



**REGULAR MEETING OF THE BOARD OF DIRECTORS**  
**2:00 pm Tuesday, January 2, 2024**

**In Person:**

380 East Vanderbilt Way  
San Bernardino, CA 92408

**Online via Zoom:**

<https://sbvmwd.zoom.us/j/684456030>

Meeting ID: 684 456 030

**PASSCODE: 3802020**

**By Telephone:**

Dial-in Info: (877) 853 5247 US Toll-free

Meeting ID: 684 456 030

**PASSCODE: 3802020**

If you are unable to participate online or by telephone, you may also submit your comments and questions in writing for the District's consideration by sending them to [comments@sbvmwd.com](mailto:comments@sbvmwd.com) with the subject line "Public Comment Item #" (insert the agenda item number relevant to your comment) or "Public Comment Non-Agenda Item". Submit your written comments by **6:00 p.m. on Monday, January 1, 2024**. All public comments will be provided to the Board President and may be read into the record or compiled as part of the record.

**IMPORTANT PRIVACY NOTE:** Online participants **MUST** log in with a Zoom account. The Zoom app is a free download. Please keep in mind: (1) This is a public meeting; as such, the virtual meeting information is published on the World Wide Web and available to everyone. (2) Should you participate remotely via telephone, your telephone number will be your "identifier" during the meeting and available to all meeting participants; there is no way to protect your privacy if you elect to call in to the meeting.



**SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT**  
380 E. Vanderbilt Way, San Bernardino, CA 92408

**REGULAR MEETING OF THE BOARD OF DIRECTORS**  
**2:00 PM Tuesday, January 2, 2024**

**CALL TO ORDER/PLEDGE OF ALLEGIANCE/ROLL CALL**

**1) PUBLIC COMMENT**

Members of the public may address the Board regarding any item within the subject matter jurisdiction of the Board; however, no action may be taken on off-agenda items except as authorized by law. Each speaker is limited to a maximum of three (3) minutes.

**2) CONSENT CALENDAR**

- 2.1 Approve Minutes of the Regular Board of Directors' Meeting - December 5, 2023 (2 min) - Page 3  
[Staff Recommendation - Approve Minutes of the Regular Board of Directors' Meeting - 120523](#)
- 2.2 Approve Minutes of the Board of Directors' Workshop - Policy/Administration - December 7, 2023 (2 min) - Page 13  
[Staff Recommendation - Approve Minutes of the Board of Directors Workshop - Policy/Administration 120723](#)
- 2.3 Approve Minutes of the Board of Directors' Workshop - Resources-Engineering - December 12, 2023 (2 min) - Page 16  
[Staff Recommendation - Approve Minutes of the Board of Directors' Workshop - Resources/Engineering 121223](#)

**3) DISCUSSION AND POSSIBLE ACTION ITEMS**

- 3.1 Receive and File the Annual Audit Report for the Fiscal Year Ending June 30, 2023 (20 min) - Page 20  
[Staff Memo - Receive and File the Annual Audit Report FY June 30, 2023](#)  
[Annual Audit Report for the Fiscal Year Ending June 30, 2023](#)
- 3.2 Consider Joint Use Agreement for the Operation and Maintenance of the Regional Recycled Water Pipeline and the Weaver Basins with East Valley Water District  
Authorize the CEO/General Manager to execute the Joint Use Agreement for The Operation and Maintenance of The Regional Recycled Water Pipeline and The Weaver Basins with East Valley Water District (EVWD). (30 min) - Page 85  
[Staff Memo - Consider Joint Use Agreement for the Operation and Maintenance of the Regional Recycled Water Pipeline and the Weaver Basins with East Valley Water District](#)

[Joint Use Agreement with East Valley Water District for the Operation and Maintenance of the Regional Recycled Water Pipeline and the Weaver Basins](#)

- 3.3 Consider Amendment No. 1 to the Consulting Services Agreement with Dudek for the preparation of the Yucaipa SGMA Annual Report (30 min) - Page 845  
[Staff Memo - Consider Amendment No. 1 to the Consulting Services Agreement with Dudek for the preparation of the Yucaipa SGMA Annual Report](#)  
[Amendment No. 1 to the Dudek's Consulting Services Agreement for Yucaipa SGMA](#)
- 3.4 Celebrating Excellence: 2023 Inland Empire Top Workplace Award (15 min) - Page 860  
[Staff Memo - Celebrating Excellence: 2023 Inland Empire Top Workplace Award](#)

**4) REPORTS (Discussion and Possible Action)**

- 4.1 CEO/General Manager's Report (15 min) - Page 863  
[CEO/General Managers Report](#)  
[January 3-Month Look Ahead Table](#)  
[January Project Status Update](#)
- 4.2 General Counsel Report
- 4.3 Ad-Hoc and Standing Committee Reports
- 4.4 SAWPA Meeting Report
- 4.5 Treasurer's Report (5 min) - Page 876  
[Treasurer's Report - November 2023](#)
- 4.6 Directors' Report of Activities and Travel Requests in accordance with Resolution 1100(5 min) - Page 885  
[SBVMWD Director Fees and Expenses paid in November 2023](#)  
[Director Botello Activity Report - November](#)  
[Director Harrison Activity Report - November](#)  
[Director Hayes Activity Report - November](#)  
[Director Kielhold Activity Report - November](#)  
[Director Longville Activity Report - November](#)

**5) FUTURE BUSINESS**

**6) ANNOUNCEMENTS**

- 6.1 List of Announcements (5 min) - Page 891  
[List of Announcements 010224](#)

**7) CLOSED SESSION**

**8) ADJOURNMENT**

**MINUTES  
OF  
THE  
REGULAR BOARD MEETING  
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT**

**December 5, 2023**

**Directors Present:** Gil J. Botello, T. Milford Harrison, June Hayes, Paul R. Kielhold, and Susan Longville.

**Directors Absent:** None

**Staff Present:**

Heather Dyer, MS, MBA – Chief Executive Officer/General Manager  
 Joanna Gibson, MS – Executive Director Upper SAR Habitat Conservation Program  
 Wen B. Huang, PE, MS – Assistant General Manager/Chief Operating Officer  
 Jose Macedo, ML, CPT-P (USA Retired) – Chief of Staff/Clerk of the Board  
 Michael Plinski, PE – Chief of Water Resources  
 Cindy Saks, CPA – Chief Financial Officer/Deputy General Manager  
 Bob Tincher, PE, MS – Chief of Statewide Water Initiatives/Deputy General Manager  
 Greg Woodside, PG, C.Hg. – Chief of Planning and Watershed Resilience  
 Melissa Zoba, MBA, MPA – Chief Information Officer

Leo Ferrando, PE – Assistant Chief Engineer  
 Kelly Malloy, MPA – Strategic Communications Manager  
 Adekunle Ojo, MPA – Water Resources Manager  
 Matthew Olivo – Senior Accountant  
 Sayer Pinto, MBA - Principal Water Resources Analyst  
 Karen Resendez, MAOL – Human Resources & Risk Manager  
 Shavonne Turner, MPA – Engagement & Conservation Program Manager

Brad Neufeld, Varner & Brandt

**Members of the Public in Attendance:**

Jennifer Ares, Yucaipa Valley Water District  
 Melody McDonald, San Bernardino Valley Water Conservation District  
 John Longville, San Bernardino Valley Water Conservation District  
 Kevin Walton, San Gorgonio Pass Water Agency

The regular meeting of the Board of Directors was called to order by President Kielhold at 2:00 p.m. Director Botello led the Pledge of Allegiance. A quorum was noted present by roll call.



**Agenda Item 1. Public Comment.** None.

**Agenda Item 2. Consent Calendar**

**2.1) Approve Minutes of the Board of Directors Workshop - Policy/Administration – November 2, 2023.**

**2.2) Approve Minutes of the Regular Board of Directors Meeting – November 7, 2023.**

**2.3) Approve Minutes of the Board of Directors Workshop - Resources-Engineering November 14, 2023.**

Legal Counsel Brad Neufeld drew attention to the minutes of the Nov. 7, 2023, meeting and advised that due to quorum requirements the motion for Agenda Item 6 Future Business had actually failed. He recommended amendment of the minutes to read the motion failed 2-1.

The Board of Directors approved the items on the Consent Calendar with amendment of the Nov. 7, 2023, minutes as advised by Counsel by the following roll-call vote:

MOVED: Botello	SECONDED: Harrison	APPROVED 5-0
AYES:	Botello, Hayes, Harrison, Kielhold, Longville	
NOES:	None	
ABSTAIN:	None	
ABSENT:	None	

**Agenda Item 3. Discussion and Possible Action Items**

**3.1) Review Board Approved Investment Policy.** Chief Executive Officer/General Manager Heather Dyer reminded the Board of prior discussion at the November 2, 2023, Policy/Administration workshop meeting. She introduced Director Longville’s request for a change in language regarding publicly traded fossil fuel companies in recognition of the District’s Climate Adaptation and Resilience Plan (CARP).

The Board directed staff to work with Investment Advisor Richard Babbe of PFM Asset Management, who determined that the proposed language could not effectively be implemented because the investment advisors want clear direction, and the language was too subjective, Ms. Dyer reported.

Ms. Dyer presented the alternative language suggested by Mr. Babbe, specifically excluding investments in fossil fuel related industries as defined.

Director Botello asked for the recommendation of Chief Financial Officer/Deputy General Manager Cindy Saks. There is no recommendation regarding the policy change, Ms. Saks advised, noting the current policy seeks yield, safety, liquidity and similar outcomes. Should the Board choose to make a change to the policy, then staff would recommend the language provided by PFM Asset Management, she explained.

Director Longville acknowledged the suggested non-subjective language. She pointed out San Bernardino Valley (SBV) is a science-driven agency, and she discussed the issue of fossil fuels and the District's Climate Adaptation and Resilience Plan (CARP). She explained the opportunity for the Board to take an important step in leadership to manage the agency's assets in a publicly responsible way without fossil fuels and encouraged the sale of the District's \$2 million in current holdings, as to keep them would be hypocritical if this policy were adopted. She said she rejected that the most important thing is profit on the District's assets while ignoring what the fossil fuel companies are doing.

Vice President Hayes recalled reading about the subject in the 1980s and stated she was opposed to fearmongering. Since that time, the trend has clearly moved toward the subject, she noted. She stated intent to make a motion in favor of the change.

President Kielhold pointed out the difference from the previous proposed language to this very broad language which includes all fossil fuel companies. He asked Ms. Saks about other holdings, and she responded she believed Exxon Mobil is the only fossil fuel investment the district currently owns. President Kielhold emphasized this language is not the same; it applies to the entire industry. He asked about the social record of other holdings, and Ms. Saks said she had not gone through the entire portfolio with this intention. She is not aware of other holdings impacted by this language.

Vice President Hayes moved to make the change to exclude fossil fuel companies from the District's investment portfolio and adopt the proposed language. Director Longville seconded, explaining the socially responsible, specific, and implementable investment parameters recommended by Mr. Babbe would be applied.

Director Botello offered a substitute motion: to make no change to the investment policy. Director Harrison seconded the substitute motion.

Director Harrison said he believes the language is too broad and takes in things that he would not want included. The District's current percentage of investments in this type of company is so low that it should be left the way it is, he stated.

Vice President Hayes pointed out it is not the amount of investment but the principle, and the Board has agreed to be innovative and proactive. She noted that Director Longville is suggesting the District is willing to be in the forefront of making sometimes very difficult decisions about policy. The District may want to stand up for protection of the environment, rather than how much money may be made, since Mr. Babbe will find another place to invest the money that is equally profitable.

Vice President Hayes called the question, but there was no second.

Director Botello posited the issue will not define whether the organization is equitable, diverse, and inclusive. This is a water agency, and it has done its best to move toward resiliency, but has a fiduciary responsibility, he stated. He said it is expected of the District to build upon the work that was done before in order to assure there is the necessary infrastructure to put water in the ground and convey imported water. That is what this vote represents, he said.

Vice President Hayes called point of order and exerted her right to offer her opinion.

Director Longville pointed to carbon neutral goals for the District and the State, but said it is reasonably foreseeable that the carbon in the atmosphere will not have come down by 2030, and things will be much worse. This is an important step for the board to consider contributing in a small way, she continued, but said she did not want this issue to divide the Board and affect its good work.

Director Harrison said there are a number of fossil fuel companies leading development of alternative fuel. He said he did not think it appropriate to cancel those organizations. Giving them the opportunity to make changes, which they are doing, is appropriate as there is a lot of skill and intelligence behind their work, he noted.

President Kielhold called for a roll call vote.

Per the substitute motion, the Board of Directors confirmed no change to the investment policy by the following roll-call vote:

MOVED: Botello	SECONDED: Harrison	APPROVED 3-2
AYES:	Botello, Harrison, Kielhold	
NOES:	Hayes, Longville	
ABSTAIN:	None	
ABSENT:	None	

**3.2) Consider Board Member Teleconference Policy.** Strategic Communications Manager Kelly Malloy discussed the Brown Act and the tenets for informed, accessible, and public deliberation. She reviewed the teleconferencing rule changes over the last few years related to COVID-19, and the current exceptions. She noted that these exceptions are under discussion at the legislature and subject to change.

Ms. Malloy explained that a Board member also has the option of joining via teleconference as a member of the public; to listen but not participate as a Board member.

Legal Counsel Neufeld explained the Board may adopt the policy to be included in the Board Member Handbook as a ready reference. He provided additional detail on the exceptions for Board member emergency and just cause, and on the state of emergency

provisions. He explained that the policy is self-amending to follow the law should there be changes in the future.

In response to questions from Vice President Hayes, Mr. Neufeld said the Board would not have to meet in person to declare an emergency. He confirmed that a Board member could speak as a member of the public at a meeting if attending outside the Brown Act requirements and reminded that it is the discretion of the Chair whether to accept public comment outside of the stated Public Comment period. The Board can change this policy if desired, he added.

The workshops are special meetings, not regular meetings, and fall outside of the limitation on use of the just cause or emergency provisions, Mr. Neufeld continued in response to Vice President Hayes.

The Board of Directors directed staff to include the Board Member Teleconference Policy in the Board Member Handbook by the following roll-call vote:

MOVED: Hayes	SECONDED: Harrison	APPROVED 5-0
AYES:	Botello, Hayes, Harrison, Kielhold, Longville	
NOES:	None	
ABSTAIN:	None	
ABSENT:	None	

**3.3 Review of BOD Handbook Final Draft Revisions.** Chief Executive Officer/General Manager Heather Dyer reminded the Board of the September 26, 2023, workshop and of decisions made. Director Longville posited that some changes made at the workshop had not been included, but Ms. Dyer assured that staff had made all changes as decided upon during the September workshop. Per recommendation of legal counsel, no redline version was provided in the agenda packet to avoid confusion. Directors indicated preference to have a redline.

The Board of Directors tabled this item to a future meeting by the following roll-call vote:

MOVED: Harrison	SECONDED: Longville	APPROVED 5-0
AYES:	Botello, Hayes, Harrison, Kielhold, Longville	
NOES:	None	
ABSTAIN:	None	
ABSENT:	None	

#### **Agenda Item 4. Reports. (Discussion and Possible Action)**

**4.1) State Water Project Report.** Chief of Statewide Water Initiatives/Deputy General Manager Bob Tincher reported the Sites Reservoir final Environmental Impact Report (EIR) / Environmental Impact Study was approved, and the project was approved for streamlining under SB 149.

The EIR for the Delta Conveyance Project is on schedule to be released this month, and options for next steps are being considered. Those will be brought to a Board workshop during the first part of 2024, Mr. Tincher noted. He advised the Board about the availability of a new smart phone app.

Snowpack is at 28 percent of average to date, and the initial State Water Project (SWP) allocation is 10 percent, Mr. Tincher reported. He explained the calculations and noted that SBV will have about 50,000 acre-feet (af) of carryover water from last year.

The Bay-Delta Water Quality Control Plan is currently under consideration by the State Water Resources Control Board (SWRCB), Mr. Tincher advised. He noted the staff proposal is an unimpaired flow concept, which would trigger litigation. The Department of Fish and Wildlife is pushing for Healthy Rivers and Landscape (voluntary agreements). A presentation will be made to the SWRCB at the December 11 hearing, he advised.

Vice President Hayes pointed out with carryover water the total would be approximately 50,000 af, and asked if that would be enough to meet deliveries. Mr. Tincher said it would, as everything over and above 25,000 to 30,000 af is recharge.

Director Botello asked if it was a concern that the actual deliveries taken seemed low. Mr. Tincher indicated that will be addressed in agenda item 4.2 Water Delivery Report.

**4.2) Water Delivery Report.** Chief of Water Resources Michael Plinski reported that In October 2023, 5,688 acre-feet of imported water was delivered to the District. In October, the District delivered approximately 2,000 af bringing the total to just under 16,000 af, he noted. In response to Director Botello, Mr. Plinski extrapolated that with orders for 25,000 af, about 6,000 af would be undelivered.

Mr. Plinski acknowledged the efforts of staff to bring water into the service area. In October, about 3,400 af was received as there were limitations on the Department of Water Resources (DWR) side. More than 5,000 af were recharged in November, he added, and if that continues in December there is potential to deliver about 10,000 of the 12,000 af target.

Monthly updates on the SWP are being provided to retail agencies, Mr. Plinski continued. Direct delivery orders for 2024 are 22,000 af to date, he noted, and those deliveries will be able to be met with carryover water and the 10 percent initial allocation, he assured. To meet targets, however, it is hoped that the initial allocation will increase to 75 percent, he added.

A meeting for retail agencies will be held in January to begin the planning effort for 2024, Mr. Plinski advised.

President Kielhold asked if the carryover water would be available January 1, and Mr. Plinski said it would.

#### **4.3) Directors' Report of Activities and Travel Requests in accordance with Resolution 1100.**

Director Botello reported that he attended:

- November 13 – Orange County Water District presentation on Lessons Learned in Storm Water Capture and Recharge
- November 14 – SBVMWD Board Workshop – Resources/Engineering
- November 15 – Met with San Bernardino City Council Member Juan Figueroa
- November 17 – Sites Reservoir Board Meeting
- November 20 – Association of Special Districts Dinner
- November 21 – Yucaipa Valley Water District Board Meeting
- November 30 – Mountains Foundation 30th Anniversary

Director Harrison reported that he attended:

- November 22 – National Habitat Conservation Board Meeting
- November 27 – Association of California Water Agencies (ACWA) Conference

Director Hayes reported that she attended:

- November 8 – Met with Mr. Hernandez of Water Education for Latino Leaders
- November 2 – Southern California Water Coalition meeting
- November 16 – Tres Lagos Board Meeting
- November 17 – Sites Reservoir Board Meeting
- November 20 – Association of Special Districts Dinner
- November 27-28 – Joint Powers Insurance Authority (JPIA)

Director Longville reported that she attended:

- November 7-9 – HCP Coalition Meeting
- November 13 – Orange County Water District presentation on Lessons Learned in Storm Water Capture and Recharge
- November 14 – Program for the Expansion of Recharge Capacity (PERC) Committee meeting
- November 15 – Economic Choices for the Colorado River and Its Reservoirs
- November 16 – Open Data for Water Resiliency
- November 20 – Association of Special Districts Dinner
- November 28 – State Resources Agency's Rivers and a Climate Update

President Kielhold reported that he attended:

- November 21 – Yucaipa Valley Water District Board Meeting
- November 27 – East Valley Water District Board Meeting

#### **4.4) General Counsel Report.** No report.

*Note: President Kielhold called Item 4.7 out of order.*

#### 4.5) Ad-Hoc and Standing Committee Reports.

- **State Water Project Committee Report.** Director Harrison noted that information was covered earlier in the meeting. He advised that he had visited Oroville Dam and the location for Sites Reservoir.
- **Regional Recycled Water Committee Report.** Director Botello reported meeting with Water Resources and Engineering staff to review the draft Joint Use Agreement for the Operation and Maintenance of the Regional Recycled Water Pipeline and Weaver Basins. Changes were identified but the Committee decided to bring the Agreement back to the full Board.
- **Legislative Committee Report.** Discussions are in progress for a trip to Washington, D.C. to talk with representatives and determine next steps based on the visit with the Environmental Protection Agency (EPA).
- **Tres Lagos Mutual Water Company Report.** President Kielhold reported there was no quorum for the Shareholders meeting for the Tres Lagos Mutual Water Company.
- **Regional Recycled Water Committee Report.** President Kielhold reported that the Agreement would not need to go back to the Committee after the full Board.

Director Longville submitted a travel request to attend the Planning and Conservation League annual California Environmental Assembly on January 27 at the UC Davis School of Law at a registration cost of \$200.

The Board approved this travel request by the following roll-call vote:

MOVED: Longville	SECONDED: Hayes	APPROVED: 5-0
AYES:	Botello, Hayes, Harrison, Kielhold, Longville	
NOES:	None	
ABSTAIN:	None	
ABSENT:	None	

#### 4.6) SAWPA Meeting Report. Director Harrison presented the report.

- **SAWPA Commission**
  - Approved the addition of the Silica Exposure Control Program to SAWPA's Injury and Illness Prevention Plan (IIPP).
  - Authorized the General Manager to extend the West Coast Advisor's (WCA) Agreement to provide state legislative affairs services for an additional period of one (1) year for an amount not to exceed \$117,000.00.

- Adopted Resolution No. 2023-11 in memoriam of Commissioner Kelly Rowe for his many contributions and years of public service.
- **PA 24 Committee**
  - Approved the addition of the Silica Exposure Control Program to SAWPA’s Injury and Illness Prevention Plan (IIPP).
  - Received Informational Report on the Inland Empire Brine Line Master Plan.

**4.7) Treasurer's Report.** Director Harrison presented the report.

The Board approved the following expenses for the month of October 2023: State Water Contract Fund \$4,475,255.00 and General Fund \$5,585,432.14 by the following roll-call vote:

MOVED: Harrison	SECONDED: Botello	APPROVED: 5-0
AYES:	Botello, Hayes, Harrison, Kielhold, Longville	
NOES:	None	
ABSTAIN:	None	
ABSENT:	None	

**Agenda Item 5. Future Business.** None were added.

**Agenda Item 6. Announcements.**

**6.1) List of Announcements.** Chief of Staff/Clerk of the Board Jose Macedo pointed out the List of Announcements, noting that the Agency will be closed between December 25 and 29 and will reopen January 2 for the regular Board meeting.

**Agenda Item 7. Closed Session.** There was no closed session.

**Agenda Item 8. Adjournment.** The meeting was adjourned by President Kielhold in memory of SAWPA Commissioner Kelly Rowe at 3:27 p.m.



**APPROVAL CERTIFICATION**

I hereby certify to approval of the foregoing Minutes of San Bernardino Valley Municipal Water District.

\_\_\_\_\_  
**Secretary**

Date \_\_\_\_\_

Respectfully submitted,

Lynda J. Kerney  
Contract Assistant

**MINUTES  
OF  
THE  
BOARD OF DIRECTORS WORKSHOP – POLICY / ADMINISTRATION  
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT**

**December 7, 2023**

**Directors Present:** Gil J. Botello, T. Milford Harrison, June Hayes, and Susan Longville

**Directors Absent:** Paul R. Kielhold

**Staff Present:**

Wen B. Huang, PE, MS – Assistant General Manager/Chief Operating Officer  
Jose Macedo, ML, CPT-P (USA Retired) – Chief of Staff/Clerk of the Board  
Michael Plinski, PE – Chief of Water Resources  
Cindy Saks, Chief Financial Officer/Deputy General Manager  
Melissa Zoba, MBA, MPA – Chief Information Officer

Leo Ferrando, PE – Assistant Chief Engineer  
Anthony Flordelis – Business Systems Analyst  
Kelly Malloy, MPA - Strategic Communications Manager  
Matthew Olivo – Senior Accountant  
Sayer Pinto, MBA - Principal Water Resource Analyst  
Karen Resendez, MAOL - Human Resources & Risk Manager  
Shavonne Turner, MPA – Engagement & Conservation Program Manager

**Members of the Public in Attendance:**

Leticia White, Innovative Federal Strategies  
Jean Denton, Innovative Federal Strategies  
Jeanette Windon, Innovative Federal Strategies  
Sam Swinson, Innovative Federal Strategies  
Susan Paxon, Innovative Federal Strategies  
Melody McDonald, San Bernardino Valley Water Conservation District  
Joyce McIntire, Yucaipa Valley Water District  
Ron Coats, East Valley Water District

The Policy/Administration Workshop of the Board of Directors was called to order by Chairperson Botello at 2:00 p.m. A quorum was noted present.

**Agenda Item 1. Introductions.** Chief Financial Officer/Deputy General Manager Cindy Saks introduced staff members present including new employee, Sayer Pinto, Principal Water Resource Analyst.

**Agenda Item 2. Public Comment.** None.

**Agenda Item 3. Discussion and Possible Action Items.**

**3.1) Federal Legislative Update.** Letitia White of Innovative Federal Strategies (IFS) reported on current events in the federal legislature including ongoing operation under a Continuing Resolution, and the new Speaker of the House resetting the agenda with changes in calendar.

Ms. Jean Denton added in the last 24 hours, legislation including the National Defense Authorization Act was passed but many items will be pushed into the new year. Ms. White provided additional detail on the Supplemental Bill for Ukraine / Israel Broader Security Funding, noting the parties have walked away from the table.

IFS has been working closely with staff on the reauthorization of the Water Resources Development Act (WRDA), which includes potential legislation related to Seven Oaks Dam, Ms. White noted. She said IFS has also been talking with staff about the next request for a community project.

Ms. White explained that with the departure of California Senator Kevin McCarthy at the end of the year along with other retirements, the House Republicans may be down to a one vote margin in bringing legislation to the floor.

With schedule changes, Ms. White continued, there will not be a House member of Congress in Washington, D.C. during the ACWA Conference, so IFS is discussing ways to obtain good meetings with staff and other ways to ensure the ACWA time would be a productive visit. IFS can also assist with meetings in California when Members are in their District offices, she added.

Vice President Hayes reminded about the discussion regarding not going to Washington, D.C. during ACWA to be able to talk with legislators and their aides without the pressure. Ms. White acknowledged that is a good point and it is brought up from time to time. She noted the value of the ACWA Conference but said if the Members are not going to be present, it is a good year to consider not attending but instead visiting another time when private meetings can be set up.

Requests for community projects will have to be solidified and ready before the deadline provided by the Members, she noted. Appropriations bills will not be finished by early January or mid-February, she stated, and suggested looking at the pros and cons of other dates when the group would not be competing with other water agencies. This might be a year when it would be worth not coming for ACWA, she noted.

Director Longville requested Strategic Communications Manager Kelly Malloy provide Directors the recently released WRDA request form sent from Representative Aguilar's office. The request form relates to language requests for WRDA. A later form will be the standard call for projects, Ms. White noted.

**3.2) Contract with Innovative Federal Strategies for Consulting and Strategic Advocacy Service.** Strategic Communications Manager Kelly Malloy introduced the two-year contract with IFS, the District’s federal legislative support since 2000. She explained the services provided and said IFS has robust knowledge of all happenings, keeps the District informed about current events, and has the ability to turn around quick results.

The last agreement was for three years at a cost of \$6,500 per month, Ms. Malloy advised. The proposed contract would take effect on January 1, 2024, with an increase of \$500 per month in 2024, and an additional \$500 per month in 2025, she explained. These are cost of living adjustments based on expenses, she added.

Director Harrison stated he believes IFS is the best possible team to have in Washington, D.C. and said he is in favor of continuing the contract in the stated amounts. Vice President Hayes concurred and added staff and the IFS team work together well.

The Board of Directors authorized the CEO / General Manager to execute a professional services agreement with Innovative Federal Strategies for Consulting and Strategic Advocacy services by the following roll call vote:

MOVED: Harrison	SECONDED: Hayes	APPROVED: 4-0
AYES:	Botello, Harrison, Hayes, Longville	
NOES:	None	
ABSTAIN:	None	
ABSENT:	Kielhold	

Director Botello indicated it seems the team will visit Washington D.C. in March 2024 with dates to be decided.

**Agenda Item 4. Future Business.** None added.

**Agenda Item 5. Adjournment.** The meeting was adjourned by Chair Botello at 2:22 p.m.

<p>APPROVAL CERTIFICATION</p> <p>I hereby certify to approval of the foregoing Minutes of San Bernardino Valley Municipal Water District.</p>  <p>_____</p> <p><b>Secretary</b></p> <p>Date _____</p>
--

Respectfully submitted,

Lynda J. Kerney  
Contract Assistant

**MINUTES  
OF  
THE  
BOARD OF DIRECTORS WORKSHOP – RESOURCES/ENGINEERING  
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT**

**December 12, 2023**

**Directors Present:** Gil J. Botello, T. Milford Harrison, June Hayes, Susan Longville, and Paul R. Kielhold.

**Directors Absent:** None.

**Staff Present:**

Heather Dyer, MS, MBA – Chief Executive Officer/General Manager  
Joanna Gibson, MS – Executive Director Upper SAR Habitat Conservation Program  
Wen B. Huang, PE, MS – Assistant General Manager/Chief Operating Officer  
Jose Macedo, ML, CPT-P (USA Retired) – Chief of Staff/Clerk of the Board  
Michael Plinski, PE – Chief of Water Resources  
Melissa Zoba, MBA, MPA – Chief Information Officer

Leo Ferrando, PE – Assistant Chief Engineer  
Anthony Flordelis – Business Systems Analyst  
Kelly Malloy, MPA – Strategic Communications Manager  
Matthew Olivo – Senior Accountant  
Sayer Pinto, MBA - Principal Water Resources Analyst  
Karen Resendez, MAOL – Human Resources & Risk Manager  
Shavonne Turner, MPA – Engagement & Conservation Program Manager

Scott Heil, District Counsel

**Members of the Public in Attendance:**

James Morales, East Valley Water District  
Melody McDonald, San Bernardino Valley Water Conservation District  
Betsy Miller, San Bernardino Valley Water Conservation District

The Resources/Engineering Workshop of the Board of Directors was called to order by Chairperson June Hayes at 2:01 p.m. A quorum was noted present.

**Agenda Item 1. Introductions.** None.

**Agenda Item 2. Public Comment.** None.

### **Agenda Item 3. Discussion And Possible Action Items**

**3.1) Consider First Amendment to Partnership Agreement for Joint Active Recharge Project Development under the Upper Santa Ana River Habitat Conservation Plan.** Assistant General Manager/Chief Operating Officer Wen Huang reminded this partnership agreement was executed by the San Bernardino Valley Water Conservation District (Conservation District) and San Bernardino Valley Municipal Water District (SBV) boards in January 2019. He provided background on the collaborative effort for 295 acres of mitigation land.

The 5-year agreement was for the Conservation District to place 295 acres into a conservation easement and SBV would provide funding of approximately \$37 million (about \$125,000 per acre), Mr. Huang continued. The Conservation District designated the funds for development of additional stormwater capture and recharge for the benefit of the Basin. The project was rebranded as the Program for the Expansion of Recharge Capacity (PERC), he explained. The agreement expires in January.

Mr. Huang provided detail on the project area, emphasized cost savings, and explained the benefits of the plan. Covered activities will produce up to 70,000 acre-feet (af) of water collectively, he advised. It is a win/win for both agencies. He listed the included PERC project areas.

The 5-year agreement extension was considered by the PERC Policy Committee in November, Mr. Huang advised. Chief Executive Officer/General Manager Heather Dyer noted when the strategy was developed it was a great model in finding the true win/win with the Conservation District having the land and SBV having 13 water projects to be permitted.

In response to President Kielhold, Mr. Huang pointed out the location of the Enhanced Recharge A basins area, and Ms. Dyer noted the wash plan conservation land.

Director Botello noted when this partnership was formed, SBV did not own the 1,600-acre Sunset Ranch property for mitigation. He asked how the land purchase balanced with these projects. Ms. Dyer explained that it is financially advantageous. She said it relates to current needs as this conservation land is of the highest value as it is currently occupied by five different species. The construction project itself is acting as a restoration project that will grow the animal population, whereas the Sunset Ranch land is not currently occupied by the San Bernardino Kangaroo Rat (SBKR) and has a lower conservation value. With a restoration project there, it will become more valuable, she explained. With the agreement securing all the Santa Ana River mitigation land needed, the 1,600 acres was purchased for \$19,900 per acre and can be turned in for mitigation bank credits to sell at a market rate of \$250,000 to \$300,000 per acre.

Director Botello indicated the Board had not received an update on the PERC projects and Ms. Dyer suggested a presentation by San Bernardino Water Conservation District General Manager Betsy Miller. Ms. Miller agreed and noted that quarterly updates are given to the PERC Policy Committee.

Executive Director Upper SAR Habitat Conservation Program Joanna Gibson advised SBV has the needed approximately 1,000 acres of habitat in the Santa Ana River area. Ms. Dyer explained the estimates for mitigation land needed and efforts to procure the land in advance of projects. President Kielhold noted that approximately 700 acres more will be needed.

Director Harrison noted there is no provision for further extensions of the agreement. Mr. Huang said it is contingent upon completion of the HCP, following which the conservation easement will be placed.

The Board approved the First Amendment to the Partnership Agreement for Joint Active Recharge Project Development under the Upper Santa Ana River Habitat Conservation Plan with San Bernardino Valley Water Conservation District and authorized the Board President to execute the Amendment by the following roll-call vote:

MOVED: Kielhold	SECONDED: Longville	APPROVED: 5-0
AYES:	Botello, Hayes, Harrison, Kielhold, Longville	
NOES:	None	
ABSTAIN:	None	
ABSENT:	None	

**3.2) Consider 2024 Meeting Schedule.** Strategic Communications Manager Kelly Malloy explained the planning process, pointed out special events and calendar conflicts, and made recommendations.

Director Botello expressed preference for maintaining the Board meeting schedule. Vice President Hayes recommended rescheduling agenda items when needed.

Legal Counsel advised the rules under AB 2449 allow teleconferencing while on travel for District purposes.

No action was taken to revise the regular scheduled meetings in 2024.

**Agenda Item 4. Future Business.** Noting there had been only three Board members present at the last conversation, Vice President Hayes moved to agendize the topic of eliminating the reading of the Veteran's Day resolution. Director Longville seconded. Following comment, Vice President Hayes withdrew the motion.

Vice President Hayes requested that the subject of the Investment Policy and the previously suggested prohibited investments and proposed reconsideration. Discussion regarding previous discussions and votes on the item occurred among Directors.

The Board agreed to reconsider the Investment Policy on prohibited investments on a future Board of Directors agenda by the following roll-call vote:

MOVED: Hayes	SECONDED: Longville	APPROVED: 3-2
AYES:	Hayes, Kielhold, Longville	
NOES:	Botello, Harrison	
ABSTAIN:	None	
ABSENT:	None	

**Agenda Item 5. Closed Session.** District Counsel Scott Heil introduced the Closed Session items. Chair Hayes adjourned the meeting to Closed Session at 2:43 p.m.

- 5.1) Conference with Legal Counsel - anticipated litigation  
 Significant exposure to litigation Pursuant to paragraph (2) or (3) of subdivision (d) of Govt. Code Section 54956.9. One case

Chair Hayes returned the meeting to Open Session at 3:53 p.m. District Counsel Scott Heil reported that there was no reportable action taken in the closed session.

**Agenda Item 6. Adjournment**

The meeting was adjourned by Chair Hayes at 3:53 p.m.

<p>APPROVAL CERTIFICATION</p> <p>I hereby certify to approval of the foregoing Minutes of San Bernardino Valley Municipal Water District.</p>  <p>_____</p> <p><b>Secretary</b></p> <p>Date _____</p>
--

Respectfully submitted,

Lynda J. Kerney  
 Contract Assistant





---

**DATE:** January 2, 2024

**TO:** Board of Directors

**FROM:** Heather Dyer, CEO / General Manager  
Cindy Saks, CFO / Deputy General Manager

**SUBJECT:** Receive and File the Annual Audit Report for the Fiscal Year Ending June 30, 2023

---

**Staff Recommendation**

Receive and File the Annual Audit Report for the Fiscal Year Ending June 30, 2023

**Background**

The firm of Rogers, Anderson, Malody and Scott, (RAMS) CPA's has concluded the District's financial statement audit for the fiscal year ended June 30, 2023. The auditors have given a clean or unmodified opinion on the District's financial statements, which means that the District's financial condition, position, and operations are fairly presented in the financial statements. This is the highest level of opinion available. District staff and representatives from RAMS will present the financial statements and audit report at the Board meeting and be prepared to answer any questions.

**District Strategic Plan Application**

The completion of the annual financial audit report reinforces the district's commitment to transparency and communication, supported by district strategy # 4 – Build trust by being a collaborative and resourceful partner through effective communication and engagement.

**Attachment**

- 1) Annual Audit Report for the Fiscal Year Ending June 30, 2023

# **SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT**

San Bernardino, California

Basic Financial Statements and Supplementary Information

For the Year Ended June 30, 2023  
(With Comparative Data for Prior Year)



**A REGIONAL WATER AGENCY  
SINCE 1954**

---

*San Bernardino Valley Municipal Water District*

**Basic Financial Statements and Supplementary Information  
For the Year Ended June 30, 2023  
(With Comparative Data for Prior Year)**

---

**Table of Contents**

	<u>Page</u>
<b>Independent Auditor's Report</b> .....	1
<b>Management's Discussion and Analysis</b> .....	4
<b>Basic Financial Statements</b>	
Statement of Net Position (With Comparative Data for Prior Year) .....	10
Statement of Revenues, Expenses and Changes in Net Position (With Comparative Data for Prior Year) .....	12
Statement of Cash Flows (With Comparative Data for Prior Year) .....	14
Notes to the Basic Financial Statements .....	16
<b>Required Supplementary Information</b>	
Schedule of District's Proportionate Share of the Plans' Net Pension Liability and Related Ratios as of the Measurement Date .....	47
Schedule of Plan Contributions .....	48
Schedule of Changes in the Net OPEB Liability and Related Ratios as of the Measurement Date .....	49
Schedule of OPEB Plan Contributions .....	50
<b>Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with <i>Government Auditing Standards</i></b> .....	51



ROGERS, ANDERSON, MALODY & SCOTT, LLP  
CERTIFIED PUBLIC ACCOUNTANTS, SINCE 1948

735 E. Carnegie Dr. Suite 100  
San Bernardino, CA 92408  
909 889 0871 T  
909 889 5361 F  
ramscpa.net

**PARTNERS**

Terry P. Shea, CPA  
Scott W. Manno, CPA, CGMA  
Leena Shanbhag, CPA, MST, CGMA  
Bradferd A. Welebir, CPA, MBA, CGMA  
Jenny W. Liu, CPA, MST  
Gardenya Duran, CPA, CGMA  
Brianna Schultz, CPA, CGMA  
Brenda L. Odle, CPA, MST (Partner Emeritus)

**MANAGERS / STAFF**

Seong-Hyea Lee, CPA, MBA  
Evelyn Morentin-Barcena, CPA  
Veronica Hernandez, CPA  
Laura Arvizu, CPA  
John Maldonado, CPA, MSA  
Julia Rodriguez Fuentes, CPA, MSA  
Demi Hite, CPA  
Jeffrey McKennan, CPA

**MEMBERS**

American Institute of  
Certified Public Accountants

*PCPS The AICPA Alliance  
for CPA Firms*

*Governmental Audit  
Quality Center*

California Society of  
Certified Public Accountants

*Independent Auditor's Report*

Board of Directors  
San Bernardino Valley Municipal Water District  
San Bernardino, California

**Report on the Audit of the Financial Statements**

***Opinion***

We have audited the financial statements of the San Bernardino Valley Municipal Water District (the District), as of and for the year ended June 30, 2023, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the District as of June 30, 2023, and the changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

***Basis for Opinion***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards* (GAS), issued by the Comptroller General of the United States and the State Controller's *Minimum Audit Requirements for California Special Districts*. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the District and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



### ***Prior Year Comparative Information***

We have previously audited the District's 2022 financial statements, and we expressed an unmodified opinion in our report dated December 7, 2022. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2022 is consistent, in all material respects, with the audited financial statements from which it has been derived.

### ***Responsibilities of Management for the Financial Statements***

The District's management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the District's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

### ***Auditor's Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and GAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and GAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the District's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and required supplementary information as listed in the table of contents be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### ***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated December 14, 2023, on our consideration of the District's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the District's internal control over financial reporting and compliance.

*Rogers, Anderson, Malody & Scott, LLP.*

San Bernardino, California  
December 14, 2023

**San Bernardino Valley Municipal Water District  
Management's Discussion and Analysis  
June 30, 2023**

---

San Bernardino Valley Municipal Water District (District) was formed on February 17, 1954, under the Municipal Water District Act of 1911. The District is one of 29 contractors to the California State Water Project, which delivers water from Northern California to various parts of the state. A major function of the District is to import and deliver water into its service area through participation in the State Water Project and to manage groundwater storage within its boundaries. The District's service area encompasses approximately 353 square miles in southwestern San Bernardino County and a portion of Riverside County. It spans the eastern two-thirds of the San Bernardino Valley, the Crafton Hills, and a portion of the Yucaipa Valley and includes the cities and communities of San Bernardino, Colton, Loma Linda, Redlands, Rialto, Bloomington, Highland, East Highland, Mentone, Grand Terrace, and Yucaipa. The District is governed by a five member board, representing five geographical divisions within the District, which is elected by the citizens in a general popular election.

In 1960, the District entered into a contract with the State Department of Water Resources to receive an annual allotment of up to 102,600 acre-feet of water from the State Water Project. The District has been importing water from the State Water Project since 1972.

**Overview of the Basic Financial Statements**

San Bernardino Valley Municipal Water District is a special purpose governmental district (Special District) engaged only in activities that support themselves through tax levies and user fees. Accordingly, the accompanying financial statements are presented in the format prescribed for proprietary funds by the Governmental Accounting Standards Board.

These financial statements consist of three interrelated statements designed to provide the reader with relevant, understandable data about the District's financial condition and operating results. They are the Statement of Net Position, the Statement of Revenues, Expenses and Changes in Net Position, and the Statement of Cash Flows.

The Statement of Net Position presents the District's assets, deferred outflows of resources, liabilities, and deferred inflows of resources, with the difference reported as net position. The Statement of Revenues, Expenses and Changes in Net Position describes the financial results of the District's operations for the years reported. These results, or changes in net position, are the increases or decreases in the bottom line of the Statement of Net Position.

The Statement of Cash Flows conveys to financial statement users how the District managed cash resources during the year. This statement converts the income or loss from operations presented on the Statement of Revenues, Expenses and Changes in Net Position into actual cash provided by or used for operations. The Statement of Cash Flows also details how the District obtains cash through financing and investing activities and, conversely, how cash is spent for these purposes.

**San Bernardino Valley Municipal Water District  
Management's Discussion and Analysis  
June 30, 2023**

**Summary Financial Information and Analysis**

**Condensed Statement of Net Assets**  
in millions

	2023	2022	Change
<b>Assets:</b>			
Current and other Noncurrent Assets	\$ 117.01	\$ 87.70	\$ 29.31
Restricted Assets	528.03	466.31	61.72
Capital assets - net	561.35	521.74	39.61
Total Assets	1,206.39	1,075.75	130.64
<b>Deferred Outflows of Resources</b>	6.31	2.77	3.54
<b>Liabilities:</b>			
Current Liabilities	26.11	18.29	7.82
Payable from Restricted Assets	3.10	0.83	2.27
Non-Current Liabilities	60.79	8.44	52.35
Total Liabilities	90.00	27.56	62.44
<b>Deferred Inflows of Resources</b>	6.31	5.12	1.19
<b>Net Position</b>			
Net Investment in Capital Assets	505.77	514.91	(9.14)
Restricted	524.93	465.12	59.81
Unrestricted	85.69	65.81	19.88
Total Net Position	\$ 1,116.39	\$ 1,045.84	\$ 70.55

**Condensed Statement of Revenues, Expenses and Changes in Net Assets**  
in millions

	2023	2022	Change
<b>Operating Revenues</b>	\$ 15.60	\$ 7.49	\$ 8.11
<b>Operating Expenses</b>	88.60	75.40	13.20
<b>Nonoperating Revenues (Expenses)</b>	143.05	112.23	30.82
<b>Contributions in aid of Construction</b>	0.50	0.50	-
<b>Change in Net Position</b>	70.55	44.82	25.73
<b>Net Position, Beginning of Year</b>	1,045.84	1,001.02	44.82
<b>Net Position, End of Year</b>	\$ 1,116.39	\$ 1,045.84	\$ 70.55

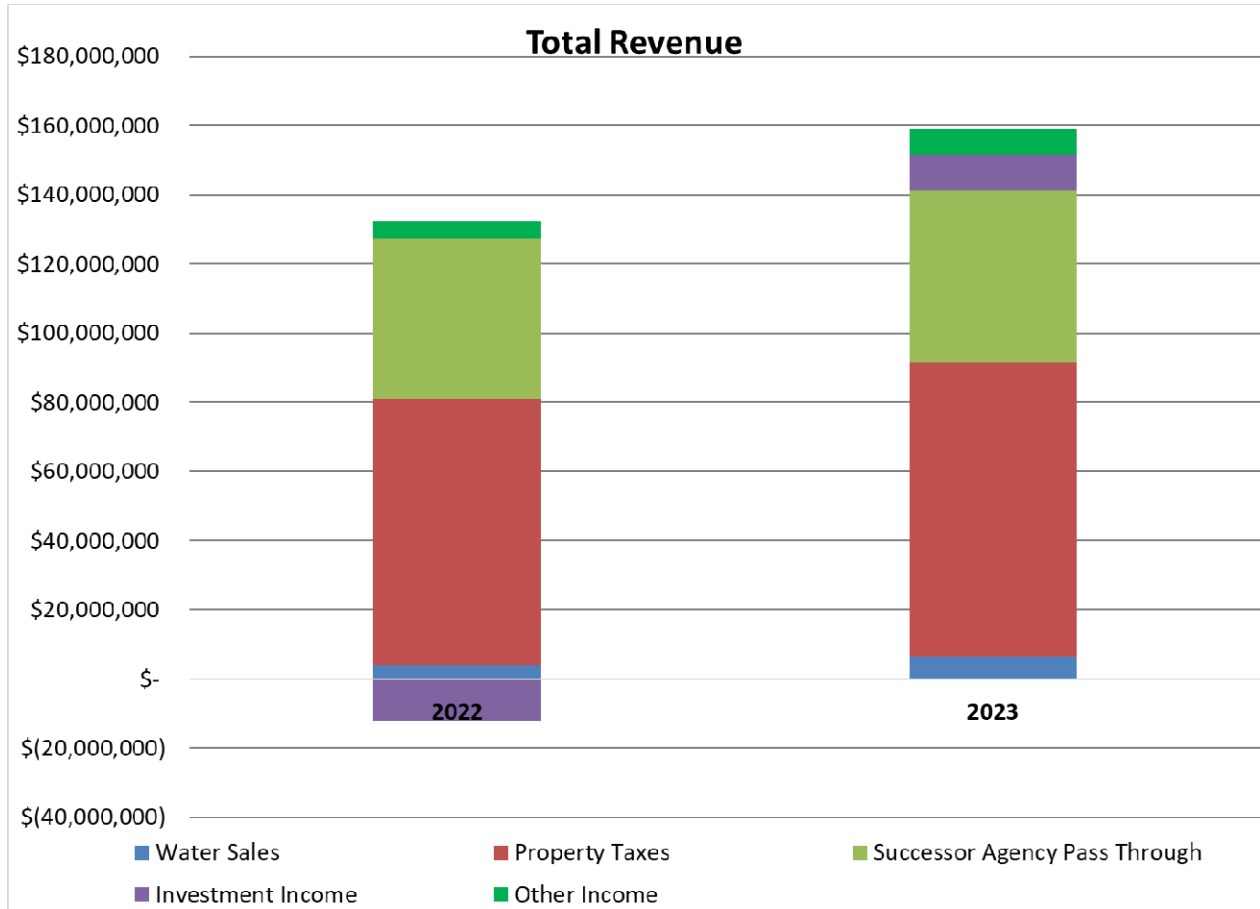


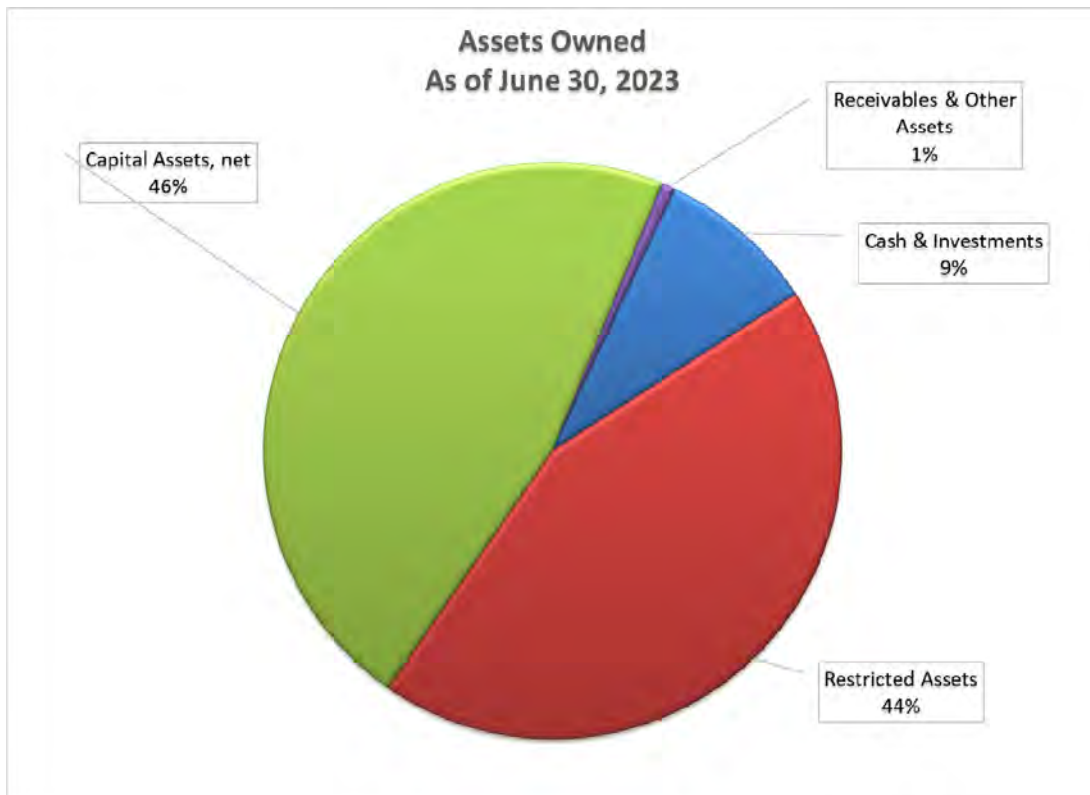
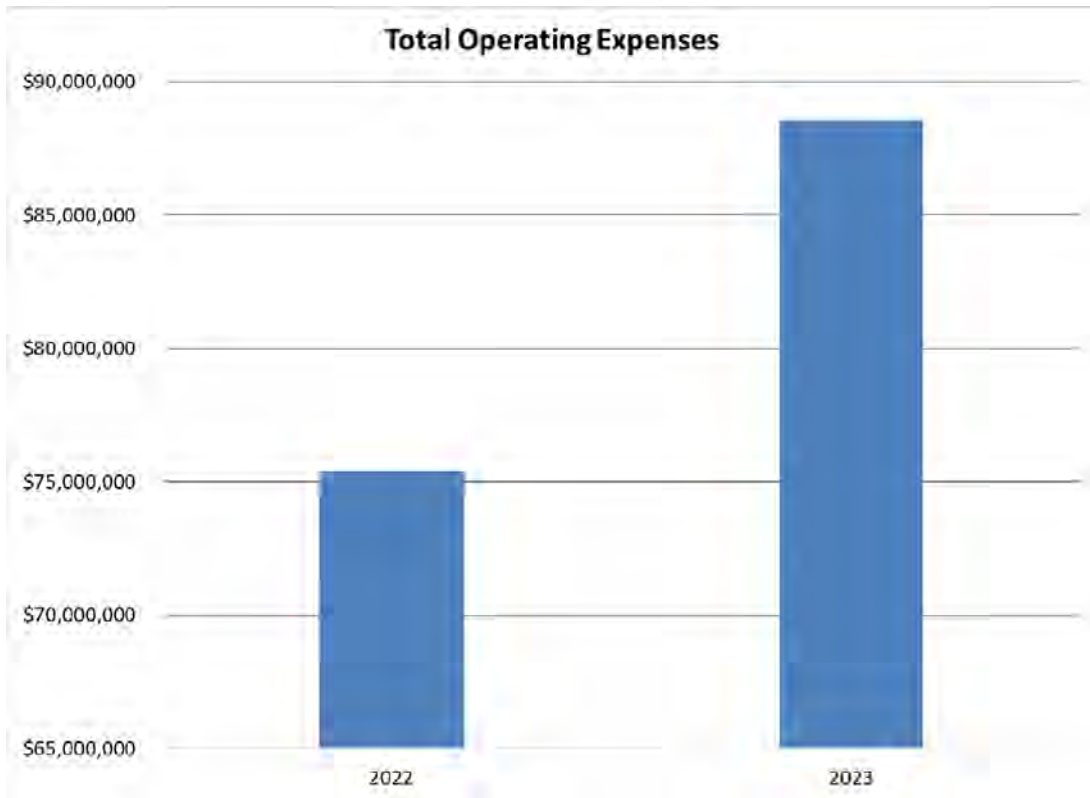
**San Bernardino Valley Municipal Water District  
Management's Discussion and Analysis  
June 30, 2023**

---

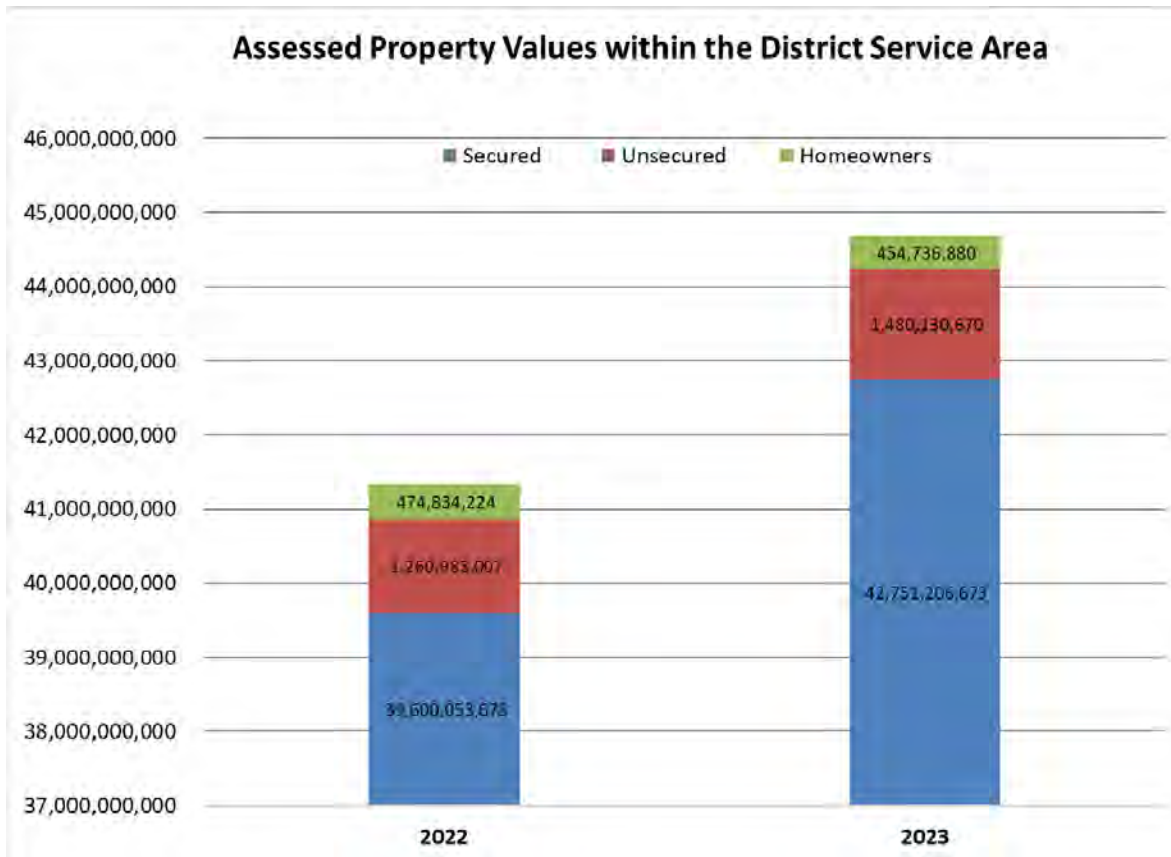
The increase from fiscal year June 30, 2022 to June 30, 2023 in investment income is due to a significant increase in investment interest rates and adjusting the portfolio to market at year end. The significant changes in operating expense from fiscal year June 30, 2022 to 2023 pertains to an increase in source of supply which contains payments to the Department of Water Resources and local resources investment program, wages and benefits due to adding additional staff and consultants, and adjustments for changes in the actuarial assumptions of the CalPERS accrued pension plan obligations.

Below is a comparison of Revenue and Operating Expenses over the past two fiscal years:





**San Bernardino Valley Municipal Water District  
Management's Discussion and Analysis  
June 30, 2023**



The increase in net position included an operating loss of \$72.99 million. This is due in part to the District being required by the California State Controller's office to report property taxes as nonoperating revenue. However, the majority of the property tax revenues are used for State Water Project expenditures which are included in operating expenses.

Total nonoperating revenues increased by \$31.00 million over the prior year. Total property taxes received increased by \$11.20 million due to an increase in assessed valuations. The assessed values within the District's service area experienced a 8.0% increase over the prior year and the Board voted to retain the State Water Project debt service tax rate at \$0.13/\$100 of assessed value for fiscal year ending June 30, 2023. Successor Agency pass through payments increased by \$3.27 million over the prior year. Interest income increased over the prior year by \$22.31 million and grant income decreased by \$0.92 million over the prior year.

**Categories of Net Position**

The District is required to present its net position in three categories: Net investment in Capital Assets, Restricted, and Unrestricted.

Net Investment in Capital Assets

At June 30, 2023, the amount the District had invested in capital assets, net of related debt was \$505.77 million. This balance was obtained by combining Construction in Progress of \$78.19 million with Capital Assets in Service, net of Accumulated Depreciation and Amortization of \$483.16 million and minus the capital related debt of \$55.59 million.

**San Bernardino Valley Municipal Water District  
Management's Discussion and Analysis  
June 30, 2023**

---

Restricted Net Position – Debt Service

The District has restricted Net Position of \$524.93 million, which consists of tax proceeds that were levied for State Water Project payments plus interest on investments less State Water Project related expenditures. The Board of Directors has designated \$30 million of this amount to be retained for the purpose of Maintenance and Repairs on the State Water Project distribution pipelines, pump stations and reservoirs. The balance of restricted Net Position of \$494.93 million is to be used for future expenses related to the State Water Project.

The District's future commitment for State Water Project costs over the years 2023 to 2035, according to a payment schedule dated October 1, 2023 is estimated to total \$395.92 million.

Unrestricted Net Position

The District had unrestricted Net Position of \$85.69 million at June 30, 2023. The District has an extensive future capital improvement plan which consists of many projects which include Enhanced Santa Ana River Spreading, Santa Ana River Tributary / Storm Water Capture, Recycled Water Systems and Conjunctive Use Well Projects.

Construction in Progress (CIP)

The projects still in progress on June 30, 2023 included Riverside Groundwater Aquifer Storage Project, Design and Construction of Waterman Hydroelectric Plant, the Enhanced Recharge Project 1B, the Regional Recycled Water Pipeline, and several pipeline turnouts.

Capital Assets

The District made payments to the Department of Water Resources during the year totaling \$57.51 million net of credits and refunds for participation rights in the State Water Project. This was an increase of \$2.09 million over the prior year mainly attributable to the variable energy cost component during the fiscal year June 30, 2023. Additional information on capital assets can be found in the notes to the financial statements.

Long-term Liabilities

The District paid off \$6.83 million in Certificates of Participation (COP) during the fiscal year ended June 30, 2023, and issued 2023 bonds totaling \$55.59 million. Bond proceeds are being used to build the Enhanced Recharge Project and refund the 2011 Certificates of Participation. Additional information on the bonds can be found in the notes to the financial statements.

Net Pension and Other Post-Employment Benefits Liability

During fiscal year ended June 30, 2023 the District recorded a net pension liability of \$5.38 million. During fiscal year ended June 30, 2023 the District recorded a net other post-employment benefits asset of \$184 thousand.

Contacting the District's Financial Management

This financial report is designed to provide our customers, investors, and creditors with an overview of the District's financial operations and condition. If you have questions about this report or need additional information, you may contact the District at (909) 387-9200 or 380 E. Vanderbilt Way, San Bernardino, CA 92408.

*San Bernardino Valley Municipal Water District*

**Statement of Net Position  
June 30, 2023  
(With Comparative Data for Prior Year)**

	2023	2022
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 1,869,496	\$ 2,742,268
Investments	105,932,789	78,343,494
Property taxes receivable	193,683	225,771
Accounts receivable	4,401,822	1,045,788
Leases receivable	1,194,173	1,220,861
Accrued interest receivable	186,503	122,252
Current portion of other receivable	6,854	6,854
Current portion of notes receivable	760,120	761,100
Prepaid expenses	563	563
Total current assets - unrestricted	<u>114,546,003</u>	<u>84,468,951</u>
Restricted assets:		
Cash and cash equivalents	71,757,826	75,971,077
Investments	<u>452,061,316</u>	<u>387,340,047</u>
Total restricted cash and investments	523,819,142	463,311,124
Property taxes receivable	1,198,772	1,442,766
Accrued interest receivable	2,626,706	733,074
Water bank inventory	<u>380,501</u>	<u>824,614</u>
Total restricted assets	<u>528,025,121</u>	<u>466,311,578</u>
Noncurrent assets:		
Capital assets:		
Capital assets in service	322,411,629	323,694,976
Accumulated depreciation	<u>(76,721,084)</u>	<u>(71,731,036)</u>
Capital assets, net	<u>245,690,545</u>	<u>251,963,940</u>
Participation rights in State Water Project facilities (at cost)	465,867,281	446,283,734
Accumulated amortization	<u>(228,394,482)</u>	<u>(210,149,872)</u>
Participation rights in State Water Project facilities - net	<u>237,472,799</u>	<u>236,133,862</u>
Total capital assets, net of accumulated depreciation and amortization	483,163,344	488,097,802
Construction in progress	<u>78,190,270</u>	<u>33,646,067</u>
Total capital assets, net	<u>561,353,614</u>	<u>521,743,869</u>
Other noncurrent assets:		
Other receivables, net of current portion	161,352	204,888
Notes receivable, net of current portion	2,216,622	2,938,110
Water stock	<u>88,500</u>	<u>88,500</u>
Total noncurrent assets	<u>563,820,088</u>	<u>524,975,367</u>
Total assets	<u>1,206,391,212</u>	<u>1,075,755,896</u>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>		
Pension related	4,983,921	1,858,236
Other post-employment benefits related	<u>1,322,509</u>	<u>912,222</u>
Total deferred outflows of resources	<u>6,306,430</u>	<u>2,770,458</u>

The accompanying notes are an integral part of these financial statements.

*San Bernardino Valley Municipal Water District*

**Statement of Net Position, (Continued)**  
**June 30, 2023**  
**(With Comparative Data for Prior Year)**

	2023	2022
<b>LIABILITIES</b>		
Current liabilities:		
Payables from current assets - unrestricted:		
Accounts payable	\$ 6,589,667	\$ 1,645,139
Accrued employee benefits	1,168,369	988,701
Accrued interest payable	-	141,622
Unearned revenue	18,063,354	15,032,931
Deposits	297,427	257,827
Bonds payable, current portion	-	225,000
Total payables from current assets - unrestricted	<u>26,118,817</u>	<u>18,291,220</u>
Payable from restricted assets:		
Accounts payable	2,714,680	446,450
Santa Ana River restoration/recovery trust fund	382,514	379,917
Total payables from current assets - restricted	<u>3,097,194</u>	<u>826,367</u>
Non-current liabilities:		
Notes and bonds payable, non-current portion	52,525,000	6,510,000
Premium on notes and bonds payable, net	3,062,010	98,045
Net pension liability	5,382,682	(150,148)
Net other post-employment benefits liability (asset)	(184,347)	1,985,297
Total non-current liabilities	<u>60,785,345</u>	<u>8,443,194</u>
Total liabilities	<u>90,001,356</u>	<u>27,560,781</u>
<b>DEFERRED INFLOWS OF RESOURCES</b>		
Pension related	1,039,166	854,961
Other post-employment benefits related	4,137,378	3,079,346
Leases related	1,135,265	1,190,475
Total deferred inflows of resources	<u>6,311,809</u>	<u>5,124,782</u>
<b>NET POSITION</b>		
Net investment in capital assets	505,766,604	514,910,824
Restricted:		
Debt service - State Water Project	520,512,491	459,810,089
Debt service - Devil Canyon-Castaic	4,415,434	5,308,500
Unrestricted	85,689,948	65,811,378
Total net position	<u>\$ 1,116,384,477</u>	<u>\$ 1,045,840,791</u>

The accompanying notes are an integral part of these financial statements.

*San Bernardino Valley Municipal Water District*

**Statement of Revenues, Expenses and Changes in Net Position  
For the Year Ended June 30, 2023  
(With Comparative Data for Prior Year)**

	2023	2022
<b>OPERATING REVENUES</b>		
Water sales	\$ 6,695,567	\$ 4,161,008
Other operating revenues	8,907,772	3,331,027
Total operating revenues	<u>15,603,339</u>	<u>7,492,035</u>
<b>OPERATING EXPENSES</b>		
Source of supply:		
Operations, maintenance, power and replacement	29,802,583	28,452,169
Purchased water	10,406,923	7,138,273
Local resources investment program	-	1,780,158
	<u>40,209,506</u>	<u>37,370,600</u>
Administrative and general:		
Salaries	5,353,267	4,511,671
Retirement and benefits	2,427,727	2,683,331
Retirement and benefits - pension and OPEB adjustments	1,419,451	(5,112,522)
Payroll taxes	355,879	299,814
Consultants	6,790,246	6,485,282
Legal and accounting	935,199	1,127,727
Office supplies and expense	299,313	267,954
Dues and subscriptions	581,634	495,850
Water conservation, public education and information	971,147	154,209
Field improvements	563,537	339,719
Maintenance and repair	1,095,936	1,077,546
Utilities	1,230,890	1,133,369
Inland Empire Brine Line fees	2,091,597	1,984,068
Insurance	227,396	208,432
Auto and travel	155,865	122,853
Lodging and meals	50,240	36,827
Taxes and licenses	141,135	134,507
Tax collection fee	433,272	379,684
	<u>25,123,731</u>	<u>16,330,321</u>
Other operating expenses:		
Depreciation and amortization	<u>23,263,700</u>	<u>21,695,987</u>
Total operating expenses	<u>88,596,937</u>	<u>75,396,908</u>
<b>OPERATING LOSS</b>	<u>(72,993,598)</u>	<u>(67,904,873)</u>

The accompanying notes are an integral part of these financial statements.

*San Bernardino Valley Municipal Water District*

**Statement of Revenues, Expenses and Changes in Net Position, (Continued)  
For the Year Ended June 30, 2023  
(With Comparative Data for Prior Year)**

	2023	2022
<b>NONOPERATING REVENUES</b>		
Revenues:		
Property taxes:		
Debt service	\$ 71,802,952	\$ 65,151,166
General purpose distribution	13,091,762	11,817,868
Successor Agency pass through	49,553,953	46,279,648
Investment income	10,145,823	(12,164,054)
Lease revenue	55,210	55,210
Grants and other revenues	144,306	1,068,962
Gain (loss) on disposal of capital assets	(1,290,704)	297,176
	143,503,302	112,505,976
Expenses:		
Interest expense	465,616	278,084
	465,616	278,084
Total nonoperating revenues	143,037,686	112,227,892
Income before contributions	70,044,088	44,323,019
Contributions in aid of construction	499,598	499,598
	70,543,686	44,822,617
Change in net position	70,543,686	44,822,617
Net position - beginning of year, as restated (note 15)	1,045,840,791	1,001,018,174
Net position - end of year	\$ 1,116,384,477	\$ 1,045,840,791

The accompanying notes are an integral part of these financial statements.



*San Bernardino Valley Municipal Water District*

**Statement of Cash Flows  
For the Year Ended June 30, 2023  
(With Comparative Data for Prior Year)**

	2023	2022
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Cash received from water sales	\$ 6,369,956	\$ 11,955,399
Cash received from other operating activities	8,951,308	3,251,871
Cash paid for source of supply	(39,765,393)	(37,370,600)
Cash paid to other suppliers	(11,298,528)	(14,505,710)
Cash paid for employees' wages, taxes and benefits	(8,307,205)	(7,350,989)
Net cash used for operating activities	<u>(44,049,862)</u>	<u>(44,020,029)</u>
<b>CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES</b>		
Property taxes received - general purpose distribution	13,123,850	11,675,312
Successor Agency pass through received	49,553,953	46,279,648
Grants and other revenues received	144,306	1,068,962
Net cash provided by noncapital financing activities	<u>62,822,109</u>	<u>59,023,922</u>
<b>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES</b>		
Property taxes received - debt service	72,046,946	64,724,176
Proceeds from sale of capital assets	412,651	591,509
Proceeds from contribution in aid of construction	499,598	499,598
Proceeds from collection of notes receivable	800,192	774,404
Acquisition of capital assets	(19,987,325)	(78,845,212)
Payments for construction in progress	(41,605,996)	(24,871,123)
Proceeds from issuance of bonds	55,587,010	-
Payments on lease receivable	26,688	24,824
Principal payments on debt	(6,735,000)	(215,000)
Interest paid	(705,283)	(287,544)
Net cash provided by capital and related financing activities	<u>60,339,481</u>	<u>(37,604,368)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Purchase of investments	(170,599,065)	(143,465,049)
Redemption of investments	165,770,271	140,952,739
Investment income	(79,368,957)	21,535,260
Net cash used for investing activities	<u>(84,197,751)</u>	<u>19,022,950</u>
<b>NET DECREASE IN CASH AND CASH EQUIVALENTS</b>	(5,086,023)	(3,577,525)
<b>CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR</b>	<u>78,713,345</u>	<u>82,290,870</u>
<b>CASH AND CASH EQUIVALENTS AT END OF YEAR</b>	<u>\$ 73,627,322</u>	<u>\$ 78,713,345</u>

The accompanying notes are an integral part of these financial statements.

*San Bernardino Valley Municipal Water District*

**Statement of Cash Flows, (Continued)  
For the Year Ended June 30, 2023  
(With Comparative Data for Prior Year)**

	2023	2022
<b>RECONCILIATION TO STATEMENTS OF NET POSITION</b>		
Current assets:		
Cash and cash equivalents - current	\$ 1,869,496	\$ 2,742,268
Cash and cash equivalents - restricted	71,757,826	75,971,077
Total cash and cash equivalents	\$ 73,627,322	\$ 78,713,345
<b>RECONCILIATION OF OPERATING LOSS TO NET CASH USED FOR OPERATING ACTIVITIES</b>		
Operating loss	\$ (72,993,598)	\$ (67,904,873)
Adjustments to reconcile operating loss to net cash used for operating activities:		
Depreciation and amortization	23,263,700	21,695,987
Changes in assets and liabilities:		
(Increase) decrease in:		
Accounts receivable	(3,356,034)	705,853
Other receivable	43,536	(74,656)
Prepaid expenses	-	(563)
Water bank inventory	444,113	-
Deferred outflows of resources		
Pension related	(3,125,685)	(137,775)
Other post-employment benefits related	(410,287)	151,103
Increase (decrease) in:		
Accounts payable	4,229,279	(596,720)
Accrued employee benefits	179,668	143,827
Unearned revenue	3,030,423	7,084,038
Deposits	39,600	39,600
Net pension liability	5,532,830	(3,822,399)
Net other post-employment benefits liability (asset)	(2,169,644)	(814,544)
Deferred inflows of resources		
Pension related	184,205	34,534
Other post-employment benefits related	1,058,032	(523,441)
Net cash used for operating activities	\$ (44,049,862)	\$ (44,020,029)
<b>SCHEDULE OF NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES</b>		
Capital asset additions included in accounts payable	\$ 2,983,479	\$ 12,693

The accompanying notes are an integral part of these financial statements.

# *San Bernardino Valley Municipal Water District*

## **Notes to the Basic Financial Statements For the Year Ended June 30, 2023**

---

### **Note 1: Reporting Entity and Summary of Significant Accounting Policies**

#### ***Organization and operations of the reporting entity***

San Bernardino Valley Municipal Water District (the District) was formed on February 17, 1954, under the Municipal Water District Act of 1911. The District is one of 29 contractors to the California State Water Project, which delivers water from Northern California to various parts of the state. The purpose of the District is to import and deliver water into its service area through participation in the State Water Project and to manage groundwater storage within its boundaries. The District's service area encompasses approximately 352 square miles in southwestern San Bernardino County. It spans the eastern two-thirds of the San Bernardino Valley, the Crafton Hills, and a portion of the Yucaipa Valley, and includes portions of the cities of San Bernardino, Colton, Loma Linda, Redlands, Rialto, Bloomington, Highland, Grand Terrace, and Yucaipa. The District is governed by a five-member board, representing five geographical divisions within the District, which is elected by the citizens in a general popular election.

The San Bernardino Valley Municipal Water District Financing Corporation (the Corporation) was created in May of 2011 by a joint exercise of powers agreement for the purpose of acquiring, constructing, rehabilitating, financing and refinancing, or providing for the sale or leasing of public capital improvements. It is governed by a Board of Directors comprised of the District's Board of Directors. The Corporation has issued debt which is secured solely from installment payments payable under an installment purchase agreement entered into by the District and the Corporation. All accounts or funds created and established pursuant to any instrument or agreement to which the Corporation is a party, and any interest earned or accrued thereon, shall incur to the benefit of the District. Separate financial statements are not prepared for the Corporation. It is reported as a blended component unit.

#### ***Measurement focus, basis of accounting and financial statement presentation***

The District's financial statements have been prepared using the economic resources measurement focus and the accrual basis of accounting, in conformity with generally accepted accounting principles (GAAP) and the Uniform Systems of Accounts for Water Utility Districts as prescribed by the Controller of the State of California. Under this basis, revenues are recorded when earned and expenses are recorded when the liability is incurred, regardless of the timing of the related cash flows. Property taxes are recognized as revenues in the year for which they are levied. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider have been met.

The District has elected to follow all pronouncements of the Governmental Accounting Standards Board (GASB).

#### ***Use of estimates***

The preparation of financial statements in conformity with generally accepted accounting principles requires the use of estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

#### ***Cash and cash equivalents***

For the purposes of the statement of cash flows, cash and cash equivalents consist of cash on hand, demand deposits at financial institutions, investments in money market funds and government securities that are highly liquid and readily available with an original maturity of three months or less, and deposits in the State of California Local Agency Investment Fund (LAIF). Deposits in LAIF can be withdrawn at any time without penalty.

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 1: Reporting Entity and Summary of Significant Accounting Policies, (Continued)**

***Investments***

Investments are stated at fair value (the value at which financial instruments could be exchanged in a current transaction between willing parties, other than in a forced liquidation sale). Changes in fair value that occur during a fiscal year are recognized as investment income reported for that fiscal year. Investment income includes interest earnings, changes in fair value, and any gains or losses realized upon the liquidation or sale of investments.

***Allowance for doubtful accounts***

Notes and accounts receivable are reported net of an allowance for uncollectible accounts. Allowances are reported when notes and accounts are proven to be uncollectible. There were no allowances for uncollectible accounts to be netted with accounts or notes receivable for 2023. Refer to Note 6 for details of the notes receivable.

***Prepaid expenses***

Certain payments to vendors reflect costs or deposits applicable to future accounting periods and are recorded as prepaid items in the financial statements.

***Inventories***

Inventories are valued at purchase cost using the weighted average cost of consumption method. Refer to Note 4 for more information regarding inventory.

***Capital assets***

Capital assets are stated at original cost. District policy has set the capitalization threshold for reporting capital assets at \$5,000. Upon retirement or other disposition of capital assets, the cost and related accumulated depreciation are removed from the respective balances and any gains or losses are recognized. The cost of maintenance is charged to operating expense. Land, right of ways, pipeline capacity, and construction in progress are not depreciated. Other tangible property, plant and equipment of the District are depreciated using the straight-line method over the following estimated useful lives:

<u>Capital asset classes</u>	<u>Useful Lives</u>
Buildings	30-40
Furniture, fixtures and equipment	5-50
Vehicles	5-10
Water transportation and distributions lines	10-100

The capital cost component of the transportation charges and the Delta water charge the District pays for participation rights in the State Water Project are being capitalized as paid and amortized using the straight-line method over the remaining life of the State Water Contract, which expires in 2035.

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 1: Reporting Entity and Summary of Significant Accounting Policies, (Continued)**

***Employee benefits***

District employees earn vacation and sick leave days based on length of service. Employees may accumulate vacation time not to exceed two annual vacation periods, as determined by length of service, and unused sick leave to a maximum of 1,280 hours. Upon termination, the District is obligated to compensate employees for 100% of the accrued unused vacation time, and 25% of the accrued unused sick leave. Compensated absences are presented in the current liabilities section of the statement of net position.

The District provides a Health and Dependent Care Reimbursement Plan to employees eligible under the District's plan. Any unused benefits under this plan carry over to following years to a maximum of \$25,000. The accrued medical reimbursement plan liability is presented in the current liabilities section of the statement of net position.

The District provides a deferred compensation plan to employees on a voluntary basis. Employees may elect to have a portion of their current earnings withheld and invested with Voya Financial and Annuity Company or PERS deferred compensation plan. Benefits are generally available upon the employee's death, disability, retirement, severe hardship, or termination of employment.

***Restricted resources***

When both restricted and unrestricted resources are available for use, the District uses restricted resources first, then unrestricted resources as they are needed, in accordance with its Reserve Policy.

***Net position***

Net position is categorized as follows:

- *Net investment in capital assets* – This component of net position consists of capital assets, net of accumulated depreciation and reduced by any outstanding debt against the acquisition, construction or improvement of those assets.
- *Restricted net position* – This component of net position consists of constraints placed on net position use through external constraints imposed by creditors, grantors, contributors, or laws or regulations of other governments or constraints imposed by law through constitutional provisions or enabling legislation.
- *Unrestricted net position* – This component of net position consists of net position that does not meet the definition of *restricted* or *net investment in capital assets*.

***Operating and nonoperating activities***

Revenues and expenses are distinguished between operating and nonoperating items. Operating revenues generally result from providing services in connection with the District's principal ongoing operations. The principal operating revenues of the District are water sales.

Operating expenses include costs associated with the purchasing, pumping, and distribution of water, administrative expenses, and depreciation of capital assets. All revenues and expenses not meeting these definitions are reported as nonoperating revenues and expenses.

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 1: Reporting Entity and Summary of Significant Accounting Policies, (Continued)**

***Property taxes***

Property taxes are attached as an enforceable lien on property as of March 1. Taxes are levied on July 1 and are due in two installments. The first installment is due on November 1 and is payable through December 10 without penalty. The second installment is due on February 1 and becomes delinquent on April 10. Property taxes are remitted to the District from the County of San Bernardino and County of Riverside at various times throughout the year.

***Contributions***

Contributions in aid of construction represent cash and capital assets contributed to the District by other governmental agencies for the acquisition, construction, or improvement of District capital assets.

***Pension plans***

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Plan and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis. For this purpose, benefit payments (including refunds of employee contributions) are recognized when currently due and payable in accordance with the benefit terms. Investments are reported at fair value.

GASB 68 requires that the reported results must pertain to liability and asset information within certain defined timeframes. For this report, the following timeframes are used.

Valuation Date (VD)	June 30, 2021
Measurement Date (MD)	June 30, 2022
Measurement Period (MP)	July 1, 2021 to June 30, 2022

***Other post-employment benefits (OPEB)***

For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the District's plan (OPEB Plan) and additions to/deductions from the OPEB Plan's fiduciary net position have been determined on the same basis. For this purpose, benefit payments are recognized when currently due and payable in accordance with the benefit terms. Investments are reported at fair value.

GASB 75 requires that the reported results must pertain to liability and asset information within certain defined timeframes. For this report, the following timeframes are used:

Valuation Date (VD)	June 30, 2022
Measurement Date (MD)	June 30, 2022
Measurement Period (MP)	July 1, 2021 to June 30, 2022

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 1: Reporting Entity and Summary of Significant Accounting Policies, (Continued)**

***Deferred outflows/inflows of resources***

In addition to assets, the statement of net position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, *deferred outflows of resources*, represents a consumption of net position that applies to future periods and so will not be recognized as an outflow of resources (expenses) until then. The District currently has pension and other post-employment benefits related deferred outflows of resources.

In addition to liabilities, the statement of net position will sometimes report a separate section for deferred inflows of resources. This separate financial element, *deferred inflows of resources*, represents an acquisition of net position that applies to future periods and so will not be recognized as an inflow of resources (revenue) until that time. The District currently has pension, other post-employment benefits, and leases related deferred inflows of resources.

**Note 2: Cash, Cash Equivalents, and Investments**

Cash, cash equivalents, and investments as of June 30, 2023 are classified in the accompanying financial statements as follows:

Statement of Net Position:

Current assets:

Cash in bank and on hand	\$ 544,861
Cash in Local Agency Investment Fund	1,324,635
Total cash and cash equivalents	<u>1,869,496</u>
Investments	105,932,789
Total unrestricted	<u>107,802,285</u>

Restricted:

Cash in bank	411,922
Cash in Local Agency Investment Fund	70,963,389
Cash held by trustee	1
Cash held in trust	382,514
Total cash and cash equivalents	<u>71,757,826</u>
Investments	452,056,316
Department of Water Resources bonds	5,000
Total investments	<u>452,061,316</u>
Total restricted	<u>523,819,142</u>
 Total cash and cash equivalents and investments	 <u>\$ 631,621,427</u>

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 2: Cash, Cash Equivalents, and Investments, (Continued)**

Cash, cash equivalents, and investments as of June 30, 2023 consisted of the following:

Cash on hand	\$	350
Deposits with financial institutions		1,338,948
Cash in Local Agency Investment Fund		72,288,024
Investments		557,994,105
		<hr/>
Total cash and cash equivalents and investments	\$	<u>631,621,427</u>

***Investments authorized by the California Government Code and the District's investment policy***

The table below identifies the investment types that are authorized by the District in accordance with Section 53601 of the California Government Code (or the District's investment policy, where more restrictive). The table also identifies certain provisions of the California Government Code (or the District's investment policy, where more restrictive) that address interest rate risk, and concentration of credit risk.

Authorized investment type	Maximum maturity	Maximum percentage of portfolio	Maximum investment in one issuer
U.S. Treasury Bills, Notes and Bonds	5 years	None	None
Federal Agency Securities	5 years	None	None
Banker's Acceptances	180 days	40%	30%
Commercial Paper	270 days	25%	10%
Negotiable Certificates of Deposit	5 years	30%	None
Repurchase Agreements	1 year	None	None
California Local Agency Investment Fund	N/A	None	\$ 75,000,000
JPA Pools/CAMP	N/A	None	None
Medium-Term Notes	5 years	30%	None
Money Market Funds	N/A	20%	None
Collateralized Bank Deposits	5 years	25%	None
Municipal Bonds	5 years	30%	None

***Interest rate risk***

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value is to changes in market interest rates. One of the ways that the District manages its exposure to interest rate risk is by purchasing a combination of shorter and longer term investments and by timing cash flows from maturities so that a portion of the portfolio is maturing or coming close to maturity evenly over time as necessary to provide the cash flow and liquidity needed for operations.



*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

**Note 2: Cash, Cash Equivalents, and Investments, (Continued)**

***Interest rate risk, (Continued)***

As of June 30, 2023, the District had the following investments and maturities:

Investment type	Amount	Remaining maturity (in months)			
		12 or less	13 to 24	25 to 36	More than 36
Federal Agency Securities	\$ 6,647,003	\$ 6,019,155	\$ -	\$ 627,848	\$ -
JPA Pools/CAMP	216,146,211	216,146,211	-	-	-
Municipal Bonds	7,041,660	3,956,485	3,085,175	-	-
U.S. Treasury Bills, Notes and Bonds	217,979,020	20,402,197	119,943,868	77,632,955	-
Negotiable Certificates of Deposit	8,831,072	926,198	2,130,653	5,774,221	-
Medium-Term Notes	94,513,292	14,542,780	49,655,648	28,711,504	1,603,360
Commercial Paper	5,819,945	5,819,945	-	-	-
Money Market Funds	1,015,902	1,015,902	-	-	-
<b>Total investments</b>	<b>\$ 557,994,105</b>	<b>\$ 268,828,873</b>	<b>\$ 174,815,344</b>	<b>\$ 112,746,528</b>	<b>\$ 1,603,360</b>

***Disclosures relating to credit risk***

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. Presented below is the minimum rating required by (where applicable) the California Government Code, the District's investment policy and the actual rating as of year-end for each investment type.

Credit ratings of investments as of June 30, 2023 were as follows:

Investment type	Amount	Minimum legal rating	Rating as of year end				
			AAA	AA	A	BBB	Not rated
Federal Agency Securities	\$ 6,647,003	N/A	\$ -	\$ 6,647,003	\$ -	\$ -	\$ -
JPA Pools/CAMP	216,146,211	N/A	216,146,211	-	-	-	-
Municipal Bonds	7,041,660	N/A	205,657	2,449,521	-	-	4,386,482
U.S. Treasury Bills, Notes and Bonds	217,979,020	N/A	-	217,979,020	-	-	-
Negotiable Certificates of Deposit	8,831,072	A	-	3,056,851	5,774,221	-	-
Medium-Term Notes	94,513,292	A	-	25,229,901	61,790,056	7,493,335	-
Commercial Paper	5,819,945	A	-	-	5,819,945	-	-
Money Market Funds	1,015,902	AAA	1,015,902	-	-	-	-
<b>Total investments</b>	<b>\$ 557,994,105</b>		<b>\$ 217,367,770</b>	<b>\$ 255,362,296</b>	<b>\$ 73,384,222</b>	<b>\$ 7,493,335</b>	<b>\$ 4,386,482</b>

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 2: Cash, Cash Equivalents, and Investments, (Continued)**

***Concentration of credit risk***

The investment policy of the District contains no limitations on the amount that can be invested in any one issuer beyond that stipulated by the California Government Code. The District's investment policy is to apply the prudent investor standard as set forth in the California Government Code: investments are made as a prudent person would be expected to act, with discretion and intelligence, to seek reasonable income, preserve capital, and, in general, avoid speculative investments.

The District's investment policy limits certain investments to minimum credit ratings issued by nationally recognized statistical rating organizations. The District's investments in commercial paper, medium-term notes, and money market funds at June 30, 2023, met their respective minimum credit ratings requirements.

The District did not have any investments in any one issuer (other than U.S. Treasury securities, mutual funds, and external investment pools) that represent 5% or more of the total District's investments.

***Custodial credit risk***

Custodial credit risk for *deposits* is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for *investments* is the risk that in the event of the failure of the counterparty to a transaction, a government will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The California Government Code and the District's investment policy do not contain legal or policy requirements that would limit the exposure to custodial credit risk for deposits or investments, other than the following provision for deposits. The California Government Code requires that a financial institution secure deposits made by state or local governmental units by pledging securities in an undivided collateral pool held by a depository regulated under state law. The market value of the pledged securities in the collateral pool must equal at least 110% of the total amount deposited by the public agencies.

As of June 30, 2023, demand deposits with financial institutions in excess of federal depository insurance limits of \$250,000 were fully collateralized by securities in a separate account held by the same institution.

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 2: Cash, Cash Equivalents, and Investments, (Continued)**

***Investment in State Investment Pool***

The District is a voluntary participant in the Local Agency Investment Fund (LAIF), which is part of the Pooled Money Investment Account that is regulated by the California Government Code under the oversight of the Treasurer of the State of California. The fair value of the District's investment in LAIF is based upon the District's pro-rata share of the fair value provided by LAIF for the entire LAIF portfolio (in relation to the amortized cost of that portfolio), which was \$72,288,024 as of June 30, 2023. The balance available for withdrawal is based on the accounting records maintained by LAIF, which are recorded on an amortized cost basis. The District may invest up to \$75,000,000 in the LAIF fund. Investments in LAIF are highly liquid, as deposits can be converted to cash within 24 hours without loss of interest. All investments with LAIF are secured by the full faith and credit of the State of California. Separate LAIF financial statements are available from the California State Treasurer's Office on the internet at [www.treasurer.ca.gov](http://www.treasurer.ca.gov).

***Investment in California Asset Management Program***

The District is a voluntary participant in the California Asset Management Program (CAMP), which was established as a nontaxable investment portfolio under provisions of the California Joint Exercise of Powers Act to provide California Public Agencies with comprehensive investment management services. There are no minimum deposit requirements or limits on deposits and withdrawals. Dividends from net investment income are declared on a daily basis and paid on the last day of the month. Dividends paid are automatically reinvested in each account by the purchase of additional shares. The contract creating the program specifies the types of investments that can be made by the investment portfolio with available cash: U.S. Government securities, securities of federally sponsored agencies, repurchase agreements, banker's acceptances, negotiable certificates of deposit and commercial paper. The fair value of the District's investment in this pool is reported in the accompanying financial statements at amounts based upon the District's pro-rata share of the fair value provided by CAMP which was \$216,146,211 as of June 30, 2023.

***Investments with fair values highly sensitive to interest rate fluctuations***

At June 30, 2023, the District did not hold investments that were highly sensitive to interest rate fluctuations beyond that already indicated in the information provided above.

***Fair value measurements***

GASB Statement No. 72, *Fair Value Measurements and Application*, establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. This hierarchy consists of three broad levels: Level 1 inputs consist of quoted prices (unadjusted) for identical assets and liabilities in active markets that a government can access at the measurement date, Level 2 inputs that are observable for an asset or liability, either directly or indirectly, and Level 3 inputs have the lowest priority and consist of unobservable inputs for an asset or liability.

Investments in the Local Agency Investment Fund are not subject to the fair value hierarchy.

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

**Note 2: Cash, Cash Equivalents, and Investments, (Continued)**

***Fair value measurements, (Continued)***

The District has the following fair value measurements as of June 30, 2023:

Investments by Fair Value Level	Total	Fair Value Measurement Using		
		Level 1	Level 2	Level 3
U.S. Treasury Bills, Notes and Bonds	\$ 217,979,020	\$ 217,979,020	\$ -	\$ -
Federal Agency Securities	6,647,003	-	6,647,003	-
Municipal Bonds	7,041,660	-	7,041,660	-
Negotiable Certificates of Deposit	8,831,072	-	8,831,072	-
Medium-Term Notes	94,513,292	-	94,513,292	-
Commercial Paper	5,819,945	-	5,819,945	-
Total investments by fair value level	340,831,992	\$ 217,979,020	\$ 122,852,972	\$ -
Investments not subject to the fair value hierarchy:				
JPA Pools/CAMP	216,146,211			
Money market mutual funds	1,015,902			
Total	\$ 557,994,105			

The District's investment in the Local Agency Investment Fund of \$72,288,024 is measured at amortized cost which approximated fair value.

The District's investment in the California Asset Management Program of \$216,146,211 is measured at amortized cost which approximated fair value.

**Note 3: Leases Receivable**

On July 1, 2020, the District entered into a 295-month lease as lessor for the use of cell towers on the District's land. An initial lease receivable was recorded in the amount of \$711,951. As of June 30, 2023, the value of the lease receivable is \$688,391. The lessee is required to make monthly variable principal and interest payments of \$2,500, based on annual CPI increases. The lease has an implied interest rate of 2.6%. The value of the deferred inflow of resources as of June 30, 2023 was \$654,029, and the District recognized lease revenue of \$28,961.

On July 1, 2020, the District entered into a 244-month lease as lessor for the use of cell towers on the District's land. An initial lease receivable was recorded in the amount of \$533,734. As of June 30, 2023, the value of the lease receivable is \$505,782. The lessee is required to make monthly variable principal and interest payments of \$2,300, based on annual CPI increases. The lease has an implied interest rate of 2.5%. The value of the deferred inflow of resources as of June 30, 2023 was \$481,236, and the District recognized lease revenue of \$26,249.

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 3: Leases Receivable (Continued)**

The following is a summary of the leases receivable and related lease revenue for the year ended June 30, 2023:

	Initial Receivable	Remaining Receivable	Deferred Inflows of Resources	Lease Revenue
Lease 1	\$ 711,951	\$ 688,391	\$ 654,029	\$ 28,961
Lease 2	533,734	505,782	481,236	26,249
Total	<u>\$ 1,245,685</u>	<u>\$ 1,194,173</u>	<u>\$ 1,135,265</u>	<u>\$ 55,210</u>

**Note 4: Water Bank Inventory**

The Metropolitan Water District of Southern California, a State Water Project Contractor, has allowed the District to utilize capacity in the Kern Delta Water Bank, for the purpose of increasing water supply in a dry year. The District has stored 2,907 acre-feet at fiscal year ended June 30, 2023. This stored water is classified as a restricted asset and is valued at cost.

The following is a summary of the water bank inventory for the year ended June 30, 2023:

	Acre-feet	Inventory cost
Balance at June 30, 2022	6,300	\$ 824,614
Reductions	(3,393)	(444,113)
Balance at June 30, 2023	<u>2,907</u>	<u>\$ 380,501</u>

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

**Note 5: Capital Assets**

Summaries of changes in capital assets in service for the year ended June 30, 2023 were as follows:

	Balance June 30, 2022	Additions	Deletions	Balance June 30, 2023
Capital assets, not being depreciated:				
Land, right of ways, and pipeline capacity	\$ 105,736,426	\$ 109,305	\$ 1,703,355	\$ 104,142,376
Construction in progress	33,646,067	44,544,203	-	78,190,270
Total capital assets, not being depreciated	<u>139,382,493</u>	<u>44,653,508</u>	<u>1,703,355</u>	<u>182,332,646</u>
Capital assets, being depreciated:				
Buildings	6,958,811	-	-	6,958,811
Distribution lines	198,230,396	-	-	198,230,396
Brine line	7,121,795	-	-	7,121,795
Furniture, fixtures and equipment	1,355,563	245,176	-	1,600,739
Vehicles	593,747	94,569	29,042	659,274
Yucaipa Dam	3,698,238	-	-	3,698,238
Total capital assets, being depreciated	<u>217,958,550</u>	<u>339,745</u>	<u>29,042</u>	<u>218,269,253</u>
Less accumulated depreciation	<u>(71,731,036)</u>	<u>(5,019,090)</u>	<u>(29,042)</u>	<u>(76,721,084)</u>
Total capital assets, being depreciated, net	<u>146,227,514</u>	<u>(4,679,345)</u>	<u>-</u>	<u>141,548,169</u>
Participation rights in State Water Project Facilities	446,283,734	19,583,547	-	465,867,281
Less accumulated amortization	<u>(210,149,872)</u>	<u>(18,244,610)</u>	<u>-</u>	<u>(228,394,482)</u>
Participation rights in State Water Project Facilities, net	<u>236,133,862</u>	<u>1,338,937</u>	<u>-</u>	<u>237,472,799</u>
Total capital assets, net	<u>\$ 521,743,869</u>	<u>\$ 41,313,100</u>	<u>\$ 1,703,355</u>	<u>\$ 561,353,614</u>

Depreciation and amortization expense for the year ended June 30, 2023 was as follows:

Depreciation	\$ 5,019,090
Amortization	<u>18,244,610</u>
Total	<u>\$ 23,263,700</u>

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 6: Notes Receivable**

Notes receivable at June 30, 2023 consisted of the following:

The District entered into a loan agreement with East Valley Water District in January 2015 for the amount of approximately \$4 million for the construction, operation and maintenance of the city creek turnout and the plant 134 Hydroelectric Station. Interest shall accrue monthly on the unpaid and outstanding balance of the costs commencing from the effective date and continuing until repayment in full at the Local Agency Investment Fund interest rate, with accrued but unpaid interest also bearing interest. The term is eleven years, or until the date on which the debt incurred by the District in financing the project is paid in full, including interest or other charges, whichever occurs later.

\$ 1,293,862

The District entered into a loan agreement with West Valley Water District in December 2016 for the amount of approximately \$4.36 million for the construction, operation and maintenance of the Lytle Creek Turnout and the Roemer Hydroelectric Station. Interest is accrued monthly on the unpaid and outstanding balance of the costs commencing from the effective date and continuing until repayment in full at the Local Agency Investment Fund interest rate, with accrued but unpaid interest also bearing interest. The term is eleven years, or until the date on which the debt incurred by the District in financing the project is paid in full, including interest or other charges, whichever occurs later.

1,682,880

Less current portion of notes receivable (760,120)

Total notes receivable, net of current portion \$ 2,216,622

**Note 7: Unearned Revenue**

The District receives cash advances from various water purveyors in exchange for commitments of future water deliveries. As of June 30, 2023, total unearned revenue amounted to \$18,063,354.

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

**Note 8: Long-term Liabilities**

The following is a summary of long-term liabilities payable for the year ended June 30, 2023:

	Balance June 30, 2022	Additions	Deletions	Balance June 30, 2023	Due within one year
2011A Certificates of Participation	\$ 6,735,000	\$ -	\$ (6,735,000)	\$ -	\$ -
Premium on Certificates of Participation	98,045	-	(98,045)	-	-
2023A Interim Notes	-	46,910,000	-	46,910,000	-
2023A Interim Notes Premium	-	2,243,705	-	2,243,705	-
2023B Refunding Revenue Bonds	-	5,615,000	-	5,615,000	-
2023B Bond Premium	-	818,305	-	818,305	-
Total long-term liabilities, net	<u>\$ 6,833,045</u>	<u>\$ 55,587,010</u>	<u>\$ (6,833,045)</u>	<u>\$ 55,587,010</u>	<u>\$ -</u>

**Project Finance Agreements (direct placement)**

The District issued Revenue Certificates of Participation, Series 2011A on July 7, 2011, in the amount of \$8,565,000, to fund capital improvements to the Baseline Feeder Project. The certificates are secured by the District's annual net revenues, meaning the revenues for any given fiscal year, excluding property taxes levied for the State Water Project, less the operation and maintenance costs for that fiscal year. Principal and interest are due in semiannual installments beginning on July 1, 2012 and ending on July 1, 2041. Interest rates range from 2.00% to 4.25%. Certificates are subject to extraordinary prepayment prior to their respective stated maturities at a prepayment price equal to the principal amount thereof plus accrued interest without a premium or penalty.

In May 2012, the District executed a Restated and Amended Agreement for the Construction, Operation and Maintenance of the New Baseline Feeder System with the District of Rialto, Riverside Highland Water Company and the West Valley Water District. The agreement requires annual capital payments by Rialto, Riverside Highland and West Valley to reimburse the District for the Debt Service on the 2011A Certificates of Participation. The District receives 100% reimbursement from the above mentioned entities and pays the annual principal and interest payable on the bonds to the bond trustee. Construction activities funded by the 2011A Certificates of Participation were completed as of June 30, 2013. The 2011A Certificates of Participation were refunded with the 2023B Refunding Revenue Bonds.



*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 8: Long-term Liabilities (continued)**

**WIFIA Loan**

On June 7, 2023, the District and the Upper Santa Ana River Watershed Infrastructure Financing Authority (the Authority) executed and delivered the Water Infrastructure Finance and Innovation Act (WIFIA) Master Agreement and the 2023 WIFIA Loan Agreement relating to the 2023 WIFIA Loan, each with the United States Environmental Protection Agency, for the purpose of financing a portion of the costs of certain capital improvements to the District's System (the "WIFIA Project"). Proceeds of the 2023 WIFIA Loan are expected to be available to repay the principal of the 2023A Interim Notes at maturity or to redeem the 2023A Interim Notes prior to maturity to the extent proceeds of the 2023A Interim Notes are used to pay eligible project costs of the WIFIA Project. While the Authority and the District entered into the WIFIA Master Agreement and the 2023 WIFIA Loan Agreement on June 7, 2023, there can be no assurance that any loan proceeds will be available to pay the principal of the 2023A Interim Notes at maturity. The WIFIA Loan is authorized to a principal amount of up to \$69,818,796. The 2023 WIFIA Loan bears interest at a rate of 3.88% per annum. In addition, the District and the Authority entered into a second WIFIA Installment Purchase Agreement on June 7, 2023 and an additional WIFIA Loan agreement, in accordance with the provisions of the WIFIA Master Agreement, in 2024 in connection with a WIFIA Loan in the expected principal amount up to \$23,248,100 (the "2024 WIFIA Loan"). The 2024 WIFIA Loan may be entered into at a time earlier or later than the time currently projected or in an amount other than as currently projected. The 2024 WIFIA Loan is projected to bear interest at a rate of 4.5% per annum.

As of June 30, 2023, the District has not drawn upon this loan.

**2023A Interim Notes (direct placement)**

The District issued the Interim Notes, Series 2023A on June 8, 2023, in the amount of \$46,910,000, to fund the acquisition of certain capital improvement projects enhancing the system included in the 2023 WIFIA Project.

The notes are secured by the WIFIA Loan, meaning that draws can be made from the loan to make principal amounts due at maturity. Principal payment is expected to be made from a draw of the 2023 WIFIA Loan on June 30, 2026. Interest is due in semiannual installments beginning on December 1, 2023, and ending on January 1, 2026. The Notes bear interest at a rate of 5.00%.

The aggregate principal and interest debt to maturity payments for the 2023A Interim Notes are summarized as follows:

<b>Year ending June 30,</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>
2024	\$ -	\$ 2,254,286	\$ 2,254,286
2025	-	2,345,500	2,345,500
2026	46,910,000	1,368,208	48,278,208
<b>Total</b>	<b>\$ 46,910,000</b>	<b>\$ 5,967,994</b>	<b>\$ 52,877,994</b>

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 8: Long-term Liabilities (continued)**

**2023B Refunding Revenue Bonds (direct placement)**

The District issued the Refunding Revenue Bonds, Series 2023B on June 8, 2023, in the amount of \$5,615,000, to prepay all of the outstanding 2011A Certificates. Principal and interest are payable semi-annually on each July 1 and January 1, commencing January 1, 2024. The Bonds bear interest at a rate of 5.00%.

In the event of default or termination, the District has agreed, upon demand, to immediately repay the Trustee the principal amount of bonds due at the time.

The aggregate principal and interest debt to maturity payments for the 2023B Refunding Revenue Bonds are summarized as follows:

<b>Year ending June 30,</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>
2024	\$ -	\$ 152,853	\$ 152,853
2025	195,000	275,875	470,875
2026	205,000	265,875	470,875
2027	220,000	255,250	475,250
2028	230,000	244,000	474,000
2029 - 2033	1,335,000	1,030,125	2,365,125
2034 - 2038	1,710,000	652,000	2,362,000
2039 - 2042	1,720,000	177,000	1,897,000
<b>Total</b>	<b>\$ 5,615,000</b>	<b>\$ 3,052,978</b>	<b>\$ 8,667,978</b>

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 9: Defined Benefit Pension Plans (PERS)**

**A. General information about the pension plan**

***Plan description***

All qualified permanent and probationary employees are eligible to participate in the Public Agency Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (Plan or PERF C) administered by the California Public Employees' Retirement System (CalPERS.) The Plan consists of a miscellaneous pool and a safety pool (also referred to as "risk pools"), which are comprised of individual employer miscellaneous and safety rate plans, respectively. Plan assets may be used to pay benefits for any employer rate plan of the safety and miscellaneous pools. Accordingly, rate plans within the safety or miscellaneous pools are not separate plans under generally accepted accounting principles. Individual employers may sponsor more than one rate plan in the miscellaneous or safety risk pools. The District participates in three miscellaneous rate plans. Benefit provisions under the Plan are established by State statute and District resolution. CalPERS issues publicly available reports that include a full description of the pension plan regarding benefit provisions, assumptions and membership information that can be found on the CalPERS' website, at [www.calpers.ca.gov](http://www.calpers.ca.gov).

***Benefits provided***

CalPERS provides service retirement and disability benefits, annual cost of living adjustments and death benefits to plan members, who must be public employees and beneficiaries. Benefits are based on years of credited service, equal to one year of full-time employment. Members with five years of total service are eligible to retire at age 50 with statutorily reduced benefits. All members are eligible for non-duty disability benefits after 5 years of service. The death benefit is one of the following: the Basic Death Benefit, the 1957 Survivor Benefit, or the Optional Settlement 2W Death Benefit. The cost-of-living adjustments for each plan are applied as specified by the Public Employees' Retirement Law.

The Plan operates under the provisions of the California Public Employees' Retirement Law (PERL), the California Public Employees' Pension Reform Act of 2013 (PEPRA), and the regulations, procedures and policies adopted by the CalPERS Board of Administration. The Plan's authority to establish and amend the benefit terms are set by the PERL and PEPRA, and may be amended by the California state legislature and in some cases require approval by the CalPERS Board.

The Plan's provisions and benefits in effect at June 30, 2023 are summarized as follows:

	Prior to January 1, 2011	On or after January 1, 2011 and prior to January 1, 2013	On or after January 1, 2013
Hire date			
Benefit formula	3.0% @ 60	2.0% @ 60	2.0% @ 62
Benefit vesting schedule	5 years of service	5 years of service	5 years of service
Benefit payments	monthly for life	monthly for life	monthly for life
Retirement age	50-60	50-60	52-62
Monthly benefits, as a % of eligible compensation	2.0%-3.0%	1.092%-2.418%	1.0%-2.5%
Required employee contribution rates	8.0%	7.0%	7.5%
Required employer contribution rates	17.220%	10.480%	8.190%

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 9: Defined Benefit Pension Plans (PERS), (Continued)**

**A. General information about the pension plan, (Continued)**

**Contributions**

Section 20814(c) of the California Public Employees' Retirement Law (PERL) requires that the employer contribution rates for all public employers are determined on an annual basis by the actuary and shall be effective on the July 1 following notice of a change in the rate. The total plan contributions are determined through CalPERS' annual actuarial valuation process. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. The employer is required to contribute the difference between the actuarially determined rate and the contribution rate of employees. Employer contribution rates may change if plan contracts are amended. Payments made by the employer to satisfy contribution requirements that are identified by the pension plan terms as plan member contribution requirements are classified as plan member contributions. Employer Contributions to the Plan for the fiscal year ended June 30, 2023 were \$924,370. The actual employer payments of \$778,783 made to CalPERS by the District during the measurement period ended June 30, 2022 differed from the District's proportionate share of the employer's contributions of \$1,530,255 by \$751,472, which is being amortized over the expected average remaining service lifetime in the Public Agency Cost-Sharing Multiple Employer Plan.

**B. Net pension liability**

The District's net pension liability for the Plan is measured as the total pension liability, less the pension plan's fiduciary net position. The net pension liability of the Plan is measured as of June 30, 2022, using an annual actuarial valuation as of June 30, 2021 rolled forward to June 30, 2022 using standard update procedures. A summary of principal assumptions and methods used to determine the net pension liability is as follows.

**Actuarial methods and assumptions used to determine total pension liability**

	<u>Miscellaneous</u>
Valuation Date	June 30, 2021
Measurement Date	June 30, 2022
Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Fair Value of Assets
Actuarial Assumptions:	
Discount Rate	6.90%
Inflation	2.30%
Salary Increases	Varies by Entry Age and Service
Mortality Rate Table <sup>(1)</sup>	Derived using CALPERS' membership data for all funds
Post Retirement Benefit Increase	The lesser of contract COLA or 2.50% until purchasing power protection allowance floor on purchasing power applies, 2.50% thereafter.

(1) The mortality table used was developed based on CalPERS-specific data. The probabilities of mortality are based on the 2021 CalPERS Experience Study for the period from 2001 to 2019. Pre-retirement and Post-retirement mortality rates include generational mortality improvement using 80% of Scale MP-2020 published by the Society of Actuaries. For more details on this table, please refer to the CalPERS Experience Study and Review of Actuarial Assumptions report from November 2021 that can be found on the CalPERS website.

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 9: Defined Benefit Pension Plans (PERS), (Continued)**

**B. Net pension liability, (Continued)**

***Long-term expected rate of return***

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class.

In determining the long-term expected rate of return, CalPERS took into account both short-term and long-term market return expectations. Using historical returns of all of the funds' asset classes, expected compound (geometric) returns were calculated over the next 20 years using a building-block approach. The expected rate of return was then adjusted to account for assumed administrative expenses of 10 Basis points.

The expected real rates of return by asset class are as follows:

<b>Asset Class</b>	<b>Assumed Asset Allocation</b>	<b>Real Return <sup>1,2</sup></b>
Global equity - cap-weighted	30.00%	4.54%
Global equity - non-cap-weighted	12.00%	3.84%
Private Equity	13.00%	7.28%
Treasury	5.00%	0.27%
Mortgage-backed securities	5.00%	0.50%
Investment grade corporates	10.00%	1.56%
High yield	5.00%	2.27%
Emerging market debt	5.00%	2.48%
Private debt	5.00%	3.57%
Real assets	15.00%	3.21%
Leverage	(5.00%)	(0.59%)

<sup>1</sup> An expected inflation of 2.30% used for this period

<sup>2</sup> Figures are based on the 2021 Asset Liability Management study

***Change of assumptions***

Effective with the June 30, 2021, valuation date (2022 measurement date), the accounting discount rate was reduced from 7.15% to 6.90%. In determining the long-term expected rate of return, CalPERS took into account long-term market return expectations as well as the expected pension fund cash flows. Projected returns for all asset classes are estimated, combined with risk estimates, and are used to project compound (geometric) returns over the long term. The discount rate used to discount liabilities was informed by the long-term projected portfolio return. In addition, demographic assumptions and the inflation rate assumption were changed in accordance with the 2021 CalPERS Experience Study and Review of Actuarial Assumptions.

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 9: Defined Benefit Pension Plans (PERS), (Continued)**

**B. Net pension liability, (Continued)**

***Discount rate***

The discount rate used to measure the total pension liability for PERF C was 6.90%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current member contribution rates and that contributions from employers will be made at statutorily required rates, actuarially determined. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

***Subsequent Events***

On July 12, 2021, CalPERS reported a preliminary 21.3% net return on investments for fiscal year 2020-21. Based on the thresholds specified in CalPERS Funding Risk Mitigation policy, the excess return of 14.3% prescribes a reduction in investment volatility that corresponds to a reduction in the discount rate used for funding purposes of 0.20%, from 7.00% to 6.80%. Since CalPERS was in the final stages of the four-year Asset Liability Management (ALM) cycle, the board elected to defer any changes to the asset allocation until the ALM process concluded, and the board could make its final decision on the asset allocation in November 2021.

On November 17, 2021, the board adopted a new strategic asset allocation. The new asset allocation along with the new capital market assumptions, economic assumptions and administrative expense assumption support a discount rate of 6.90% (net of investment expense but without a reduction for administrative expense) for financial reporting purposes. This includes a reduction in the price inflation assumption from 2.50% to 2.30% as recommended in the November 2021 CalPERS Experience Study and Review of Actuarial Assumptions. This study also recommended modifications to retirement rates, termination rates, mortality rates and rates of salary increases that were adopted by the board. These new assumptions will be reflected in the GASB 68 accounting valuation reports for the June 30, 2022, measurement date.

***Pension plan fiduciary net position***

Information about the pension plan's assets, deferred outflows of resources, liabilities, deferred inflows of resources, and fiduciary net position are presented in CalPERS' audited financial statements, which are publicly available reports that can be obtained at CalPERS' website, at [www.calpers.ca.gov](http://www.calpers.ca.gov). The plan's fiduciary net position and additions to/deductions from the plan's fiduciary net position have been determined on the same basis used by the pension plan, which is the economic resources measurement focus and the accrual basis of accounting. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan. Investments are reported at fair value.

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 9: Defined Benefit Pension Plans (PERS), (Continued)**

**C. Proportionate share of net pension liability**

The following table shows the District's proportionate share of the net position liability over the measurement period.

	Increase (Decrease)		
	Plan Total Pension Liability	Plan Fiduciary Net Position	Plan Net Pension Liability / (Asset)
Balance at: 6/30/2021 (VD)	\$ 32,612,164	\$ 32,762,312	\$ (150,148)
Balance at: 6/30/2022 (MD)	34,883,970	29,501,288	5,382,682
Net changes during 2021-22	2,271,806	(3,261,024)	5,532,830

Valuation Date (VD), Measurement Date (MD)

The District's proportion of the net pension liability was determined by CalPERS using the output from the Actuarial Valuation System and the fiduciary net position, as provided in the CalPERS Public Agency Cost-Sharing Allocation Methodology Report, which is a publicly available report that can be obtained at CalPERS' website, at [www.calpers.ca.gov](http://www.calpers.ca.gov). The District's proportionate share of the net pension liability for the miscellaneous Plan as of the June 30, 2021 and 2022 measurement dates was as follows:

Proportion - June 30, 2021	(0.00791%)
Proportion - June 30, 2022	0.11503%
Change - Increase (Decrease)	0.12294%

***Sensitivity of the proportionate share of the net pension liability to changes in the discount rate***

The following presents the District's proportionate share of the net pension liability of the Plan as of the measurement date, calculated using the discount rate of 6.9 percent, as well as what the net pension liability would be if it were calculated using a discount rate that is 1 percentage-point lower (5.9 percent) or 1 percentage-point higher (7.9 percent) than the current rate:

	Discount Rate - 1% (5.90%)	Current Discount Rate (6.90%)	Discount Rate + 1% (7.90%)
Miscellaneous Tier 1 Plan's Net Pension Liability (Asset)	\$ 10,137,996	\$ 5,382,682	\$ 1,470,238

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 9: Defined Benefit Pension Plans (PERS), (Continued)**

**C. Proportionate share of net pension liability, (Continued)**

***Amortization of Deferred Outflows and Deferred Inflows of Resources***

Under GASB 68, gains and losses related to changes in total pension liability and fiduciary net position are recognized in pension expense systematically over time.

The first amortized amounts are recognized in pension expense for the year the gain or loss occurs. The remaining amounts are categorized as deferred outflows and deferred inflows of resources related to pensions and are to be recognized in future pension expense.

The amortization period differs depending on the source of the gain or loss:

Net difference between projected and actual earnings on pension plan investments	5-year straight-line amortization
--	-----------------------------------

All other amounts	Straight-line amortization over the expected average remaining service lives (EARSL) of all members that are provided with benefits (active, inactive and retired) as of the beginning of the measurement period
-------------------	--

The expected average remaining service lifetime (EARSL) is calculated by dividing the total future service years by the total number of plan participants (active, inactive, and retired) in the Public Agency Cost-Sharing Multiple-Employer Plan (PERF C).

The EARSL for PERF C for the measurement period ending June 30, 2022 is 3.7 years, which was obtained by dividing the total service years of 574,665 (the sum of remaining service lifetimes of the active employees) by 153,587 (the total number of participants: active, inactive, and retired) in PERF C. Inactive employees and retirees have remaining service lifetimes equal to 0. Total future service is based on the members' probability of decrementing due to an event other than receiving a cash refund.



*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

**Note 9: Defined Benefit Pension Plans (PERS), (Continued)**

**D. Pension expense and deferred outflows and deferred inflows of resources related to pensions**

As of the start of the measurement period (July 1, 2021), the District's net pension asset for the plan was \$150,148. For the measurement period ending June 30, 2022 (the measurement date), the District incurred a pension expense of \$3,515,720 for the Plan.

As of June 30, 2023, the District has deferred outflows and deferred inflows of resources related to pensions as follows:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Changes of Assumptions	\$ 551,568	\$ -
Differences between Expected and Actual Experience	108,095	72,397
Differences between Projected and Actual Investment Earnings	985,964	-
Differences between Employer's Contributions and Proportionate Share of Contributions	-	966,769
Change in Employer's Proportion	2,413,924	-
Pension Contributions made Subsequent to Measurement Date	924,370	-
	<u>\$ 4,983,921</u>	<u>\$ 1,039,166</u>

The amounts above are net of outflows and inflows recognized in the 2021-22 measurement period expense. Contributions subsequent to the measurement date of \$924,370 reported with deferred outflows of resources will be recognized as a reduction of the net pension liability in the upcoming fiscal year. Other amounts reported as deferred outflows and deferred inflows of resources related to pensions will be recognized in future pension expense as follows:

<u>Fiscal Year Ending June 30:</u>	<u>Deferred Outflows/(Inflows) of Resources, Net</u>
2024	\$ 961,910
2025	902,500
2026	552,926
2027	603,049
2028	-
Thereafter	-
	<u>\$ 3,020,385</u>

**E. Payable to the pension plan**

At June 30, 2023, the District reported a payable of \$-0- for the outstanding amount of contributions to the pension plan required for the year then ended.

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 10: Other-Post Employment Benefits (OPEB)**

***Plan description***

The District offers a health care plan to active and retired employees, as well as their qualified dependents. For employees hired prior to April 19, 2011, the District pays the entire cost of the monthly medical and dental insurance premiums for retired employees and their dependents who have reached at least age 50 with a minimum of 10 years' service. District-provided benefits continue for the life of the retiree and eligible family members. Benefits are also continued to surviving family members in the event of the death of an active eligible employee if age plus service at death equals 60 or more. For employees hired after April 19, 2011, who have reached at least age 60 with a minimum of 15 years of service, the District pays the entire cost of the monthly medical and dental insurance premiums for retired employees and their dependents until the employee reaches the age of Medicare eligibility as determined by the United States Department of Health and Human Services. The District participates in the ACWA medical program and Delta Dental of California. Retirees may enroll in any of the single-employer benefit plans offered by the District. The authority to establish and amend postemployment benefits resides with the District's Board of Directors.

The District intends to pre-fund its other postemployment benefits (OPEB) with CalPERS through the California Employers' Retiree Benefits Trust (CERBT) Fund. CERBT is a trust fund that allows public employers to pre-fund the future cost of their retiree health insurance benefits and OPEB obligations for their covered employees or retirees. Employers that elect to participate in the CERBT make contributions into the trust fund. Participating employers use investment earnings to pay for retiree health benefits, similar to the CalPERS pension trust. CalPERS issues a publicly available annual financial report that includes financial statements and required supplementary information for the CERBT. That report may be obtained by writing to CalPERS Headquarters, Lincoln Plaza North, 400 Q Street, Sacramento, CA 95811, or on the internet at [www.calpers.ca.gov](http://www.calpers.ca.gov).

***Employees covered***

As of the June 30, 2022 actuarial valuation, the following current and former employees were covered by the benefit terms under the Plan:

Active employees	36
Inactive employees or beneficiaries currently receiving benefits	<u>11</u>
Total	<u><u>47</u></u>

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 10: Other-Post Employment Benefits (OPEB), (Continued)**

**Contributions**

The Plan and its contribution requirements are established by Ordinance and may be amended by Board action to update the original ordinance. The annual contribution is based on the actuarially determined contribution. For the fiscal year ended June 30, 2023, the District's cash contributions were \$350,000 in payments to the CalPERS' California Employer's Retiree Benefit Trust (CERBT), \$185,789 in payments outside of the trust, and \$27,256 in implicit benefits for total contributions of \$563,045.

**Net OPEB liability**

The District's net OPEB liability was measured as of June 30, 2022 and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation dated June 30, 2022, based on the following actuarial methods and assumptions:

Actuarial Assumptions:

Discount Rate	6.73%
Inflation	2.50%
Salary Increases	3.00% annual increases
Investment Rate of Return	6.73%
Mortality Rate	The mortality rates used in this valuation are those used in the CalPERS 2021 experience study.

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Real Rate of Return
Global Equity	40%	5.90%
U.S. Fixed	43%	0.90%
Treasury Inflation Securities	5%	0.40%
Real Estate	8%	3.30%
Commodities	4%	0.40%
Total	100%	

**Discount rate**

The discount rate used to measure the total OPEB liability was 6.73 percent. The projection of cash flows used to determine the discount rate assumed that District's contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected OPEB payments for current active and inactive employees and beneficiaries. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

**Note 10: Other-Post Employment Benefits (OPEB), (Continued)**

***Changes in the OPEB Liability/(Asset)***

The changes in the net OPEB liability for the Plan are as follows:

	<u>Total OPEB Liability (a)</u>	<u>Plan Fiduciary Net Position (B)</u>	<u>Net OPEB Liability/(Asset) (c)= (a) - (b)</u>
<b>Balance at June 30, 2022</b> (Measurement Date June 30, 2021)	\$ 6,676,807	\$ 4,691,510	\$ 1,985,297
<b>Changes recognized for the measurement period:</b>			
Service Cost	120,898	-	120,898
Interest	450,433	-	450,433
Difference between expected and actual experience	(2,231,597)	-	(2,231,597)
Changes of assumptions	(455,716)	-	(455,716)
Contributions - employer	-	663,045	(663,045)
Net investment income	-	(608,190)	608,190
Benefit payments	(213,045)	(213,045)	-
Administrative expenses	-	(1,193)	1,193
<b>Net Changes</b>	<u>(2,329,027)</u>	<u>(159,383)</u>	<u>(2,169,644)</u>
<b>Balance at June 30, 2023</b> (Measurement Date June 30, 2022)	<u>\$ 4,347,780</u>	<u>\$ 4,532,127</u>	<u>\$ (184,347)</u>

***Sensitivity of the Net OPEB Liability/(Asset) to changes in the discount rate***

The following presents the net OPEB liability/(asset) of the District's if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate, for measurement period ended June 30, 2022:

	<u>Discount Rate - 1% 5.73%</u>	<u>Current Discount Rate 6.73%</u>	<u>Discount Rate + 1% 7.73%</u>
Net OPEB Liability/(Asset)	\$ 322,498	\$ (184,347)	\$ (612,235)

***Sensitivity of the Net OPEB Liability/(Asset) to changes in the health care cost trend rates***

The following presents the net OPEB liability/(asset) of the District if it were calculated using health care cost trend rates that are one percentage point lower or one percentage point higher than the current rate, for measurement period ended June 30, 2022:

	<u>1% Decrease</u>	<u>Current Healthcare Cost Trend Rates</u>	<u>1% Increase</u>
Net OPEB Liability/(Asset)	\$ (581,114)	\$ (184,347)	\$ 293,137

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 10: Other-Post Employment Benefits (OPEB), (Continued)**

***OPEB plan fiduciary net position***

CalPERS issues a publicly available CERBT financial report that may be obtained from the CalPERS' website at [www.calpers.ca.gov](http://www.calpers.ca.gov).

***Recognition of deferred outflows and deferred inflows of resources***

Gains and losses related to changes in total OPEB liability and fiduciary net position are recognized in OPEB expense systematically over time.

Amounts are first recognized in OPEB expense for the year the gain or loss occurs. The remaining amounts are categorized as deferred outflows and deferred inflows of resources related to OPEB and are to be recognized in future OPEB expense.

The recognition period differs depending on the source of the gain or loss:

Net difference between projected and actual earnings on OPEB plan investments	5 years
All other amounts	For assumption changes and experience gains/losses, we assumed Average Future Working Lifetime, averages over all active and retirees (retirees are assumed to have no future working years)

***OPEB expense and deferred outflows/inflows of resources related to OPEB***

For the fiscal year ended June 30, 2023, the District recognized OPEB expense of \$904,056. As of fiscal year ended June 30, 2023, the District reported deferred outflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Changes of assumptions	\$ -	\$ (2,258,003)
Differences between expected and actual experience	250,727	(1,879,375)
Net difference between projected and actual earnings on OPEB plan investments	508,737	-
OPEB contributions subsequent to measurement date	563,045	-
Total	<u>\$ 1,322,509</u>	<u>\$ (4,137,378)</u>

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 10: Other-Post Employment Benefits (OPEB), (Continued)**

***OPEB expense and deferred outflows/inflows of resources related to OPEB, (Continued)***

The \$563,045 reported as deferred outflows of resources related to contributions subsequent to the June 30, 2022 measurement date will be recognized as a reduction of the net OPEB liability in the upcoming year. Other amounts reported as deferred outflows of resources related to OPEB will be recognized as expense as follows:

<b>Fiscal Year Ended June 30:</b>	<b>Deferred Outflows/(Inflows) of Resources</b>
2024	\$ (1,147,511)
2025	(1,096,853)
2026	(447,052)
2027	(294,829)
2028	(386,033)
Thereafter	(5,636)
	<u>\$ (3,377,914)</u>

**Note 11: Commitments and Contingencies**

***Construction contracts***

The District has a variety of agreements with private parties relating to the installation, improvement or modification of water facilities and distribution systems within its service area. The financing of such construction contracts is being provided primarily from the District's replacement reserves. The District has committed to \$69,425,074 in open construction contracts as of June 30, 2023. These include:

<u>Project</u>	<u>Approved Contract</u>	<u>Payments To Date</u>	<u>Balance To Complete</u>
Cactus Basin Project	\$ 2,020,000	\$ 897,633	\$ 1,122,367
Waterman Turnout Hydroelectric Project	2,858,450	2,715,528	142,922
Enhanced Recharge Project Phase 1B	64,528,312	9,445,651	55,082,661
Regional Recycled Water Pipeline	62,670,391	49,593,267	13,077,124
	<u>\$ 132,077,153</u>	<u>\$ 62,652,079</u>	<u>\$ 69,425,074</u>

***State of California Department of Water Resources***

On December 30, 1960, the District entered into a contract with the State of California, Department of Water Resources to receive an annual entitlement for water from the State Water Project. The District assumed a proportionate share of capital costs and minimum operations, maintenance, power and replacement costs of the State facilities, in addition to paying variable operations, maintenance, power and replacement costs on a per-acre-foot charge for water deliveries received.

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 11: Commitments and Contingencies (Continued)**

***State of California Department of Water Resources, (Continued)***

The District's future commitment for State Water Project costs over the years 2024 to 2035, according to the payment schedule dated October 1, 2023, is estimated as follows:

Transportation charges - capital cost component	\$ 48,226,286
Delta water charges	49,502,352
Water system revenue bond surcharge	38,342,997
Off Aqueduct power facilities charges	299,861
East branch extension capital cost	<u>259,549,880</u>
Total	<u><u>\$ 395,921,376</u></u>

***Jointly governed organization***

The District participates in the following jointly governed organization with other districts and agencies for various water projects and operating facilities in Southern California:

Santa Ana Watershed Project Authority

The Santa Ana Watershed Project Authority (SAWPA) was formed under a joint exercise of power agreement for the purpose of undertaking projects for water quality control, protection, and pollution abatement in the Santa Ana River Watershed. SAWPA is composed of five member water agencies within the watershed area: Eastern Municipal Water District, Orange County Water District, San Bernardino Valley Municipal Water District, Western Municipal Water District, and the Inland Empire Utilities Agencies. Each participating agency appoints one commissioner and one alternate commissioner to form the Board of Commissioners, the governing body of SAWPA. Financial data for SAWPA is available online at [www.sawpa.org](http://www.sawpa.org).

Condensed financial information for the operation of SAWPA for the fiscal year ended June 30, 2022 is as follows:

	<u>2022</u>
Total assets	<u>\$ 180,505,856</u>
Total deferred outflows of resources	<u>\$ 2,592,450</u>
Total liabilities	<u>\$ 103,551,783</u>
Total deferred inflows of resources	<u>\$ 1,153,595</u>
Total net position	<u>\$ 78,392,928</u>
Total revenues	<u>\$ 34,024,989</u>
Total expenses	<u>\$ (28,957,566)</u>
Change in net position	<u>\$ 5,067,423</u>

*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 12: Funds Held in Trust**

The District is the administrator and custodian of funds held in trust on behalf of the California Department of Fish & Game (CDFG), as prescribed in the Memorandum of Agreement dated March 2007 (Agreement). The Agreement requires the District and Western Municipal Water District to deposit a combined sum of \$50,000 per year, from 2007 to 2017, into a segregated fund administered by the District. Accordingly, the segregated fund is presented as a restricted asset and liability in these financial statements. The CDFG shall direct the District on the disbursements from the fund as needed, in accordance with the Agreement. The balance of the Santa Ana River Restoration/Recovery Trust Fund as of June 30, 2023 was \$382,514.

**Note 13: Net Position**

The components of net position consist of the following on June 30, 2023:

Net investment in capital assets:	
Capital assets, net	\$ 245,690,545
Participation rights in State Water Project facilities, net	237,472,799
Construction in progress	78,190,270
Less:	
2023A Interim notes	(46,910,000)
2023A Interim notes premium	(2,243,705)
2023 B Refunding revenue bonds	(5,615,000)
2023 B Refunding revenue bonds premium	<u>(818,305)</u>
Total net investment in capital assets	<u>505,766,604</u>
Restricted net position:	
Restricted for debt service - State Water Project	520,512,491
Restricted for debt service - Devil Canyon-Castaic	<u>4,415,434</u>
Total restricted net position	<u>524,927,925</u>
Unrestricted net position:	
Nonspendable net position:	
Prepaid expenses	563
Water bank inventory	<u>380,501</u>
	381,064
Spendable net position:	
Operating reserve	<u>85,308,884</u>
Total unrestricted net position	<u>85,689,948</u>
Total net position	<u>\$ 1,116,384,477</u>



*San Bernardino Valley Municipal Water District*

**Notes to the Basic Financial Statements  
For the Year Ended June 30, 2023**

---

**Note 14: Risk Management**

The District is exposed to various risks of loss related to torts, theft of, damage to and destruction of assets; errors and omissions; injuries to employees; and natural disasters. To help mitigate some of these risks, the District has purchased commercial insurance as follows:

Property loss - Insured up to \$100,000,000 per occurrence with a \$5,000 deductible for buildings, personal property, fixed equipment, mobile equipment, and licensed vehicles.

Boiler and machinery - Insured up to \$100,000,000 per occurrence, with a \$10,000 deductible for boiler and machinery breakdown.

Auto liability - Insured up to \$1,000,000 per occurrence with no deductible for property damage.

Information security and privacy liability - Insured up to \$2,000,000 per occurrence with no deductible for security and privacy breaches.

Pollution liability - Insured up to \$2,000,000 per occurrence with no deductible for underground storage tanks.

The District has obtained liability, property and workers compensation insurance through Association of California Water Agencies (ACWA) Joint Power Insurance Authority (JPJA).

The District pays annual premiums for these coverages. They are subject to retrospective adjustments based on claims experience. The nature and amounts of these adjustments cannot be estimated and are charged to expense as invoiced. There have been no significant reductions in insured liability coverage from coverage in the prior year, and there were no instances in the past three years where a settlement exceeded the District's coverage.

*San Bernardino Valley Municipal Water District*

**Required Supplementary Information  
Schedule of District's Proportionate Share of the Plan's Net Pension Liability and  
Related Ratios as of the Measurement Date  
Last 10 Years\***

<u>Measurement Date</u>	<u>Employer's Proportion of the Collective Net Pension Liability (Asset)<sup>1</sup></u>	<u>Employer's Proportionate Share of the Collective Net Pension Liability (Asset)</u>	<u>Employer's Covered Payroll</u>	<u>Employer's Proportionate Share of the Collective Net Pension Liability (Asset) as a Percentage of the Employer's Covered Payroll</u>	<u>Pension's Plans Fiduciary Net Position as a Percentage of the Total Pension Liability (Asset)</u>
6/30/2014	0.089700%	\$ 5,587,972	\$ 2,166,220	258%	77%
6/30/2015	0.084587%	5,805,949	2,279,057	255%	77%
6/30/2016	0.072157%	6,243,808	2,210,568	282%	76%
6/30/2017	0.027173%	2,694,804	2,127,895	127%	90%
6/30/2018	0.023636%	2,277,589	2,252,665	101%	92%
6/30/2019	0.028612%	2,931,878	2,761,632	106%	90%
6/30/2020	0.033751%	3,672,251	2,907,350	126%	88%
6/30/2021	-0.007908%	(150,148)	3,422,597	-4%	100%
6/30/2022	0.011503%	5,382,682	4,119,491	131%	85%

<sup>1</sup> Proportion of the net pension liability represents the plan's proportion of PERF C, which includes both the Miscellaneous and Safety Risk Pools excluding the 1959 Survivors Risk Pool.

\* Historical information is required only for measurement periods for which GASB 68 is applicable. Future years' information will be displayed up to 10 years as needed as information becomes available.

*San Bernardino Valley Municipal Water District*

**Required Supplementary Information  
Schedule of Plan Contributions  
Last 10 years\***

Fiscal Year	Contractually Determined Contributions	Contributions in Relation to the Contractually Determined Contributions	Contribution Deficiency (Excess)	Employer's Covered Payroll	Contributions as a Percentage of Covered Payroll
2014-15	\$ 654,436	\$ (654,436)	\$ -	\$ 2,279,057	28.72%
2015-16	1,563,043	(1,563,043)	-	2,210,568	70.71%
2016-17	4,308,248	(4,308,248)	-	2,127,895	202.47%
2017-18	380,370	(380,370)	-	2,252,665	16.89%
2018-19	601,348	(601,348)	-	2,761,632	21.78%
2019-20	709,684	(709,684)	-	2,907,350	24.41%
2020-21	627,920	(627,920)	-	3,422,597	18.35%
2021-22	778,783	(778,783)	-	4,119,491	18.90%
2022-23	924,370	(924,370)	-	4,779,669	19.34%

\* Historical information is required only for measurement periods for which GASB 68 is applicable. Future years' information will be displayed up to 10 years as needed as information becomes available.

**Notes to Schedule:**

**Changes in Benefit Terms:** There were no changes to benefit terms that applied to all members of the Public Agency Pool. Additionally, the figures above do not include any liability impact that may have resulted from Golden Handshakes that occurred after the June 30, 2021 valuation date, unless the liability impact is deemed to be material to the Public Agency Pool.

**Changes in Assumptions:** Effective with the June 30, 2021 valuation date (2022 measurement date), the accounting discount rate was reduced from 7.15% to 6.90%. In determining the long-term expected rate of return, CalPERS took into account long-term market return expectations as well as the expected pension fund cash flows. Projected returns for all asset classes are estimated, combined with risk estimates, and are used to project compound (geometric) returns over the long term. The discount rate used to discount liabilities was informed by the long-term projected portfolio return. In addition, demographic assumptions and the inflation rate assumption were changed in accordance with the 2021 CalPERS Experience Study and Review of Actuarial Assumptions. There were no assumption changes for 2021. For 2020, the Plan adopted a new amortization policy effective with the 2019 actuarial valuation. The new amortization policy shortens the period over which actuarial gains and losses are amortized from 30 years to 20 years with the payments computed as a level dollar amount. In addition, the new policy does not utilize a five-year ramp-up and ramp-down on UAL bases attributable to assumption changes and non-investment gains/losses. The new policy also does not utilize a five-year ramp-down on investment gains/losses. These changes apply only to new UAL bases established on or after June 30, 2019. There were no changes in assumptions in 2019. In 2018, demographic assumptions and inflation rate were changed in accordance to the CalPERS Experience Study and Review of Actuarial Assumptions December 2017. There were no changes in the discount rate in 2019. In 2017, the accounting discount rate was reduced from 7.65 percent to 7.15 percent. In 2016, there were no changes in the discount rate. In 2015, amounts reported reflect an adjustment of the discount rate from 7.5 percent (net of administrative expense) to 7.65 percent (without a reduction for pension plan administrative expense). In 2014, amounts reported were based on the 7.5 percent discount rate.

*San Bernardino Valley Municipal Water District*

**Required Supplementary Information  
Schedule of Changes in the Net OPEB Liability and Related Ratios as of the Measurement Date  
Last 10 years\***

Measurement Period Ended June 30:	2017	2018	2019	2020	2021	2022
<b>Total OPEB Liability</b>						
Service Cost	\$ 415,185	\$ 153,033	\$ 117,741	\$ 123,628	\$ 115,141	\$ 120,898
Interest on the Total OPEB Liability	317,872	409,717	387,786	409,881	427,236	450,433
Actual and expected experience difference	(1,955)	87,576	(48,509)	345,803	(11,779)	(2,231,597)
Changes in assumptions	(5,400,852)	(802,057)	-	(461,236)	-	(455,716)
Benefit payments	(126,972)	(141,570)	(136,035)	(133,104)	(170,965)	(213,045)
<b>Net change in Total OPEB Liability</b>	<b>(4,796,722)</b>	<b>(293,301)</b>	<b>320,983</b>	<b>284,972</b>	<b>359,633</b>	<b>(2,329,027)</b>
<b>Total OPEB Liability - beginning</b>	<b>10,801,242</b>	<b>6,004,520</b>	<b>5,711,219</b>	<b>6,032,202</b>	<b>6,317,174</b>	<b>6,676,807</b>
<b>Total OPEB Liability - ending (a)</b>	<b>6,004,520</b>	<b>5,711,219</b>	<b>6,032,202</b>	<b>6,317,174</b>	<b>6,676,807</b>	<b>4,347,780</b>
<b>Plan Fiduciary Net Position</b>						
Contribution - employer	2,026,972	141,570	886,035	558,104	645,965	663,045
Net investment income	28,815	116,588	142,801	157,273	700,473	(608,190)
Benefit payments	(126,972)	(141,570)	(136,035)	(133,104)	(170,965)	(213,045)
Administrative expense	(135)	(1,014)	(444)	(1,551)	(1,296)	(1,193)
<b>Net change in Plan Fiduciary Net Position</b>	<b>1,928,680</b>	<b>115,574</b>	<b>892,357</b>	<b>580,722</b>	<b>1,174,177</b>	<b>(159,383)</b>
<b>Plan Fiduciary Net Position - beginning</b>	<b>-</b>	<b>1,928,680</b>	<b>2,044,254</b>	<b>2,936,611</b>	<b>3,517,333</b>	<b>4,691,510</b>
<b>Plan Fiduciary Net Position - ending (b)</b>	<b>1,928,680</b>	<b>2,044,254</b>	<b>2,936,611</b>	<b>3,517,333</b>	<b>4,691,510</b>	<b>4,532,127</b>
<b>Net OPEB Liability/(Asset) - ending (a) - (b)</b>	<b>\$ 4,075,840</b>	<b>\$ 3,666,965</b>	<b>\$ 3,095,591</b>	<b>\$ 2,799,841</b>	<b>\$ 1,985,297</b>	<b>\$ (184,347)</b>
Plan fiduciary net position as a percentage of the total OPEB liability	32.12%	35.79%	48.68%	55.68%	70.27%	104.24%
Covered-employee payroll <sup>(1)</sup>	\$ 2,127,895	\$ 2,252,665	\$ 2,763,767	\$ 2,894,400	\$ 3,414,697	\$ 4,116,446
Net OPEB liability as a percentage of covered-employee payroll <sup>(1)</sup>	191.54%	162.78%	112.01%	96.73%	58.14%	-4.48%

**Notes to schedule:**

(1) Covered-employee payroll represented above is based on covered-employee payroll provided by the employer. GASB 75 defines covered-employee payroll as the total payroll of employees that are provided OPEBs through the OPEB plan. Contributions are not based on a measure of pay, therefore, covered-employee payroll is used in this schedule.

Mortality Improvement: The mortality rates used in this valuation are those used in the 2021 CalPERS experience study.

\* Historical information is required only for measurement periods for which GASB 75 is applicable. Future years' information will be displayed up to 10 years as information becomes available.

Fiscal Year 2017-18 was the first year of implementation.

*San Bernardino Valley Municipal Water District*

**Required Supplementary Information  
Schedule of OPEB Plan Contributions  
Last 10 years\***

Fiscal Year Ended June 30	2017	2018	2019	2020	2021	2022	2023
Actuarially Determined Contributions (ADC) <sup>(1)</sup>	\$ 529,151	\$ 438,901	\$ 388,949	\$ 391,749	\$ 339,717	\$ -	\$ -
Contribution in relation to the ADC (Excess)/deficiency	<u>(2,026,972)</u>	<u>(141,570)</u>	<u>(886,035)</u>	<u>(558,104)</u>	<u>(645,965)</u>	<u>(663,045)</u>	<u>(563,045)</u>
	<u>\$ (1,497,821)</u>	<u>\$ 297,331</u>	<u>\$ (497,086)</u>	<u>\$ (166,355)</u>	<u>\$ (306,248)</u>	<u>\$ (663,045)</u>	<u>\$ (563,045)</u>
Covered-employee payroll <sup>(2)</sup>	\$ 2,127,895	\$ 2,252,665	\$ 2,763,767	\$ 2,894,400	\$ 3,414,697	\$ 4,116,446	\$ 4,779,669
Contribution as a percentage of covered-employee payroll <sup>(2)</sup>	95.26%	6.28%	32.06%	19.28%	18.92%	16.11%	11.78%

<sup>1</sup> Employers setting a discount rate based on the assumption that assets will be sufficient to cover all future benefit payments under the plan are assumed to annually make contributions equal to the actuarially determined contribution. Annual contributions made that are substantially less than the ADC would require additional support for use of a discount rate equal to the long-term expected return on trust assets.

<sup>2</sup> Covered-Employee Payroll represented above is based on covered-employee payroll provided by the employer. GASB 75 defines covered-employee payroll as the total payroll of employees that are provided benefits through the OPEB plan. Accordingly, if OPEB covered-employee payroll shown above is different than total earnings for covered-employees, the employer should display in the disclosure footnotes the payroll based on total earnings for the covered group and recalculate the required payroll-related ratios.

**Notes to Schedule:**

Actuarial methods and assumptions used to set the actuarially determined contributions for fiscal year 2023 were from the June 30, 2022 actuarial valuation.

**Methods and assumptions used to determine contributions:**

Actuarial Cost Method	Entry Age Normal
Amortization Methodology	Straight-line amortization. For assumption changes and experience gains/losses: Average Future Working Lifetime averages over all actives and retirees (retirees are assumed to have no future working years). For asset gains and losses: 5 years.
Asset Valuation Method	Market value
Discount Rate	6.73%
Inflation	2.50%
Payroll Growth	3.00% per annum, in aggregate
Investment Rate of Return	6.73% per annum
Healthcare Trend Rates	5.20 percent for 2022 through 2034; 5.00 percent for 2035 through 2049; 4.50 percent for 2050 through 2064; and 4.00 percent for 2065 and later years.
Retirement Age	The probabilities of retirement are based on the 2021 CalPERS Experience Study for the period from 1997 to 2011.
Mortality	Pre-retirement mortality probability based on 2021 CalPERS Experience Study covering CalPERS participants.

\* Historical information is required only for measurement periods for which GASB 75 is applicable. Future years' information will be displayed up to 10 years as information becomes available.



735 E. Carnegie Dr. Suite 100  
San Bernardino, CA 92408  
909 889 0871 T  
909 889 5361 F  
ramscpa.net

**PARTNERS**

Terry P. Shea, CPA  
Scott W. Manno, CPA, CGMA  
Leena Shanbhag, CPA, MST, CGMA  
Bradferd A. Welebir, CPA, MBA, CGMA  
Jenny W. Liu, CPA, MST  
Gardenya Duran, CPA, CGMA  
Brianna Schultz, CPA, CGMA  
Brenda L. Odle, CPA, MST (Partner Emeritus)

**MANAGERS / STAFF**

Seong-Hyea Lee, CPA, MBA  
Evelyn Morentin-Barcena, CPA  
Veronica Hernandez, CPA  
Laura Arvizu, CPA  
John Maldonado, CPA, MSA  
Julia Rodriguez Fuentes, CPA, MSA  
Demi Hite, CPA  
Jeffrey McKennan, CPA

**MEMBERS**

American Institute of  
Certified Public Accountants

*PCPS The AICPA Alliance  
for CPA Firms*

*Governmental Audit  
Quality Center*

California Society of  
Certified Public Accountants



**REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING  
AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN  
AUDIT OF FINANCIAL STATEMENTS PERFORMED IN  
ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS**

*Independent Auditor's Report*

Board of Directors  
San Bernardino Valley Municipal Water District  
San Bernardino, California

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the accompanying financial statements of the business-type activities of San Bernardino Valley Municipal Water District (the District) as of and for the year ended June 30, 2023, and the related notes to the financial statements, which collectively comprise San Bernardino Valley Municipal Water District's basic financial statements, and have issued our report thereon dated December 14, 2023.

***Internal Control over Financial Reporting***

In planning and performing our audit of the financial statements, we considered the District's internal control over financial reporting (internal control) as a basis for designing procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, we do not express an opinion on the effectiveness of the District's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over financial reporting that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

### ***Compliance and Other Matters***

As part of obtaining reasonable assurance about whether the District's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

### **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

*Rogers, Anderson, Malody & Scott, LLP.*

San Bernardino, California  
December 14, 2023



735 E. Carnegie Dr. Suite 100  
San Bernardino, CA 92408  
909 889 0871 T  
909 889 5361 F  
ramscpa.net

December 14, 2023

**PARTNERS**

Terry P. Shea, CPA  
Scott W. Manno, CPA, CGMA  
Leena Shanbhag, CPA, MST, CGMA  
Bradferd A. Welebir, CPA, MBA, CGMA  
Jenny W. Liu, CPA, MST  
Gardenya Duran, CPA, CGMA  
Brianna Schultz, CPA, CGMA  
Brenda L. Odle, CPA, MST (Partner Emeritus)

**MANAGERS / STAFF**

Seong-Hyea Lee, CPA, MBA  
Evelyn Morentin-Barcena, CPA  
Veronica Hernandez, CPA  
Laura Arvizu, CPA  
John Maldonado, CPA, MSA  
Julia Rodriguez Fuentes, CPA, MSA  
Demi Hite, CPA  
Jeffrey McKennan, CPA

**MEMBERS**

American Institute of  
Certified Public Accountants

*PCPS The AICPA Alliance  
for CPA Firms*

*Governmental Audit  
Quality Center*

California Society of  
Certified Public Accountants

To the Board of Directors  
San Bernardino Valley Municipal Water District  
380 E. Vanderbilt Way  
San Bernardino, California 92408

We have audited the financial statements of San Bernardino Valley Municipal Water District (the District) as of and for the year ended June 30, 2023, and have issued our report thereon dated December 14, 2023. Professional standards require that we advise you of the following matters relating to our audit.

**Our Responsibility in Relation to the Financial Statement Audit**

As communicated in our engagement letter dated June 7, 2023, our responsibility, as described by professional standards, is to form and express an opinion about whether the financial statements that have been prepared by management with your oversight are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America. Our audit of the financial statements does not relieve you or management of your respective responsibilities.

Our responsibility, as prescribed by professional standards, is to plan and perform our audit to obtain reasonable, rather than absolute, assurance about whether the financial statements are free of material misstatement. An audit of financial statements includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control over financial reporting. Accordingly, as part of our audit, we considered the internal control of the District solely for the purpose of determining our audit procedures and not to provide any assurance concerning such internal control.

We are also responsible for communicating significant matters related to the audit that are, in our professional judgment, relevant to your responsibilities in overseeing the financial reporting process. However, we are not required to design procedures for the purpose of identifying other matters to communicate to you.





### **Planned Scope and Timing of the Audit**

We conducted our audit consistent with the planned scope and timing we previously communicated to you.

### **Compliance with All Ethics Requirements Regarding Independence**

The engagement team and others in our firm, as appropriate, have complied with all relevant ethical requirements regarding independence.

### **Significant Risks Identified**

We have identified the possibility of the following significant risks:

*Management's override of internal controls over financial reporting* – Management override of internal controls is the intervention by management in handling financial information and making decisions contrary to internal control policy.

*Revenue recognition* – Revenue recognition is a generally accepted accounting principle that refers to the conditions under which an entity can recognize a transaction as revenue. Auditing standards indicate that recognizing revenue is a presumed fraud risk and usually classified as a significant risk in most audits.

These significant risks are presumptive in most audits and merit attention by the auditors due to the direct impact over financial reporting and internal control processes. Although identified as significant risks, we noted no matters of management override of controls or deviations from generally accepted accounting principles which caused us to modify our audit procedures or any related matters which are required to be communicated to those charged with governance due to these identified risks.

### **Qualitative Aspects of the Entity's Significant Accounting Practices**

#### *Significant Accounting Policies*

Management has the responsibility to select and use appropriate accounting policies. A summary of the significant accounting policies adopted by the District is included in Note 1 to the financial statements. There have been no initial selection of accounting policies and no changes in significant accounting policies or their application during fiscal year 2023. No matters have come to our attention that would require us, under professional standards, to inform you about (1) the methods used to account for significant unusual transactions and (2) the effect of significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus.

#### *Significant Accounting Estimates*

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's current judgments. Those judgments are normally based on knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ markedly from management's current judgments.

The most sensitive accounting estimates affecting the financial statements are:

Management's estimate of the fair value measurement is based on information provided by financial institutions. We evaluated the key factors and assumptions used to develop the fair value of investments in determining that it is reasonable in relation to the financial statements taken as a whole.

Management's estimate of capital asset depreciation is based on historical estimates of each capitalized item's useful life. We evaluated the key factors and assumptions used to develop the estimated useful lives in determining that it is reasonable in relation to the financial statements as a whole.

Management's estimate of water inventory is based on current water levels at rates passed on to the District by the Kern Delta Water District. We evaluated the key factors and assumptions used to develop these amounts in determining that it is reasonable in relation to the financial statements as a whole.

Management's estimate of the net pension liability and related deferred inflows and outflows are based on actuarial reports provided by independent actuaries. We evaluated the key factors and assumptions used to develop the estimate in determining that it is reasonable in relation to the financial statements taken as a whole.

Management's estimate of the liability for other post-employment benefits is based on actuarial reports provided by independent actuaries. We evaluated the key factors and assumptions used to develop the estimate in determining that it is reasonable in relation to the financial statements as a whole.

Management's estimate of leases receivable, deferred inflows of resources related to leases, and lease amortization is based on present value calculations using certain terms and assumptions in the lease agreements in accordance with generally accepted accounting principles. We evaluated the key factors and assumptions used to develop the lease related estimates in determining that it is reasonable in relation to the financial statements taken as a whole.

#### *Financial Statement Disclosures*

Certain financial statement disclosures involve significant judgment and are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the District's financial statements relate to:

The disclosure of fair value estimates in the notes to the financial statements represents amounts susceptible to market fluctuations.

The disclosure of accumulated depreciation in the notes to the financial statements is based on estimated useful lives which could differ from actual useful lives of each capitalized item.

The disclosure of net pension liability and related deferred inflows and outflows in the notes to the financial statements is based on actuarial assumptions. Actual future liabilities may vary from disclosed estimates.

The disclosure of the other post-employment benefits (OPEB) in the notes to the basic financial statements identifies the annual OPEB cost and the funded status of the actuarial accrued liability. The information disclosed is based on actuarial assumptions which could differ from actual costs.

The disclosure of leases receivable, deferred inflows of resources related to leases, and lease amortization in the basic financial statements is based on certain terms and assumptions in the lease agreements which could differ from actual amounts.

### **Significant Difficulties Encountered during the Audit**

We encountered no significant difficulties in dealing with management relating to the performance of the audit.

### **Uncorrected and Corrected Misstatements**

For purposes of this communication, professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that we believe are trivial, and communicate them to the appropriate level of management. Further, professional standards require us to also communicate the effect of uncorrected misstatements related to prior periods on the relevant classes of transactions, account balances or disclosures, and the financial statements as a whole and each applicable opinion unit. There were no uncorrected misstatements noted.

In addition, professional standards require us to communicate to you all material, corrected misstatements that were brought to the attention of management as a result of our audit procedures. None of the misstatements identified by us as a result of our audit procedures and corrected by management were material, either individually or in the aggregate, to the financial statements taken as a whole.

### **Disagreements with Management**

For purposes of this letter, professional standards define a disagreement with management as a matter, whether or not resolved to our satisfaction, concerning a financial accounting, reporting, or auditing matter, which could be significant to the District's financial statements or the auditor's report. No such disagreements arose during the course of the audit.

### **Representations Requested from Management**

We have requested certain written representations from management, which are included in the attached letter in a letter dated December 14, 2022.

### **Management's Consultations with Other Accountants**

In some cases, management may decide to consult with other accountants about auditing and accounting matters. Management informed us that, and to our knowledge, there were no consultations with other accountants regarding auditing and accounting matters.

### **Other Significant Matters, Findings, or Issues**

In the normal course of our professional association with the District, we generally discuss a variety of matters, including the application of accounting principles and auditing standards, operating and regulatory conditions affecting the District, and operational plans and strategies that may affect the risks of material misstatement. None of the matters discussed resulted in a condition to our retention as the District's auditors.

### **Other Information in Documents Containing Audited Financial Statements**

Pursuant to professional standards, our responsibility as auditors for other information in documents containing the District's audited financial statements does not extend beyond the financial information identified in the audit report, and we are not required to perform any procedures to corroborate such other information. However, in accordance with such standards, we have applied certain limited procedures to Management's Discussion and Analysis, and those schedules as listed in the table of contents. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the Required Supplementary Information (RSI) and do not express an opinion or provide any assurance on the RSI.

Our responsibility also includes communicating to you any information which we believe is a material misstatement of fact. Nothing came to our attention that caused us to believe that such information, or its manner of presentation, is materially inconsistent with the information, or manner of its presentation, appearing in the financial statements.

This report is intended solely for the information and use of the Board of Directors and Management of the District and is not intended to be and should not be used by anyone other than these specified parties.

*Rogers, Anderson, Malody & Scott, LLP.*

San Bernardino, California



December 14, 2023

Rogers, Anderson, Malody & Scott, LLP  
735 E. Carnegie Drive, Suite 100  
San Bernardino, CA 92408

This representation letter is provided in connection with your audit of San Bernardino Valley Municipal Water District (the District) as of June 30, 2023 and for the year then ended, and the related notes to the financial statements, for the purpose of expressing opinions on whether the basic financial statements present fairly, in all material respects, the financial position, results of operations, and cash flows, of the business-type activities in accordance with accounting principles generally accepted for governments in the United States of America (U.S. GAAP).

Certain representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of size, if they involve an omission or misstatement of accounting information that, in the light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement.

We confirm that, to the best of our knowledge and belief, having made such inquiries as we considered necessary for the purpose of appropriately informing ourselves as of December 14, 2023.

### **Financial Statements**

- 1) We have fulfilled our responsibilities, as set out in the terms of the audit engagement letter dated June 7, 2023, for the preparation and fair presentation of the financial statements referred to above in accordance with U.S. GAAP.
- 2) We acknowledge our responsibility for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.
- 3) We acknowledge our responsibility for the design, implementation, and maintenance of internal control to prevent and detect fraud.
- 4) We acknowledge our responsibility for compliance with the laws, regulations, and provisions of contracts and grant agreements.
- 5) We have reviewed, approved, and taken responsibility for the financial statements and related notes.



- 6) We have a process to track the status of audit findings and recommendations.
- 7) We have identified and communicated to you all previous audits, attestation engagements, and other studies related to the audit objectives and whether related recommendations have been implemented.
- 8) Significant assumptions used by us in making accounting estimates, including those measured at fair value, are reasonable.
- 9) All related party relationships and transactions have been appropriately accounted for and disclosed in accordance with the requirements of U.S. GAAP.
- 10) All events subsequent to the date of the financial statements and for which U.S. GAAP requires adjustment or disclosure have been adjusted or disclosed.
- 11) The effects of all known actual or possible litigation and claims have been accounted for and disclosed in accordance with U.S. GAAP.
- 12) All funds and activities are properly classified.
- 13) All components of net position are properly classified and, if applicable, approved.
- 14) Our policy regarding whether to first apply restricted or unrestricted resources when an expense is incurred for purposes for which both restricted and unrestricted net position are available is appropriately disclosed and net position is properly recognized under the policy.
- 15) All revenues and expenses within the statement of revenues, expenses and changes in net position have been properly classified.
- 16) All interfund and intra-entity transactions and balances have been properly classified and reported.
- 17) Deposit and investment risks have been properly and fully disclosed.
- 18) Capital assets, including infrastructure assets, are properly capitalized, reported, and if applicable, depreciated.
- 19) All required supplementary information is measured and presented within the prescribed guidelines.
- 20) With regard to investments and other instruments reported at fair value:
  - a. The underlying assumptions are reasonable and they appropriately reflect management's intent and ability to carry out its stated courses of action.
  - b. The measurement methods and related assumptions used in determining fair value are appropriate in the circumstances and have been consistently applied.
  - c. The disclosures related to fair values are complete, adequate, and in accordance with U.S. GAAP.
  - d. There are no subsequent events that require adjustments to the fair value measurements and disclosures included in the financial statements.
- 21) With respect to the preparation of the financial statement, we have performed the following:
  - a. Made all management decisions and performed all management functions;
  - b. Assigned a competent individual to oversee the services;

- c. Evaluated the adequacy of the services performed;
  - d. Evaluated and accepted responsibility for the result of the service performed; and
  - e. Established and maintained internal controls, including monitoring ongoing activities.
- 22) We have evaluated all of our lease agreements and have given you our assessment as to whether each lease agreement is subject to Statement No. 87, *Leases* and GASB statements No. 96, *Subscription Based IT Arrangements*.

### Information Provided

- 23) We have provided you with:
- a. Access to all information, of which we are aware that is relevant to the preparation and fair presentation of the financial statements of the business-type activities, such as records, documentation, meeting minutes, and other matters;
  - b. Additional information that you have requested from us for the purpose of the audit; and
  - c. Unrestricted access to persons within the entity from whom you determined it necessary to obtain audit evidence.
- 24) All transactions have been recorded in the accounting records and are reflected in the financial statements.
- 25) We have disclosed to you the results of our assessment of the risk that the financial statements may be materially misstated as a result of fraud.
- 26) We have no knowledge of any fraud or suspected fraud that affects the entity and involves:
- a. Management;
  - b. Employees who have significant roles in internal control; or
  - c. Others where the fraud could have a material effect on the financial statements.
- 27) We have no knowledge of any allegations of fraud, or suspected fraud, affecting the entity's financial statements communicated by employees, former employees, vendors, regulators, or others.
- 28) We have disclosed to you all known actual or possible litigation, claims, and assessments whose effects should be considered when preparing the financial statements.
- 29) We have disclosed to you the identity of the District's related parties and all the related party relationships and transactions of which we are aware.
- 30) There have been no communications from regulatory agencies concerning noncompliance with or deficiencies in accounting, internal control, or financial reporting practices.
- 31) The District has no plans or intentions that may materially affect the carrying value or classification of assets and liabilities.
- 32) We have disclosed to you all guarantees, whether written or oral, under which the District is contingently liable.

- 33) We have disclosed to you all significant estimates and material concentrations known to management that are required to be disclosed in accordance with GASB Statement No. 62 (GASB-62), *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*. Significant estimates are estimates at the balance sheet date that could change materially within the next year. Concentrations refer to volumes of business, revenues, available sources of supply, or markets or geographic areas for which events could occur that would significantly disrupt normal finances within the next year.
- 34) We have identified and disclosed to you the laws, regulations, and provisions of contracts and grant agreements that could have a direct and material effect on financial statement amounts, including legal and contractual provisions for reporting specific activities in separate funds.
- 35) There are no:
  - a. Violations or possible violations of laws or regulations, or provisions of contracts or grant agreements whose effects should be considered for disclosure in the financial statements or as a basis for recording a loss contingency, including applicable budget laws and regulations.
  - b. Unasserted claims or assessments that our lawyer has advised are probable of assertion and must be disclosed in accordance with GASB-62.
  - c. Other liabilities or gain or loss contingencies that are required to be accrued or disclosed by GASB-62.
  - d. Continuing disclosure consent decree agreements or filings with the Securities and Exchange Commission and we have filed updates on a timely basis in accordance with the agreements (Rule 240, 15c2-12).
- 36) The District has satisfactory title to all owned assets, and there are no liens or encumbrances on such assets nor has any asset or future revenue been pledged as collateral, except as disclosed to you.
- 37) We have complied with all aspects of grant agreements and other contractual agreements that would have a material effect on the financial statements in the event of noncompliance.
- 38) There have been no changes or updates to legal information disclosed to you by our attorneys since the date of such legal responses and now.

#### **Required Supplementary Information**

- 39) With respect to the required supplementary information, as listed in the table of contents, accompanying the financial statements:
  - a. We acknowledge our responsibility for the presentation of the required supplementary information in accordance with U.S. GAAP and any applicable Governmental Accounting Standards Board Statements.
  - b. We believe the required supplementary information, including its form and content, is measured and fairly presented in accordance with any applicable criteria.
  - c. The methods of measurement or presentation have not changed from those used in the prior period.



**Use of a Specialist**

- 38) An actuary has been used by the District to measure pension and other postemployment benefit liabilities and costs.
  - a. We have adequately considered the qualifications of the specialist in determining the amounts and disclosures used in the financial statements and underlying accounting records. We did not give or cause any instructions to be given to specialists with respect to the values or amounts derived in an attempt to bias their work, and we are not otherwise aware of any matters that have had an impact on the independence or objectivity of the specialists.
  - b. We believe that the actuarial assumptions and methods used to measure pension and other postemployment benefit liabilities and costs for financial accounting purposes are appropriate in the circumstances.



---

Cindy Saks  
Chief Financial Officer/Deputy GM



---

**DATE:** January 2, 2024

**TO:** Board of Directors

**FROM:** Wen Huang, Chief Operating Officer/Assistant General Manager  
Leo Ferrando, Assistant Chief Engineer

**SUBJECT:** Consider the *Joint Use Agreement for the Operation and Maintenance of the Regional Recycled Water Pipeline and the Weaver Basins* with East Valley Water District

---

**Staff Recommendation**

Authorize the CEO/General Manager to execute the *Joint Use Agreement for the Operation and Maintenance of the Regional Recycled Water Pipeline and the Weaver Basins* with East Valley Water District (EVWD) and authorize the CEO/General Manager and District Counsel to make any minor, technical, or non-substantive changes to the Agreement as appropriate.

**Summary**

On December 1<sup>st</sup>, the Regional Water Quality Control Board (RWQCB) approved the Master Recycling Permit for the Sterling Natural Resource Center (SNRC) during their Board meeting. Following the permit issuance by the RWQCB, construction of the Regional Recycled Water System (RRWS), including the Regional Recycled Water Pipeline and the Weaver Basins, was substantially completed as the final section of pipe was set in place along Greenspot Road near the 210 Freeway during mid-December 2023. Final construction activities for the Weaver Basins include completing the perimeter fencing, parkway landscaping installation, and communications setup.

In anticipation of the completion of the RRWS in January 2024, a Joint Use Agreement for the Operation and Maintenance of the RRWS was developed by San Bernardino Valley staff and special counsel, Downey Brand. The agreement has been reviewed by EVWD staff and will be considered by the EVWD Board in the first part of January. The draft Agreement was also presented to the District's Regional Recycled Water Ad-Hoc Committee members (Kielhold and Botello) and is being forwarded to the full Board for consideration based on their recommendation. The Agreement covers the fundamental principles and responsibilities of both EVWD and San

Bernardino Valley for the future operations, maintenance, and repairs of the RRWS. In general, EVWD, as the discharger of recycled water, is responsible for all applicable regulatory conditions and requirements for the recycled water produced at SNRC. Conversely, as the owner of the facilities for the RRWS, San Bernardino Valley will serve as the transmitter and recharger of the recycled water in the RRWS and will be responsible for all future operation, maintenance, and repair of the facilities.

### **Background**

In 2016, to support development of recycled water projects in the region and to create a new forum for ongoing cooperative management of recycled water for regional benefit, San Bernardino Valley, in collaboration with water and wastewater agencies in the region, developed a Regional Recycled Water Concept Study (Study) that identified and evaluated potential projects that provide a new supply of recycled water for the San Bernardino Valley service area. After the Study, among other projects, EVWD's Sterling Natural Resource Center (SNRC) and the San Bernardino Municipal Water Department's Tertiary Treatment System (TTS) were identified as projects that should be further developed.

Since January 2019, our Board of Directors has approved a series of agreements and amendments with EVWD for the design, construction, and reimbursement of the RRWP and Weaver Basins. Due to the decades-long operational lifespan of the SNRC and RRWS facilities, along with the complex development of the SNRC and RRWS projects, this Agreement incorporates by reference the critical documents that indicate the projects' evolution and commitments while also making it easy for staff of both agencies to reference the material in the future. In anticipation of the completion of the RRWS and commissioning SNRC in January 2024, a Joint Use Agreement for the Operation and Maintenance of the RRWS has been developed for consideration by the Boards of San Bernardino Valley and EVWD, respectively. Among other things, the Agreement covers the fundamental principles and responsibilities of both EVWD and San Bernardino Valley for the future operations, maintenance, and repairs of the RRWS.

### **District Strategic Plan Application**

The effort is consistent with the Mission Statement to work collaboratively to provide a reliable and sustainable water supply to support the changing needs of our region's people and environment, specifically through driving science-based decision-making, proactive risk management, and effective communication and engagement.

**Fiscal Impact**

The estimated cost for the day-to-day operations is included in the FY 2023-24 approved General Fund Budget under Line Item No. 6470.

**Attachment**

*Joint Use Agreement with East Valley Water District for the Operation and Maintenance of the Regional Recycled Water Pipeline and the Weaver Basins*

## JOINT USE AGREEMENT FOR THE OPERATION AND MAINTENANCE OF THE REGIONAL RECYCLED WATER PIPELINE AND THE WEAVER BASINS

This Joint Use Agreement (“**Agreement**”) for the operations and maintenance of the Weaver Basins and Regional Recycled Water Pipeline is entered into and effective as of this 2nd day of January, 2024 (“**Effective Date**”), by and between San Bernardino Valley Municipal Water District (“**San Bernardino Valley**”) and the East Valley Water District (“**East Valley**”). San Bernardino Valley and East Valley may be referred to individually as “**Party**” or collectively as “**Parties**.”

### RECITALS

WHEREAS, on September 1, 2015, the Parties executed the Framework Agreement for the Construction and Operation of Potential Groundwater Replenishment Facilities (“**Framework Agreement**” [attached hereto as **Attachment A**]). The Parties agreed in the Framework Agreement to work collaboratively towards the construction and operation of a wastewater treatment facility that would enable the Parties to replenish groundwater supplies in the San Bernardino Basin Area;

San Bernardino Valley, as lead agency under the California Environmental Quality Act (“**CEQA**”), certified a Final Environmental Impact Report (“**Final EIR**” [attached hereto as **Attachment B**]) and associated Mitigation Monitoring and Reporting Plan (“**MMRP**” [attached hereto as **Attachment C**]) for the Sterling Natural Resource Center (“**SNRC**”), an advanced treatment facility capable of treating up to eight (8) million gallons per day (“**mgd**”) with an anticipated expanded capacity of ten (10) mgd, on March 16, 2016 (State Clearinghouse [SCH] No. 2015101058);

WHEREAS, on September 22, 2016, San Bernardino Valley filed a wastewater change petition (“**Petition**”), pursuant to California Water Code section 1211, with the State Water Resources Control Board (“**State Water Board**”), to change the point of discharge, place of use, purpose of use, and quantity of discharge of East Valley’s treated wastewater discharged to the Santa Ana River;

WHEREAS, on February 2, 2017, San Bernardino Valley, East Valley, and the Center for Biological Diversity (“**CBD**”) executed a Memorandum of Understanding for Species and Water Management in the San Bernardino Basin Area (“**CBD MOU**” [attached hereto as **Attachment D**]) to resolve the CBD’s protest against the Petition. The CBD MOU may be amended in the future to reflect changed conditions;

WHEREAS, on March 9, 2017, the United States Fish and Wildlife Service (“**USFWS**”) issued a biological opinion (“**2017 BiOp**” [attached as **Attachment E**]) (FWS-SB-16B0182-17F0387) for the construction and operation of the SNRC in accordance with section 7 of the Federal Endangered Species Act. The 2017 BiOp concluded that the proposed construction and operation of the SNRC is not likely to jeopardize the continued existence of or adversely modify the critical habitat of the San Bernardino kangaroo rat (“**SBKR**”) or Santa Ana Sucker (“**SAS**”). The biological opinion also identifies that the SNRC be included as a covered activity of the Upper Santa Ana River Habitat Conservation Plan (“**HCP**”);

WHEREAS, on April 28, 2017, the State Water Board's Division of Water Rights issued an order approving the Petition in Order WW0095 ("**Order WW0095**" [attached hereto as **Attachment F**]). The State Water Board included a Mitigation Monitoring and Reporting Program ("**Order MMRP**" [attached hereto as **Attachment G**]) as part of Order WW0095. The Order MMRP recites mitigation measures in the Final EIR for SNRC, and specifies implementation and monitoring responsibilities, including San Bernardino Valley being signatory to the HCP and the inclusion of the SNRC as a covered activity;

WHEREAS, on August 11, 2017, the USFWS issued an amendment to the 2017 BiOp ("**Amended 2017 BiOp**" [attached hereto as **Attachment H**]) (FWS-SB-16B0182-17F0387-R001). The Amended 2017 BiOp addressed the roles and responsibilities of both the United States Environmental Protection Agency and State Water Board associated with implementation of the 2017 BiOp conservation measures;

WHEREAS, on November 21, 2017, the Parties and the City of San Bernardino executed the **Settlement Agreement** (attached hereto as **Attachment I**) resolving and settling claims in the two related lawsuits filed in connection with the SNRC;

WHEREAS, on June 20, 2018, the San Bernardino County Local Agency Formation Commission approved the activation of East Valley's latent wastewater treatment authority conditioned on San Bernardino Valley assigning to East Valley San Bernardino Valley's obligations as lead agency arising under the SNRC Final EIR and associated MMRP;

WHEREAS, in October 2018, the Parties executed a written assignment agreement ("**Assignment Agreement**" [attached hereto as **Attachment J**]) whereby San Bernardino Valley assigned all obligations and responsibilities, express and implied, arising from and/or related to the SNRC Final EIR and associated MMRP, SCH #2015101058, to East Valley, and East Valley accepted, assumed, and agreed to perform, fulfill and comply with all obligations and responsibilities, express and implied arising from and/or related to the SNRC Final EIR and associated MMRP, and the CDFW- and USFWS-approved Habitat Mitigation and Monitoring Plan ("**HMMP**" [attached hereto as **Attachment K**]);

WHEREAS, in July 2019, East Valley, as the lead agency under CEQA, adopted an addendum to the Final EIR ("**Addendum No. 1**"), which evaluated specified operational changes to the SNRC facility that included emergency operations and recycled water detention ponds, use of an adjacent parcel, and food waste facilities. Addendum No.1 did not create new or increased environmental impacts beyond those analyzed and mitigated in the Final EIR;

WHEREAS, on January 27, 2021, East Valley, as the lead agency under CEQA, adopted a second addendum to the Final EIR ("**Addendum No. 2**"), with project modifications. Addendum No. 2 allowed for the recharge of SNRC-treated water into an alternative groundwater recharge site ("**Weaver Basins**") and extension of the Final EIR treated water conveyance pipeline system ("**Regional Recycled Water Pipeline**") to the alternative groundwater recharge site. Modifications to the SNRC Project in Addendum No. 2 reduced impacts to the SBKR;

WHEREAS, on January 3, 2022, USFWS issued a second amendment to the 2017 BiOp (“**Second Amended 2017 BiOp**” [attached hereto as **Attachment L**]) (FWS-SB-16B0182-17F0387-R002). The second amendment revised the conservation measures for the SBKR and Santa Ana River woolly-star based on changes to the SNRC project. These changes did not change project effects on SAS and the analysis in the 2017 biological opinion remains valid;

WHEREAS, the Parties coordinated the design and construction of the Regional Recycled Water Pipeline and the Weaver Basins (collectively, “**Regional Recycled Water System**”) pursuant to the Regional Recycled Water Pipeline Reimbursement Agreement as modified by the First, Second, and Third Addenda (attached hereto as **Attachment M**). A map of the Regional Recycled Water System is included as **Attachment N**;

WHEREAS, the Regional Recycled Water Pipeline is a thirty-inch diameter pipeline that, in general, facilitates the conveyance of tertiary treated recycled water from the SNRC into the Weaver Basins (“**Recycled Water**”);

WHEREAS, the Weaver Basins consist of up to five recharge basins on San Bernardino Valley’s property in the City of Highland, California. The Weaver Basins’ recharge basins are estimated to be capable of detaining up to sixteen (16) mgd of water for percolation into the Bunker Hill Subbasin, it is the intent of San Bernardino Valley to receive Recycled Water from East Valley for purposes of groundwater recharge at the Weaver Basins. However, these basins may also be used for recharge of imported or local stormwater in the future;

WHEREAS, as part of the SNRC project, East Valley constructed and operates two **Emergency Basins**, one at the SNRC, and one adjacent to the Weaver Basins on East Valley’s property, for the discharge and detention of Recycled Water under certain circumstances. A map of the Emergency Basins is included as **Attachment O**;

WHEREAS, in December 2022, the Parties received the final Wildlife Hazard Management Plan (attached hereto as **Attachment P**) for the Weaver Basins, Emergency Basins and SNRC, which analyzes the potential hazards the development of the Weaver Basins, Emergency Basins, and SNRC would pose to aircraft at the San Bernardino International Airport and Redlands Municipal Airport;

WHEREAS, on December 1, 2023, the USFWS issued a third amendment to the 2017 BiOp (“**Third Amended 2017 BiOp**” [attached hereto as **Attachment Q**]). The Third Amended 2017 BiOp provides flexibility for implementing Santa Ana sucker conservation measures and concludes that the proposed changes would not affect the Santa Ana Sucker in any way that was not considered in the 2017 BiOp;

WHEREAS, on December 1, 2023, the Santa Ana Region Regional Water Quality Control Board (“**Regional Water Board**”) issued East Valley the Waste Discharge Requirements and Master Recycling Permit for the East Valley Water District Sterling Natural Resource Center, Order No. R8-2023-0009 (“**WDR Permit**” [attached hereto as **Attachment R**]);

WHEREAS, the City of San Bernardino Municipal Water Department (“City”) has proposed a recycled water recharge project that would also discharge water at the Weaver Basins and would

convey some of the City's recycled water through some portions or all of the constructed Regional Recycled Water Pipeline; and

WHEREAS, to facilitate the City's use of the Regional Recycled Water Pipeline and Weaver Basins, it is anticipated that future agreements would be entered with the City and/or other parties who convey water to Weaver Basins in the future.

## **AGREEMENT**

1. Recitals. The above recitals are incorporated herein as if set forth in full.
2. Term. This Agreement shall continue for ten (10) years from the Effective Date (“**Initial Term**”). Unless a Party provides notice of intent to terminate per Section 16 to the other Party no less than 1 year prior to the intended termination date, then this Agreement will automatically renew for successive five (5) year terms after the Initial Term.
3. Scope. This Agreement governs the Parties' operations and use of the Regional Recycled Water System for the groundwater recharge of Recycled Water in accordance with applicable law. East Valley shall hold the rights to and is responsible for the Recycled Water subject to the requirements of this Agreement. San Bernardino Valley will serve as the transmitter of Recycled Water in the Regional Recycled Water System. Except as otherwise provided herein, this Agreement does not apply to East Valley's operation and management of the SNRC facilities and the Emergency Basins associated with the SNRC.
4. Regional Recycled Water System Operations.
  - a. San Bernardino Valley shall operate the Regional Recycled Water System within San Bernardino Valley's sole discretion.
  - b. East Valley shall not convey Recycled Water through the Regional Recycled Water Pipeline that does not comply with the terms, conditions, and requirements of the applicable WDR Permit (and subsequent orders), approved by the Regional Water Board ) or the State Water Board. East Valley shall strictly comply with the terms, conditions, and requirements of the WDR Permit and any subsequent orders relative to the conveyance of Recycled Water under this Agreement issued by the Regional Water Board, the State Water Board, or the United States Environmental Protection Agency.
  - c. East Valley's WDR Permit shall regulate and include specifications for the Recycled Water produced at the SNRC, and also include specifications for the percolation of Recycled Water into the Bunker Hill Subbasin through the Weaver Basins.
  - d. East Valley shall only convey the permitted capacity up to 10 mgd of Recycled Water through the Regional Recycled Water Pipeline to the Weaver Basins. The



Parties shall coordinate in good faith to discuss any and all future plans to expand the amount of Recycled Water conveyed over currently permitted amounts.

- e. San Bernardino Valley reserves the right to allow any other potential parties to convey native water, imported water, storm water, recycled water, or otherwise, to the Weaver Basins. Under no circumstances shall the addition of other parties that may convey water to the Regional Recycled Water System reduce the volume of Recycled Water allowed to be conveyed by East Valley to Weaver Basins under this Agreement nor shall East Valley be responsible for water quality for other parties who convey water to Weaver Basins.
- f. San Bernardino Valley reserves the right to refuse East Valley's Recycled Water prior to or during conveyance through the Regional Recycled Water Pipeline that does not comply with the provisions of this Agreement, including but not limited to requirements of the WDR Permit. In the event San Bernardino Valley exercises its right in this subsection, it shall meet and confer with East Valley in good faith per Section 17 to determine the actions necessary to return operation of the Weaver Basins to the specifications of this Agreement, including but not limited to requirements of the WDR Permit and any subsequent amendments thereto.
- g. East Valley may only discharge Recycled Water into the Emergency Basins: (i) during Emergency Circumstances as defined by Section 10; or (ii) to allow inspections as provided for in Paragraph h, below.
- h. San Bernardino Valley may, from time to time, conduct inspections of the Regional Recycled Water Pipeline which require the Regional Recycled Water pipeline to be free and clear and emptied of any and all Recycled Water or other contents. San Bernardino Valley shall, as soon as practicable, provide notice to East Valley in accordance with Section 16 of San Bernardino Valley's planned inspection. Upon receiving notice from San Bernardino Valley, East Valley shall as soon as practicable: (i) cease conveyance of Recycled Water through the Regional Recycled Water Pipeline; (ii) permit Recycled Water in the Regional Recycled Water Pipeline to drain via gravity flow, (iii) coordinate with San Bernardino Valley to provide a discharge point for pumping out Recycled Water from the pipeline that does not drain by gravity, and (iv) ensure that the discharge of Recycled Water complies with all relevant laws, regulatory permits and approvals.
- i. East Valley shall be solely responsible for all costs associated with the actions in Paragraph (h), above, including but not limited to the cost of regulatory permits and environmental compliance and mitigation, except that San Bernardino Valley will be responsible for costs associated with hiring a contractor to pump water out of the Regional Recycled Water Pipeline.

5. Access and Security.

- a. Access to the Weaver Basins is strictly limited to San Bernardino Valley's officers, staff, employees, and independent contractors; provided, that San Bernardino Valley shall coordinate with East Valley to provide East Valley's officers, staff, employees, and independent contractors with access when reasonably necessary to implement this Agreement, including, but not limited to, during maintenance pursuant to Section 6 or during Emergency Circumstances as defined in Section 10.
- b. Access to SNRC and the Emergency Basins is strictly limited to East Valley's officers, staff, employees, and independent contractors; provided, that East Valley shall coordinate with San Bernardino Valley to provide San Bernardino Valley's officers, staff, employees, and independent contractors with access when reasonably necessary to implement this Agreement, including, but not limited to, water quality sampling and monitoring, during maintenance and facility improvements pursuant to Section 6 or during Emergency Circumstances as defined in Section 10.
- c. San Bernardino Valley shall provide adequate security to the Regional Recycled Water System and all appurtenances.
- d. East Valley shall provide adequate security to the SNRC and the Emergency Basins.

6. Regional Recycled Water System Maintenance.

- a. San Bernardino Valley shall be responsible for routine and emergency maintenance and repairs of the facilities, pipelines, or appurtenances that compose the Regional Recycled Water System, except as provided in Section 6.b.
- b. East Valley shall be solely responsible for routine and emergency maintenance of the Emergency Basins, all facilities associated with the SNRC, and for the portion of the Regional Recycled Water Pipeline from the inlet valves to the Emergency Basins.
- c. All routine and emergency maintenance and repairs shall meet the standard of professional care and skill customarily provided in the performance of such services.

7. Wildlife Hazard Mitigation Plan.

- a. The Parties shall implement this Agreement in compliance with the Wildlife Hazard Mitigation Plan. Any and all obligations and requirements in the Wildlife Hazard Mitigation Plan are incorporated into this Agreement and are binding on the Parties.
- b. The Parties shall, as required by the Wildlife Hazard Mitigation Plan, provide training to appropriate staff, including, but not limited to, maintenance staff or

independent contractors, to ensure compliance with the Wildlife Hazard Mitigation Plan.

- c. East Valley shall be responsible for implementing the Wildlife Hazard Mitigation Plan at the SNRC site, the Emergency Basins, and any other future Recycled Water retention facility constructed by East Valley.
- d. San Bernardino Valley shall operate the Weaver Basins in accordance with the Wildlife Hazard Mitigation Plan, including implementing and conducting monitoring in accordance with the Plan, keeping access roads clear of any and all obstructions.

8. Water Quality.

- a. East Valley's conveyance and discharge of Recycled Water from the SNRC facility through the Regional Recycled Water Pipeline and into the Weaver Basins shall comply with all approvals and permits from the applicable regulatory agencies, which include, but are not limited to, the Regional Water Board and State Water Board.
- b. East Valley shall be solely responsible for any and all groundwater quality mitigation and remediation requirements that may arise resulting from the discharge of Recycled Water from the SNRC to the Weaver Basins, Emergency Basins, or otherwise; including future changes to water quality regulations and/or changes in water quality due to interaction between the Recycled Water and groundwater and/or sediments in the Weaver Basins or Bunker Hill Subbasin.
- c. In the event that the Recycled Water from the SNRC facility adversely affects, damages, or otherwise injures the Regional Recycled Water Pipeline, East Valley shall be solely responsible for: (i) assessing methods to modify the quality of the Recycled Water so that the Recycled Water does not adversely affect the pipeline; (ii) implementing changes to the SNRC to modify the quality of the Recycled Water that the Recycled Water does not adversely affect the pipeline; and (iii) reimbursing San Bernardino Valley for all costs associated with designing and constructing repairs to the pipeline.

9. Data Collection and Monitoring.

- a. The Parties agree to work cooperatively and in good faith to implement a data collection and water quality monitoring program. Each Party agrees to provide the other Party with all pertinent data, previous studies, and related information necessary for the operations of the Regional Recycled Water System upon request.
- b. San Bernardino Valley shall collect and maintain percolation rate and water level data of the Weaver Basins and shall provide data to East Valley upon request.

- c. East Valley shall simultaneously provide San Bernardino Valley with copies of all water quality monitoring reports and correspondence East Valley provides the applicable regulatory agencies, including, but not limited to, the Regional Water Board or State Water Board.
- d. East Valley shall provide San Bernardino Valley with applicable operations and water quality data for the purpose of monitoring real-time water quality of Recycled Water destined for the Weaver Basins.
- e. San Bernardino Valley shall provide East Valley access to operations data at Weaver Basins.

10. Emergency Circumstances.

- a. San Bernardino Valley may, in its sole discretion, temporarily shut off conveyance of Recycled Water through the Regional Recycled Water Pipeline to the Weaver Basins during Emergency Circumstances. Emergency Circumstances are defined as:
  - i. Occurrences where East Valley’s real-time monitoring system detects Recycled Water that is in violation of the applicable approvals and permits, including, but not limited to, the WDR Permit (“**Off-Spec Water**”).
  - ii. Occurrences where San Bernardino Valley determines in its discretion, which will not be unreasonably withheld, that the discharge of Recycled Water from the SNRC facility into the Weaver Basins is not in compliance with the conditions of East Valley’s approvals and permits, including, but not limited to, the WDR Permit;
  - iii. Occurrences where there is a rupture, breakage, or other malfunction in the Regional Recycled Water Pipeline.
  - iv. Occurrences where the Weaver Basins are unable to receive Recycled Water from the SNRC.
  - v. High groundwater levels affecting surrounding neighborhoods.
- b. During an Emergency Circumstances event, East Valley’s PLC shall send a signal notification to the San Bernardino Valley’s PLC and redirect the Recycled Water flow to the SNRC-onsite Emergency Basin first. In the event that the onsite Emergency Basin is at capacity and the Off-Spec Water cannot be cleared, East Valley shall coordinate with San Bernardino Valley to manually direct Off-Spec Water to the Emergency Basin adjacent to the Weaver Basins.
- c. The Parties shall coordinate responses to unplanned events that may impact the ability of San Bernardino Valley to accept Recycled Water from the SNRC facility. San Bernardino Valley shall make reasonable effort to consult with East

Valley regarding a potential Emergency Circumstance prior to shutting off conveyance to the Weaver Basins through the Regional Recycled Water Pipeline.

- d. In the event San Bernardino Valley shuts off access to the Weaver Basins pursuant to an Emergency Circumstance, East Valley shall be fully responsible for discharge, cleanup, and disposal of the Recycled Water in accordance with all applicable requirements of law.

11. Development of Additional Emergency Storage or Alternative Discharge Location

- a. East Valley shall, within one year of the Effective Date, prepare a Feasibility Study to assess alternatives to provide additional emergency storage or an additional discharge location for the SNRC.
- b. The Parties agree that the intent of the Feasibility Study shall be to identify a preferred alternative to conveying Recycled Water through the Regional Recycled Water Pipeline for discharge at the Weaver Basins in the event the Regional Recycled Water System is inoperable for an extended period of time.
- c. East Valley agrees to work cooperatively with San Bernadino Valley and in good faith to identify the required volume of additional emergency storage to be developed or an additional discharge location for up to eight (8) mgd of Recycled Water, identify the preferred alternative, and complete the Feasibility Study.
- d. The Parties agree that the preferred alternative identified in the Feasibility Study shall be mutually agreeable to the Parties and that approval shall not be unreasonably withheld.
- e. East Valley shall be solely responsible for completing design, environmental compliance, permitting, and completing all required agreements and approvals for the preferred alternative(s).
- f. East Valley shall be solely responsible for constructing, operating and maintaining the facilities required to implement the preferred alternative(s).
- g. The Parties acknowledge and agree that they are not committing to any course of action contemplated by this Section at this time, and nothing in this Section is intended or will be construed to be a pre-decisional commitment of funds or resources by any Party. Nor shall this Section be intended or construed to modify the application of the National Environmental Policy Act, the California Environmental Quality Act, or other applicable law, to the environmental review of any course of action contemplated by this Section.
- h. East Valley agrees to indemnify and hold harmless San Bernardino Valley for any claims resulting from, relating to, or in any way connected to the environmental review related to this Section.

12. Compliance with State Water Law, CEQA, and federal ESA. The Parties shall participate in any joint powers authority formed in connection with implementation of the HCP. Additionally, East Valley acknowledges and agrees to implement all the requirements of the Final EIR, addenda thereto, and the associated MMRP, the Assignment Agreement and subsequent amendments, Order WW0095 and Order MMRP, the 2017 BiOp and amendments thereto, the HMMP, and the HCP.
13. Electricity. East Valley shall provide San Bernardino Valley with electricity to power the Weaver Basins operations via Plant No. 143 at no cost; provided, that East Valley shall have no obligation to provide electricity after San Bernardino Valley establishes its own power service. San Bernardino Valley will take reasonable efforts to pursue an alternative electricity source.
14. Indemnification.
  - a. Except as provided in Paragraph b, below, each Party to this Agreement (as “**Indemnifying Party**”) shall indemnify, defend and hold harmless the other Party and its officers, managers, agents, employees, affiliates and successors (collectively, “**Indemnified Party**”) from and against any and all losses, damages, liabilities, deficiencies, claims, actions, judgments, settlements, interest, awards, penalties, fines, costs, or expenses whatsoever, including without limitation attorneys’ fees and legal costs (“**Damages**”), suffered by the Indemnified Party and arising from the negligence, willful misconduct or breach of this Agreement by the Indemnifying Party; provided, however, such indemnification obligation shall not apply to the extent that any such Damages are caused by the negligence, willful misconduct or breach of this Agreement by the Indemnified Party.
  - b. East Valley shall indemnify, defend (at East Valley’s sole cost and expense with legal counsel approved by San Bernardino Valley, which approval shall not be unreasonably withheld), protect, and hold harmless San Bernardino Valley and its officers, directors, managers, agents, employees, affiliates and successors (collectively, “**SBV Indemnified Parties**”) from and against any and all claims, demands, obligations, damages, actions, orders, losses, liabilities, costs, and expenses of every kind and nature whatsoever, including without limitation attorneys’ fees and legal costs (“**Claim**” or “**Claims**”) which may arise from or in any manner relate, directly or indirectly, to this Agreement, including without limitation, any Claim resulting from East Valley’s staff, employees, or independent contractors actions or omissions while accessing the Weaver Basins, and also including, without limitation, any Claim that is in any way connected to a release or threatened release of, introduction to, mobilization of, or exposure to, any chemical, contaminant, pollutant, hazardous substance and/or hazardous waste into the environment, land, soil, water (including, but not limited to surface water, groundwater, or drinking water supplies), air, liquefaction, and/or seepage to low lying lands. This paragraph shall, without limitation, apply to any release, threatened release, introduction, exposure to and/or mobilization of the broad class of chemicals known as per- and polyfluoroalkyl substances by East Valley.

- c. This Section shall survive the termination of any other agreement between San Bernardino Valley and East Valley. East Valley's obligations in Paragraph b, above, shall survive the expiration or earlier termination of this Agreement until such time as any action against SBV Indemnified Parties for such matter indemnified hereunder is fully and finally resolved or barred by the applicable statute of limitations or statute of repose.

15. Insurance.

- a. Without in any way affecting Section 14, each Party shall secure and maintain throughout the term of this Agreement the following types of insurance with limits as shown:
  - i. Commercial/General Liability. East Valley shall carry General Liability Insurance covering all operations and services performed under Sections 4, 5, and 6 of this Agreement, providing coverage for bodily injury and property damage with a combined single limit of five million dollars (\$5,000,000) per occurrence. The policy coverage shall include: (i) premises operation and mobile equipment; (ii) broad form property damage; (iii) explosion, collapse, and underground hazards; (iv) personal injury; (v) contractual liability; and (vi) pollution liability.
  - ii. Workers' Compensation. A program of Worker's Compensation Insurance or a State-approved Self-Insurance Program in an amount and form to meet all applicable requirements of the Labor Code of the State of California, including Employer's Liability with one million dollar (\$1,000,000) limits, covering all persons providing services contemplated in Sections 4, 5, and 6 of this Agreement.
  - iii. Comprehensive General and Automobile Liability Insurance. This coverage to include contractual coverage and automobile liability coverage for owned, hired, and non-owned vehicles. The policy shall have combined single limits for bodily injury and property damage of not less than one million dollars (\$1,000,000).
- b. Without in any way affecting Section 14, East Valley shall provide liability insurance for environmental impairment including cleanup costs, and endorsed for "Sudden and Accidental" contamination or pollution. Such coverage shall be in an amount and form to meet all applicable state and federal requirements, but in no event shall be less than five million dollars (\$5,000,000) per occurrence, or fifteen million dollars (\$15,000,000) aggregate limit.
- c. All policies, except for Workers' Compensation Policies, shall contain additional endorsements naming the Parties hereto, their directors and managers, the County and their officers, employees, agents, and volunteers as additional named insured with respect to liabilities arising out of the performance of this Agreement.

- d. The Parties shall require the carriers of the above required coverages to waive all rights of subrogation.
  - e. Each Party shall require all independent contractors and subcontractors to provide insurance covering the contracted operations with the same coverage and subject to the same insurance specifications set forth herein, and naming San Bernardino Valley and East Valley as an additional insured.
  - f. Each Party shall provide proof of insurance coverage via notice as provided for in Section 16 within sixty (60) days of the execution of this Agreement.
16. Notices. All notices, requests, demands, or other communications required or permitted under this agreement shall be addressed as follows:

SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT  
Heather Dyer, CEO/General Manager  
380 East Vanderbilt Way  
San Bernardino, CA 92408  
[heatherd@sbnmwd.com](mailto:heatherd@sbnmwd.com)

EAST VALLEY WATER DISTRICT  
Michael Moore, General Manager/CEO  
31111 Greenspot Road  
Highland, CA 92346  
[mmoore@eastvalley.org](mailto:mmoore@eastvalley.org)

17. Dispute Resolution.
- a. The Parties desire that this Agreement operate between them fairly and reasonably. If during the term of this Agreement a dispute arises between the Parties, or one Party perceives the other as acting unfairly or unreasonably, or a question of interpretation arises hereunder, then the Parties shall cause their respective representatives to promptly confer and exert their good faith efforts to reach a reasonable and equitable resolution of the issue. If the Parties' representatives are unable to resolve the issue within ten (10) business days, the matter shall be referred within two (2) business days of the lapse of such period to the Parties' responsible officers for resolution. No Party shall seek resolution by mediation of any dispute arising in connection with this Agreement until all Parties' responsible officers, who shall be identified by each Party from time to time, have had at least ten (10) business days to resolve the dispute following referral of the dispute to such responsible officers.
  - b. If a dispute under this Agreement is not resolved by the Parties pursuant to Section 17.a within sixty (60) days from the date on which a Party first requested mediation, then either Party may seek to resolve such dispute through litigation. Such actions shall be brought in San Bernardino County Superior Court.



- c. Regardless of whether it is the prevailing party in any litigation or other action to enforce or interpret this Agreement, each Party shall bear its own attorneys' fees, costs of suit, and other necessary disbursements. This paragraph shall not apply to the costs or attorneys' fees relative to the indemnification provisions of Section 14.
18. Entire Agreement. This instrument constitutes the entire agreement and understanding between the Parties with respect to the subject matters hereof, and supersedes and replaces any prior agreements and understandings, whether oral or written, by and between them with respect to such matters.
19. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of California, without regard to any otherwise applicable principles of conflicts of laws.
20. Amendment. This Agreement may be amended from time to time. No alteration, amendment, or variation of this Agreement shall be valid unless made in writing and signed by all Parties.
21. Severability. If any provision of this Agreement is determined by any court of competent jurisdiction to be invalid and unenforceable to any extent, the remainder of this Agreement shall not be affected thereby, and each provision hereof shall be valid and shall be enforced to the fullest extent permitted by law.
22. Assignment. The Parties may not assign, in whole or in part, their rights or obligations under this Agreement without the express written consent of the other Party; provided, that such written consent shall not be unreasonably withheld.
23. No Third-Party Beneficiary. Nothing contained in this Agreement shall be deemed or construed by the Parties or by any third person to create the relationship of principal and agent, or partnership or joint venture, or any association between the Parties, and none of the provisions contained in this Agreement or any act of the Parties shall be deemed to create any relationship other than as specified herein, nor shall this Agreement be construed, except as expressly provided herein, to authorize either Party to act as the agent for the other.
24. No Waiver. No waiver of any provision of this Agreement shall be deemed, or shall constitute, a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver, nor shall a waiver in any instance constitute a waiver in any subsequent instance. No waiver shall be binding unless executed in writing by the Party making the waiver.
25. Titles & Captions. Titles and captions are for the convenience of reference only and do not define, describe, or limit the scope of the intent of the Agreement or any of its terms. Reference to section numbers are to sections in the Agreement unless expressly stated otherwise.

26. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original instrument, but all of which together shall constitute one and the same instrument.
27. Authority to Execute. Each person executing this Agreement represents and warrants that he or she is duly authorized and has legal authority to execute and deliver this Agreement for or on behalf of the parties to this Agreement. Each Party represents and warrants to the other(s) that the execution and delivery of the Agreement and the performance of such Party's obligations hereunder have been duly authorized.

IN WITNESS WHEREOF, the parties hereto have entered into this instrument as of the Effective Date set forth above.

**SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT**

By: \_\_\_\_\_

Name:

Date:

**EAST VALLEY WATER DISTRICT**

By: \_\_\_\_\_

Name:

Date:



43 F. Replenishing the San Bernardino Basin Area or other groundwater basins with recycled  
 44 water is consistent with article X, section 2 of the California Constitution, which requires that the  
 45 water resources of California be used to the fullest extent of which they are capable and is also  
 46 consistent with Water Code section 13576(k), which authorizes and encourages the use of  
 47 recycled water for groundwater replenishment. Groundwater replenishment is also within the  
 48 authority of both Parties.

49  
 50 G. The Parties wish to establish and agree to a framework for their working collaboratively  
 51 toward the potential construction and operation of a wastewater treatment plant (the “**Project**”)  
 52 that will enable them to replenish the groundwater resources that serve their respective  
 53 ratepayers. Nothing in this collaborative framework shall commit the Parties to the Project, shall  
 54 preclude mitigations or alternatives to the Project, or shall foreclose the potential for no Project.

55  
 56 Agreements

57  
 58 1. *Governance – Joint Management.*

59 a. The Parties agree that they will work together in good faith to complete the  
 60 construction of the Project no later than June 30, 2018 .

61 b. The Parties will then promptly enter into an agreement for the operation of the  
 62 Project with a term of at least ten years that will enable the Parties to replenish the  
 63 San Bernardino Basin Area with at least 6,000 acre-feet of recycled water.

64 c. In accomplishing these objectives, the Project will be managed by a Management  
 65 Committee composed of the General Manager of EVWD and the General  
 66 Manager of Valley District, or their designees. All decisions shall be made on a  
 67 unanimous basis.

68 d. Both Parties hereby authorize their respective General Managers or designees to  
 69 develop any administrative and operating rules and procedures that may be  
 70 needed to implement the terms of this Agreement and that do not require a change  
 71 in the terms of the Agreement without subsequent action by the Parties’ governing  
 72 boards.

73 2. *Construction of Wastewater Treatment Plant.* The Parties agree that Valley District shall  
 74 serve as the lead agency for the construction and operation of the Project, as follows:

75 a. *Assignment of Consulting Agreements and Permits by EVWD to Valley District.*  
 76 Within thirty days of the effective date of this Agreement, EVWD shall assign all  
 77 existing consulting or other agreements other than legal, as well as any permits,  
 78 easements or other approvals, relating to the construction of the Project or its  
 79 subsequent operation to Valley District.

- 80 (1) In the event that Valley District determines, in its sole discretion, that it  
81 needs to retain additional consultants in order to fulfill its obligations  
82 under the terms of this Agreement, Valley District may retain such  
83 consultants without the prior consent of EVWD. Valley District shall,  
84 however, provide a copy of such newly retained consultant's budget,  
85 scope of work and retainer agreement to EVWD within thirty days of such  
86 consultant's retention.
- 87 (2) The Parties understand and agree that, throughout the construction and  
88 operation of the Project, each Party will continue to be represented by its  
89 own regular legal counsel. The Parties will, within thirty days of the  
90 execution of this Agreement, enter into a joint defense/common interest  
91 doctrine agreement that will enable them to proceed with the Project in the  
92 most expeditious manner possible.
- 93 b. *Design-Build and Project Permitting.* Valley District shall design, permit and  
94 construct the Project by means of one or more design/build contracts, as  
95 authorized by Public Contracts Code sections 22160 *et seq.* Specifically:
- 96 (1) *Design Proposal.* Valley District shall work with one or more firms to  
97 develop a design/build proposal for review and approval by EVWD no  
98 later than    April 30, 2016.
- 99 (a) In evaluating Project alternatives, the wastewater treatment plant  
100 shall consider the location of APNs 0279-211-33-0000, 0279-211-  
101 25-0000, 0279-211-26-0000 and 0279-211-01-0000, which are  
102 owned by EVWD. To the extent that additional easements are  
103 needed by Valley District or entities acting under Valley District's  
104 direction in order to complete the Project, EVWD agrees to issue  
105 such easements over its own property or to be responsible for  
106 obtaining such easements from neighboring landowners.
- 107 (b) EVWD shall review the design/build proposal and approve it (with  
108 or without changes) within thirty days of submission. If EVWD  
109 fails to approve the proposal in a timely manner, Valley District  
110 may, in its sole discretion, deem this Agreement to have been  
111 terminated.
- 112 (2) *Permitting.* Valley District shall be responsible for obtaining all local,  
113 state or federal permits that may be necessary for the construction or  
114 operation of the Project in a timely manner.

- 115 (a) Such permits shall include, but are not limited to, NPDES permits,  
 116 other permits necessary to use recycled water to replenish the San  
 117 Bernardino Basin Area, and the permits needed to allow for the  
 118 continued discharge of treated wastewater either to the Santa Ana  
 119 River or other appropriate discharge points.
- 120 (b) Valley District shall also be the lead agency for the preparation of  
 121 one or more environmental document(s) that may be required  
 122 under the terms of the National Environmental Policy Act and/or  
 123 the California Environmental Quality Act that are sufficient to  
 124 approve and support the issuance of the necessary permits for the  
 125 Project.
- 126 (3) *Construction.* Valley District shall cause the Project to be constructed in a  
 127 timely manner. The Parties anticipate that the Project shall be completed  
 128 by June 30, 2018. Valley District shall provide monthly updates to  
 129 EVWD on changes to the plans, specifications, and schedules. Valley  
 130 District shall not be liable for any delays or additional costs in  
 131 constructing the Project, save for the gross negligence, intentional acts and  
 132 willful misconduct of Valley District and its employees, agents and  
 133 contractors.
- 134 (4) *Award of Contract.* Valley District shall obtain the concurrence of EVWD  
 135 prior to awarding any contract for the construction of the Project. EVWD  
 136 agrees not to unreasonably delay its approval of any proposed contract.  
 137 Not later than 60 days prior to award of contract, the Parties, through the  
 138 Management Committee, based upon information then available, shall  
 139 determine whether the Project continues to be feasible and furthers the  
 140 Parties' groundwater replenishment objectives. If the Management  
 141 Committee finds that the Project is not feasible or will not meet the  
 142 groundwater recharge objectives of the Parties, it shall issue its findings to  
 143 the Parties who will meet and confer, in good faith, to determine an  
 144 alternate course of action including, but not limited to, Project  
 145 modification or termination.
- 146 (5) *Costs.* The Parties agree that the construction of the Project will occur at  
 147 no cost to Valley District. Valley District shall be entitled to recover all of  
 148 its costs (including, but not limited to, materials costs; consultants, experts  
 149 and attorneys' fees; and direct expenditures) from EVWD for the  
 150 construction of the Project, save for costs directly caused by the gross  
 151 negligence, intentional acts and willful misconduct of Valley District and  
 152 its employees, agents and contractors.

153 (6) *Mark-Up of Costs.* EVWD shall pay all costs incurred by Valley District  
154 in connection with the Project without any mark-up, including that EVWD  
155 shall pay Valley District's reasonable staff time for work related to the  
156 Project.

157 (7) *Payments Obligatory.* EVWD shall make all payments required by this  
158 Agreement as they become due, notwithstanding any individual default by  
159 its customers or users, any dispute over charges, or otherwise.

160 c. *Financing.* EVWD agrees that it will finance the full costs of all work associated  
161 with or required by the Project and may make any arrangements that it deems  
162 appropriate for such financing without the consent of Valley District. EVWD  
163 shall keep Valley District reasonably informed as to the status of such financing.  
164 Valley District will cooperate, and may assist in other ways at its discretion, with  
165 EVWD's efforts to secure financing for the Project to the extent that cooperation  
166 is reasonable and necessary.

167 3. *Operation of Wastewater Treatment Plant for Groundwater Replenishment.* The Parties  
168 shall enter into the operations agreement for the wastewater treatment plant and for  
169 groundwater replenishment referred to in paragraph 1 above no later than thirty days  
170 after the completion of the construction of the wastewater treatment plant. Such  
171 operations agreement shall include the following terms:

172 a. *Term*

173 (1) The operations agreement shall be for an initial term of ten years, with  
174 subsequent terms of five years each. Either Party may terminate the  
175 operations agreement with at least one year's written notice prior to the  
176 completion of either the initial term or a subsequent term, but if no such  
177 termination notice is received in a timely manner, the operations  
178 agreement shall automatically renew for another five year period.

179 (2) Notwithstanding the previous subparagraph, if the San Bernardino County  
180 Local Agency Formation Commission activates EVWD's authority to  
181 provide wastewater treatment services to its ratepayers, EVWD may  
182 succeed to Valley District's obligations to operate the wastewater  
183 treatment plant by providing Valley District with one year's written notice  
184 of such succession.

185 b. *Operation of the Wastewater Treatment Plant.* Valley District shall operate the  
186 wastewater treatment plant, or cause it to be operated by a subcontractor, in a  
187 good and workmanlike fashion, in full compliance with all applicable local, state  
188 and federal laws and regulations.

- 189 (1) EVWD shall arrange, at its sole cost, for the collection and conveyance of  
190 wastewater generated within EVWD's service area to the wastewater  
191 treatment plant.
- 192 (2) EVWD shall pay all costs incurred by Valley District for the operation of  
193 the wastewater treatment plant (including staff time). Valley District shall  
194 invoice EVWD quarterly in arrears and EVWD shall pay Valley District  
195 within thirty days of the date of each invoice.
- 196 c. *Public Education.* EVWD may construct facilities ancillary to the Project for the  
197 purpose of public education and programming on topics including water  
198 conservation and replenishment; Valley District will not object to the construction  
199 and operation of such public education facilities and the conduct of such  
200 programs, *provided that* such facilities and programs are conducted in such a way  
201 so as not to interfere with the ongoing operations of the wastewater treatment  
202 plant.
- 203 4. *Groundwater Replenishment with Recycled Water.* The Parties agree that any recycled  
204 water produced by the wastewater treatment plant shall be the sole property of EVWD.
- 205 5. *Facility Ownership.* EVWD shall own, in fee simple, all Project facilities *provided that*  
206 until EVWD completes payment of all construction costs to Valley District, Valley  
207 District shall be deemed to have a security interest in those facilities in an amount equal  
208 to the unpaid debt. In the event of a default in required payment by EVWD, the Parties  
209 agree that Valley District shall have the right to obtain a judgment in the amount of any  
210 default by EVWD and shall further have the right to cause EVWD to increase its water  
211 charges or to levy an assessment to pay the amount of the default.
- 212 6. *Indemnification*
- 213 a. *Indemnification by Valley District.* Valley District shall indemnify, defend and  
214 hold harmless EVWD, its directors, officers, attorneys, employees and agents  
215 from and against all damages, liabilities, claims, actions, demands, costs and  
216 expenses (including, but not limited to, costs of investigations, lawsuits and any  
217 other proceedings whether in law or in equity, settlement costs, attorneys' fees  
218 and costs), and penalties or violations of any kind, which arise out of, result from,  
219 or are related to Valley District's performance of its obligations under this  
220 Agreement.
- 221 b. *Indemnification by EVWD.* EVWD shall indemnify, defend and hold harmless  
222 Valley District, its directors, officers, attorneys, employees and agents from and  
223 against all damages, liabilities, claims, actions, demands, costs and expenses  
224 (including, but not limited to, costs of investigations, lawsuits and any other



225 proceedings whether in law or in equity, settlement costs, attorneys' fees and  
 226 costs), and penalties or violations of any kind, which arise out of, result from, or  
 227 are related to the performance of EVWD's obligations under this Agreement.

228 c. *Indemnification Procedures.* Any Party that is an indemnified party (the  
 229 "**Indemnified Party**") that has a claim for indemnification against the other Party  
 230 (the "**Indemnifying Party**") under this Agreement, shall promptly notify the  
 231 Indemnifying Party in writing, *provided, however*, that no delay on the part of the  
 232 Indemnified Party in notifying the Indemnifying Party shall relieve the  
 233 Indemnifying Party from any obligation unless (and then solely to the extent) the  
 234 Indemnifying Party is prejudiced. Further, the Indemnified Party shall promptly  
 235 notify the Indemnifying Party of the existence of any claim, demand, or other  
 236 matter to which the indemnification obligations would apply, and shall give the  
 237 Indemnifying Party a reasonable opportunity to defend the same at its own  
 238 expense and with counsel of its own selection, *provided* that the Indemnified  
 239 Party shall at all times also have the right to fully participate in the disputed  
 240 matter at its own expense. If the Indemnifying Party, within a reasonable time  
 241 after notice from the Indemnified Party, fails to defend a claim, demand or other  
 242 matter to which the indemnification obligations would apply, the Indemnified  
 243 Party shall have the right, but not the obligation, to undertake the defense of, and  
 244 to compromise or settle (exercising reasonable business judgment), the claim or  
 245 other matter, on behalf, or for the account, and at the risk, of the Indemnifying  
 246 Party. If the claim is one that cannot by its nature be defended solely by the  
 247 Indemnifying Party, then the Indemnified Party shall make available all  
 248 information and assistance to the Indemnifying Party that the Indemnifying Party  
 249 may reasonably request.

250 7. *Administration of Agreement*

251 a. *Books and Records.* Each Party shall have access to and the right to examine any  
 252 of the other Party's pertinent books, documents, papers or other records  
 253 (including, without limitation, records contained on electronic media) relating to  
 254 the performance of that Party's obligations pursuant to this Agreement or the  
 255 Project.

256 (1) *Retention of Records; Preservation of Privilege.* Each Party shall retain  
 257 all such books, documents, papers or other records to facilitate such  
 258 review in accordance with that Party's record retention policy. Access to  
 259 each Party's books and records shall be during normal business hours  
 260 only. Nothing in this paragraph shall be construed to operate as a waiver  
 261 of any applicable privileges.

- 262 (2) *Outside Auditors.* Any Party may, at any time and at its sole cost, hire an  
 263 auditor to examine the accounting for work performed pursuant to this  
 264 Agreement. The Parties may also agree to retain an independent auditor to  
 265 review the accounting for work performed pursuant to this Agreement.  
 266 The costs of such an auditor will be shared equally between the Parties.
- 267 b. *Disputes.* The Parties recognize that there may be disputes regarding the  
 268 obligations of the Parties or the interpretation of this Agreement. The Parties  
 269 agree that they may attempt to resolve disputes as follows:
- 270 (1) *Statement Describing Alleged Violation or Interruption of Agreement.* A  
 271 Party alleging a violation or interruption of this Agreement (the  
 272 “**Initiating Party**”) shall provide a written statement describing all facts  
 273 that it believes constitute a violation or interruption of this Agreement to  
 274 the Party alleged to have violated or interrupted the terms of this  
 275 Agreement (the “**Responding Party**”).
- 276 (2) *Response to Statement of Alleged Violation or Interruption.* The  
 277 Responding Party shall have sixty days from the date of the written  
 278 statement to prepare a written response to the allegation of a violation or  
 279 interruption of this Agreement and serve that response on the Initiating  
 280 Party or to cure the alleged violation or interruption to the reasonable  
 281 satisfaction of the Initiating Party. The Initiating Party and the  
 282 Responding Party shall then meet within thirty days of the date of the  
 283 response to attempt to resolve the dispute amicably.
- 284 (3) *Mediation of Dispute.* If the Initiating Party and the Responding Party  
 285 cannot resolve the dispute within ninety days of the date of the written  
 286 response, they shall engage a mediator, experienced in water-related  
 287 disputes, to attempt to resolve the dispute. Each Party shall ensure that it  
 288 is represented at the mediation by a member of its Board of Directors.  
 289 These representatives of the Initiating Party and the Responding Party may  
 290 consult with staff and/or technical consultants during the mediation and  
 291 such staff and/or technical consultants may be present during the  
 292 mediation. The costs of the mediator shall be divided equally between the  
 293 Initiating Party and the Responding Party.
- 294 (4) *Prior to Claims Under California Tort Claims Act.* The Parties agree that  
 295 the procedure described in this paragraph 7.b represents an effort to  
 296 resolve disputes without the need for a formal claim under the California  
 297 Tort Claims Act or other applicable law. The period of time for the  
 298 presentation of a claim by one Party against another shall be tolled for the

299 period from the date on which the Initiating Party files a written statement  
 300 until the date upon which the mediator renders a decision.

301 (5) *Reservation of Rights.* Nothing in this paragraph 7.b shall require a Party  
 302 to comply with a decision of the mediator and, after the completion of the  
 303 mediation process described above, each Party shall retain and may  
 304 exercise at any time all legal and equitable rights and remedies it may  
 305 have to enforce the terms of this Agreement; provided, that prior to  
 306 commencing litigation, a Party shall provide at least five calendar days'  
 307 written notice of its intent to sue to the other Party.

308 8. *General Provisions.*

309 a. *Authority.* Each signatory of this Agreement represents that s/he is authorized to  
 310 execute this Agreement on behalf of the Party for which s/he signs. Each Party  
 311 represents that it has legal authority to enter into this Agreement, to perform all  
 312 obligations under this Agreement and that any and all appropriate Board action  
 313 necessary for approval of this Agreement has been taken. .

314 b. *Amendment.* This Agreement may be amended or modified only by a written  
 315 instrument executed by each of the Parties to this Agreement.

316 c. *Jurisdiction and Venue.* This Agreement shall be governed by and construed in  
 317 accordance with the laws of the State of California, except for its conflicts of law  
 318 rules. Any suit, action, or proceeding brought under the scope of this Agreement  
 319 shall be brought and maintained to the extent allowed by law in the County of San  
 320 Bernardino, California.

321 d. *Headings.* The paragraph headings used in this Agreement are intended for  
 322 convenience only and shall not be used in interpreting this Agreement or in  
 323 determining any of the rights or obligations of the Parties to this Agreement.

324 e. *Construction and Interpretation.* This Agreement has been arrived at through  
 325 negotiations and each Party has had a full and fair opportunity to revise the terms  
 326 of this Agreement. As a result, the normal rule of construction that any  
 327 ambiguities are to be resolved against the drafting Party shall not apply in the  
 328 construction or interpretation of this Agreement.

329 f. *Entire Agreement.* This Agreement constitutes the entire agreement of the Parties  
 330 with respect to the subject matter of this Agreement and, save as expressly  
 331 provided in this Agreement, supersedes any prior oral or written agreement,  
 332 understanding, or representation relating to the subject matter of this Agreement.

- 333 g. *Partial Invalidity.* If, after the date of execution of this Agreement, any provision  
334 of this Agreement is held to be illegal, invalid, or unenforceable under present or  
335 future laws effective during the term of this Agreement, such provision shall be  
336 fully severable. However, in lieu thereof, there shall be added a provision as  
337 similar in terms to such illegal, invalid or unenforceable provision as may be  
338 possible and be legal, valid and enforceable.
- 339 h. *Successors and Assigns.* This Agreement shall be binding on and inure to the  
340 benefit of the successors and assigns of the respective Parties to this Agreement.  
341 No Party may assign its interests in or obligations under this Agreement without  
342 the written consent of the other Parties, which consent shall not be unreasonably  
343 withheld or delayed.
- 344 i. *Waivers.* Waiver of any breach or default hereunder shall not constitute a  
345 continuing waiver or a waiver of any subsequent breach either of the same or of  
346 another provision of this Agreement and forbearance to enforce one or more of  
347 the rights or remedies provided in this Agreement shall not be deemed to be a  
348 waiver of that right or remedy.
- 349 j. *Attorneys' Fees and Costs.* The prevailing Party in any litigation or other action  
350 to enforce or interpret this Agreement shall be entitled to reasonable attorneys'  
351 fees, expert witnesses' fees, costs of suit, and other and necessary disbursements  
352 in addition to any other relief deemed appropriate by a court of competent  
353 jurisdiction.
- 354 k. *Necessary Actions.* Each Party agrees to execute and deliver additional  
355 documents and instruments and to take any additional actions as may be  
356 reasonably required to carry out the purposes of this Agreement.
- 357 l. *Compliance with Law.* In performing their respective obligations under this  
358 Agreement, the Parties shall comply with and conform to all applicable laws,  
359 rules, regulations and ordinances.
- 360 m. *Third Party Beneficiaries.* This Agreement shall not create any right or interest in  
361 any non-Party or in any member of the public as a third party beneficiary.
- 362 n. *Counterparts.* This Agreement may be executed in one or more counterparts,  
363 each of which shall be deemed to be an original, but all of which together shall  
364 constitute but one and the same instrument.
- 365 o. *Notices.* All notices, requests, demands or other communications required or  
366 permitted under this Agreement shall be in writing unless provided otherwise in  
367 this Agreement and shall be deemed to have been duly given and received on: (i)

368 the date of service if served personally or served by facsimile transmission on the  
369 Party to whom notice is to be given at the address(es) provided below, (ii) on the  
370 first day after mailing, if mailed by Federal Express, U.S. Express Mail, or other  
371 similar overnight courier service, postage prepaid, and addressed as provided  
372 below, or (iii) on the third day after mailing if mailed to the Party to whom notice  
373 is to be given by first class mail, registered or certified, postage prepaid,  
374 addressed as follows:

375 *Notice to San Bernardino Valley Municipal Water District*

376  
377 Douglas Headrick, General Manager  
378 SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT  
379 380 East Vanderbilt Way, San Bernardino, CA 92408  
380 Phone: (909) 820-3701  
381 Email: [douglash@sbyvmwd.com](mailto:douglash@sbyvmwd.com)

382 David R.E. Aladjem  
383 DOWNEY BRAND LLP  
384 621 Capitol Mall, Sacramento, CA 95814  
385 Phone: (916) 520-5361  
386 Email: [daladjem@downeybrand.com](mailto:daladjem@downeybrand.com)

387 *Notice to East Valley Water District*

388 John Mura, General Manager/CEO  
389 EAST VALLEY WATER DISTRICT  
390 31111 Greenspot Rd., Highland, CA 92346  
391 Phone: 909-889-9501  
392 Email: [john@eastvalley.org](mailto:john@eastvalley.org)

393 Jean Cihigoyenetché  
394 CIHIGOYENETCHE GROSSBERG & CLOUSE  
395 8038 Haven Avenue, Suite E, Rancho Cucamonga, CA 91730  
396 Phone: (909) 483-1850  
397 Email: [jean@cgclaw.com](mailto:jean@cgclaw.com)  
398

399 **SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT**

400  
401  
402 By:   
403 Mark Bulot

Dated: Oct 6, 2015

404 President, Board of Directors

405

406


By:   
Gil Navarro, Secretary

Dated: 10-6-15

409

410 APPROVED AS TO FORM

411

By:   
David R.E. Aladjem, Esq.  
Downey Brand, LLP  
Counsel for San Bernardino Valley Municipal Water District

Dated: 10/13/15

412

413

414

415


416

417

418

EAST VALLEY WATER DISTRICT

419

By:   
James Morales, Jr.  
Chairman of the Board

Dated: 10/23/2015

420

421

422

423

424

425

426

By:   
John Mura, General Manager/CEO

Dated: 10-14-15

427

428 APPROVED AS TO FORM

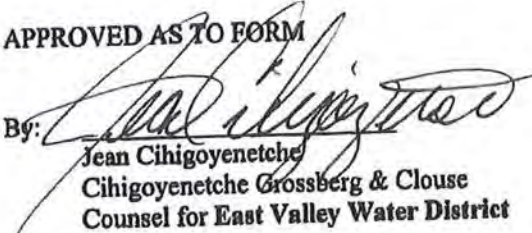
429

430

431

432

433

By:   
Jean Cihigoyenetché  
Cihigoyenetché Grossberg & Clouse  
Counsel for East Valley Water District

Dated: 10-22-15



# STERLING NATURAL RESOURCE CENTER

Final Environmental Impact Report  
SCH # 2015101058

Prepared for  
San Bernardino Valley Municipal Water  
District

March 2016



# STERLING NATURAL RESOURCE CENTER

Final Environmental Impact Report  
SCH # 2015101058

Prepared for  
San Bernardino Valley Municipal Water  
District

March 2016



626 Wilshire Boulevard  
Suite 1100  
Los Angeles, CA 90017  
213.599.4300  
[www.esassoc.com](http://www.esassoc.com)

Irvine

Oakland

Orlando

Palm Springs

Petaluma

Portland

Sacramento

San Diego

San Francisco

Seattle

Tampa

Woodland Hills

150005



# TABLE OF CONTENTS

---

## Sterling Natural Resource Center Project Final Environmental Impact Report

Chapters 1 through 8 and Appendices A through G are part of the Draft Environmental Impact Report (Under separate cover)

	<u>Page</u>
<b>Final Environmental Impact Report</b>	
<b>9. Introduction</b> .....	9-1
<b>10. Comment Letters</b> .....	10-1
Letter USFWS: US Fish and Wildlife Service	
Letter CDFW: California Department of Fish and Wildlife	
Letter Colton: City of Colton	
Letter Highland: City of Highland	
Letter Rialto: City of Rialto	
Letter RPU: City of Riverside Public Utilities Department	
Letter IVDA: Inland Valley Development Agency	
Letter MWD: Metropolitan Water District of Southern California (MWD)	
Letter OCWD: Orange County Water District	
Letter SBCDPW: San Bernardino County Department of Public Works	
Letter SBCRP: San Bernardino County Regional Parks	
Letter SBMWD: San Bernardino Municipal Water District (including GEI Memorandum)	
Letter SBIAA: San Bernardino International Airport Authority	
Letter EHL: Endangered Habitats League	
Letter CBD: Center for Biological Diversity/ San Bernardino Valley Audubon Society/ San Gorgonio chapter of Sierra Club	
Letter LAFCO: Local Agency Formation Commission for San Bernardino County	
Letter MACA: Mentone Area Community Association	
Letter SEJA: SoCal Environmental Justice Alliance	
Letter Serrano: Anthony Serrano	
Letter Yauger: Fred Yauger	
Letter Serrano 2: Anthony Serrano 2	
Letter Serrano Emails: Anthony Serrano Emails	

<b>11. Responses to Comments</b> .....	11-1
Comment Letter – U.S. Fish and Wildlife Service (USFWS) .....	11-2
Comment Letter - California Department of Fish and Wildlife (CDFW) .....	11-12
Comment Letter – City of Colton (Colton) .....	11-29
Comment Letter – City of Highland (Highland) .....	11-30
Comment Letter - City of Rialto (Rialto) .....	11-32
Comment Letter – City of Riverside Public Utilities Department (RPU) .....	11-33
Comment Letter – Inland Valley Development Agency (IVDA) .....	11-40
Comment Letter – Metropolitan Water District of Southern California (MWD) .....	11-43
Comment Letter - Orange County Water District (OCWD) .....	11-44
Comment Letter – San Bernardino County Department of Public Works (SBCDPW) .....	11-52
Comment Letter – San Bernardino County Regional Parks (SBCRP) .....	11-61
Comment Letter – San Bernardino Municipal Water District (SBMWD) .....	11-62
Comment Letter – San Bernardino International Airport Authority (SBIAA) .....	11-78
Comment Letter – Endangered Habitats League (EHL) .....	11-80
Comment Letter - Center for Biological Diversity / San Bernardino Valley Audubon Society/ San Gorgonio Chapter of Sierra Club (CBD) .....	11-83
Comment Letter – Local Agency Formation Commission for San Bernardino County (LAFCO) .....	11-97
Comment Letter – Mentone Area Community Association (MACA) .....	11-106
Comment Letter – SoCal Environmental Justice Alliance (SEJA) .....	11-107
Comment Letter – Anthony Serrano (Serrano) .....	11-135
Comment Letter – Fred Yauger .....	11-137
Comment Letter – Anthony Serrano 2 (Serrano 2) .....	11-138
Comment Letter – Anthony Serrano Emails .....	11-141
<b>12. Clarifications and Modifications</b> .....	12-1
12.1 Introduction .....	12-1
12.2 Clarification and Modifications .....	12-2
Pages ES-7 through ES-23 (Executive Summary Table) .....	12-3
Page 1-2 .....	12-22
Page 1-5 .....	12-22
Page 2-11 .....	12-24
Page 2-16 .....	12-24
Page 2-33 .....	12-24
Page 2-34 .....	12-26
Page 3.3-13 .....	12-27
Page 3.3-14 .....	12-27
Page 3.3-27 .....	12-27
Page 3.3-28 .....	12-28
Page 3.4-23 .....	12-28
Page 3.4-32 .....	12-28
Page 3.4-45 .....	12-30
Page 3.4-54 .....	12-30

**12. Clarifications and Modifications (cont.)**

Page 3.4-55 ..... 12-31  
 Page 3.4-56 ..... 12-32  
 Page 3.4-57 ..... 12-33  
 Page 3.4-62 ..... 12-34  
 Page 3.7-13 ..... 12-34  
 Page 3.14-4 ..... 12-35  
 Page 3.14-5 ..... 12-35  
 Page 3.15-7 ..... 12-36  
 Page 4-16 ..... 12-36  
 Page 6-7 ..... 12-36  
 Page 3.3-23 ..... 12-37  
 Page 3.3-24 ..... 12-37  
 Page 3.3-25 ..... 12-37  
 Page 3.4-60 ..... 12-37  
 Page 3.11-19 ..... 12-38  
 Page 3.15-8 ..... 12-39  
 Chapter 8 – Added References ..... 12-39  
 Appendix A: Notice of Preparation and Comments Added Letter ..... 12-40

**Appendices**

A Revised Notice of Preparation and Comments Table  
 B Revised Air Quality Data  
 E Revised GHG Emissions Data  
 H Updated Reduced Discharge Study Report  
 I Geoscience Technical Memoranda  
 J An Update to the Recycled Water Feasibility Study 2015  
 K Attachments Received with Comment Letters  
 L Draft Mitigation Monitoring and Reporting Program

**Figures**

11-1 Species Occurrence Data ..... 13  
 11-2 City Creek Aerial Image ..... 16  
 11-3 City Creek Proposed Discharge ..... 35  
 11-4 Redlands Basins Proposed Discharge [figure # on figure is 15-6] ..... 37  
 11-5 Conceptual Stream Infiltration ..... 45  
 11-6 Chino Basin Depth to Groundwater Contours ..... 49

**Tables**

10-1 Comment Letters Received ..... 10-1  
 11-1 Basin Plan Objectives and Ambient Water Quality ..... 11-71

# CHAPTER 9

---

## Introduction

This Final Environmental Impact Report (Final EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) as amended (Public Resources Code Section 21000 et seq.) and *CEQA Guidelines* (California Administrative Code Section 15000 et seq.). The Final EIR incorporates, by reference, the Draft EIR (State Clearinghouse No. 2015101058) prepared by San Bernardino Valley Municipal Water District (Valley District) for the Sterling Natural Resource Center (project), as it was originally published and the following chapters, which include revisions made to the Draft EIR.

### 9.1 CEQA Requirements

Before Valley District may approve the proposed project, it must certify that the Final EIR: a) has been completed in compliance with CEQA; b) was presented to the Valley District Board of Directors who reviewed and considered it prior to approving the project; and c) reflects Valley District's independent judgment and analysis.

The Draft EIR, together with the Revisions to the Draft EIR, Response To Comment, and Appendices, constitute the Final EIR for the proposed project. Section 15132 of the *Guidelines for California Environmental Quality Act* (commonly referred to as the *CEQA Guidelines*) specifies the following:

The final EIR shall consist of:

- (a) The Draft EIR or a revision of the draft.
- (b) Comments and recommendations received on the Draft EIR either verbatim or in summary.
- (c) A list of persons, organizations, and public agencies commenting on the Draft EIR.
- (d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process.
- (e) Any other information added by the Lead Agency.

Section 15004 of the *CEQA Guidelines* states that before the approval<sup>1</sup> of any project subject to CEQA, the Lead Agency must consider the final environmental document, which in this case is the Final EIR.

This Final EIR has been prepared pursuant to the requirements of CEQA. This Final EIR for the Sterling Natural Resource Center project presents the following chapters as a continuation of those included in the Draft EIR:

- Chapter 9: Introduction and CEQA process
- Chapter 10: A list of persons, organizations, and public agencies commenting on the Draft EIR, and the written comments received on the Draft EIR
- Chapter 11: Written responses to each comment identified in Chapter 10
- Chapter 12: Clarifications and modifications made to the Draft EIR in Response To Comment received or initiated by the Lead Agency
- Modified or added Appendices

## 9.2 CEQA Process

### Public Participation Process

#### Notice of Preparation and Public Scoping

In accordance with Section 15082 of the *CEQA Guidelines*, a Notice of Preparation (NOP) of an EIR was prepared and circulated for review by applicable local, state and federal agencies and the public. The 30-day project scoping period, which began with the distribution of the NOP on October 16, 2015, remained open through November 16, 2015. Two public scoping meetings were held on October 29, 2015 at the Valley District office and November 5, 2015 at the East Valley Water District office. The NOP provided the public and interested public agencies with the opportunity to review the proposed project and to provide comments or concerns on the scope and content of the environmental review document including: the range of actions; alternatives; mitigation measures, and significant effects to be analyzed in depth in the EIR.

#### Notice of Availability of the Draft EIR

The Notice of Availability (NOA) of the Draft EIR was posted on December 17, 2015 with the County Clerk in San Bernardino County. The Draft EIR was circulated to federal, state, and local agencies and interested parties requesting a copy of the Draft EIR. Copies of the Draft EIR were made available to the public at the following locations:

- Sterling Natural Resource Center Web Site (<http://www.sterlingnrc.com>)
- SBVMWD Headquarters, 380 E. Vanderbilt Way, San Bernardino, CA 92408

<sup>1</sup> The word “approval” is defined by Section 15352 of the *CEQA Guidelines* to mean “the decision by a public agency which commits the agency to a definite course of action in regard to a project intended to be carried out by any person...”

- Norman F Feldheym Central Library, 555 West 6<sup>th</sup> Street, San Bernardino, CA 92410
- Highland Sam J. Ricardo Library & Environmental Learning Center, 7863 Central Avenue, Highland, CA 92346

The Draft EIR was circulated for public review from December 17, 2015 through February 1, 2016. During this period, Valley District held two public meetings to provide interested persons with an opportunity to comment orally or in writing on the Draft EIR and the project. The public meetings were held at the Valley District office in San Bernardino on January 14, 2016 and the East Valley Water District office in Highland on January 19, 2016. No comments were offered from the audience at either public meeting.

## Evaluation and Response to Comment

*CEQA Guidelines* Section 15088 requires Valley District, as the Lead Agency, to evaluate comments on environmental issues received from parties that have reviewed the Draft EIR and to prepare a written response. The written responses to commenting public agencies shall be provided at least ten (10) days prior to the certification of the Draft EIR (*CEQA Guidelines* §15088(b)).

## Final EIR Certification and Approval

As the Lead Agency, Valley District provided the Final EIR to commenters on March 4, 2016 and made it available for review at the following locations:

- Sterling Natural Resource Center Web Site (<http://www.sterlingnrc.com>)
- SBVMWD Headquarters, 380 E. Vanderbilt Way, San Bernardino, CA 92408
- Norman F Feldheym Central Library, 555 West 6<sup>th</sup> Street, San Bernardino, CA 92410
- Highland Sam J. Ricardo Library & Environmental Learning Center, 7863 Central Avenue, Highland, CA 92346

Prior to considering the project for approval, Valley District, as the Lead Agency, will review and consider the information presented in the Final EIR and will certify that the Final EIR:

- (a) has been completed in compliance with CEQA;
- (b) has been presented to the Board of Directors as the decision-making body for the Lead Agency, which reviewed and considered it prior to approving the project; and
- (c) reflects Valley District's independent judgment and analysis.

Once the Final EIR is certified, Valley District's Board of Directors may proceed to consider project approval (*CEQA Guidelines* §15090). Prior to approving the proposed project, Valley District must make written findings and adopt statements of overriding considerations for each unmitigated significant environmental effect identified in the Final EIR in accordance with Sections 15091 and 15093 of the *CEQA Guidelines*.

## Notice of Determination

Pursuant to Section 15094 of the *CEQA Guidelines*, Valley District will file a Notice of Determination (NOD) with the Office of Planning and Research and San Bernardino County Clerk of the Board within five working days after project approval.

# CHAPTER 10

## Comment Letters

The Draft EIR for the Sterling Natural Resource Center Project (project) was circulated for public review for 45 days (December 17, 2015 through February 1, 2016) in accordance with the requirements of *CEQA Guidelines* Section 15105(a). Valley District received twenty two comments letters and emails during the public review period, which are listed in **Table 10-1** and included within this chapter. The letters have been marked with brackets that delineate comments pertaining to environmental issues and the information and analysis contained in the Draft EIR. Responses to such comments are provided in Chapter 11.

**TABLE 10-1  
COMMENT LETTERS RECEIVED**

<b>Comment Letter</b>	<b>Commenting Agency</b>	<b>Type of Agency</b>	<b>Date of Comment</b>
USFW	U.S. Fish and Wildlife Service	Federal	February 3, 2016
CDFW	California Department of Fish and Wildlife	State	February 1, 2016
Colton	City of Colton	Local	February 1, 2016
Highland	City of Highland	Local	February 1, 2016
Rialto	City of Rialto	Local	February 4, 2016
RPU	City of Riverside Public Utilities Department	Local	February 1, 2016
IVDA	Inland Valley Development Agency	Local	January 29, 2016
MWD	Metropolitan Water District of Southern California	Local	January 28, 2016
OCWD	Orange County Water District	Local	February 1, 2016
SBCDPW	San Bernardino County Department of Public Works	Local	February 1, 2016
SBCRP	San Bernardino County Regional Parks	Local	January 4, 2016
SBMWD	San Bernardino Municipal Water District	Local	February 1, 2016
SBIAA	San Bernardino International Airport Authority	Local	January 29, 2016
EHL	Endangered Habitats League	Non-Governmental Organization (NGO)	January 28, 2016
CBD SBVAS SC	Center for Biological Diversity/ San Bernardino Valley Audubon Society/ San Gorgonio chapter of Sierra Club	NGO	February 1, 2016
LAFCO	Local Agency Formation Commission for San Bernardino County	NGO	February 1, 2016
MACA	Mentone Area Community Association	NGO	February 1, 2016
SEJA	SoCal Environmental Justice Alliance	NGO	February 1, 2016
Serrano	Anthony Serrano 1	Individual	February 1, 2016
Yauger	Fred Yauger	Individual	January 19, 2016
Serrano-2	Anthony Serrano 2	Individual	February 25, 2016
Serrano Emails	Anthony Serrano Emails	Individual	February 10, 2016





United States Department of the Interior  
FISH AND WILDLIFE SERVICE  
Ecological Services  
Palm Springs Fish and Wildlife Office  
777 East Tahquitz Canyon Way, Suite 208  
Palm Springs, California 92262



In Reply Refer To:  
FWS-SB-16B0182-16CPA0233

Tom Barnes, Environmental Science Associates  
626 Wilshire Boulevard, Suite 1100  
Los Angeles, CA 90017

FEB - 3 2016

Subject: Draft Environmental Impact Report for the Sterling Natural Resource Center, City of Highland, San Bernardino County, California

Dear Mr. Barnes,

The U.S. Fish and Wildlife Service (Service) has reviewed the subject Draft Environmental Impact Report (DEIR) for the proposed Sterling Natural Resource Center (SNRC or project) received on December 17, 2015. The DEIR was prepared by San Bernardino Valley Municipal Water District (Valley District) to identify the proposed project's direct, indirect, and cumulative environmental impacts, to discuss alternatives, and to propose mitigation measures that avoid, minimize, or offset significant environmental impacts. The primary concern and mandate of the Service is the protection of fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 et seq.). We are providing the following comments as they relate to the Project's effects on wildlife resources and species listed under the Act.

The proposed project includes the construction of a new wastewater treatment facility and conveyance pipelines in order to treat wastewater generated within the East Valley Water District (EVWD) service area. The new treatment facility would be located in the City of Highland. The SNRC would be constructed within the Valley District service area on 20 acres located at North Del Rosa Drive between East 5<sup>th</sup> Street and East 6<sup>th</sup> Street in the City of Highland. A conveyance pipeline to the City of Redlands' discharge basins would be installed in Alabama Street from East 6<sup>th</sup> Street to the of Redlands basins, approximately 1.3 miles. A second 3-mile conveyance pipeline would be installed in East 6<sup>th</sup> Street from the SNRC property east to City Creek and then north within San Bernardino County Flood Control District right-of-way along City Creek.

Valley District proposes the construction of the SNRC and associated pipelines for the purposes of treating approximately 6 MGD (up to a maximum of 10 MGD) of untreated wastewater to tertiary standard. The treated effluent would be discharged into ground water recharge basis (on site or in the City of Redlands) or into City Creek or an alternative location. Currently, EVWD conveys approximately six million gallons per day (MGD) of wastewater to the City of San Bernardino for secondary treatment at the San Bernardino Water Reclamation Plant and tertiary

Mr. Barnes (FWS-SB-16B0182-16CPA0233)

2

treatment at the Rapid Infiltration and Extraction (RIX) facility. The RIX facility discharges treated water into the Santa Ana River. Operation of the SNRC will remove approximately 6 MGD (9.3 cubic feet per second, 18 to 21 percent) of effluent currently being discharged into the Santa Ana River from RIX. Effluent discharged from SNRC would potentially increase the length of the perennial stream in City Creek.

The federally-endangered least Bell's vireo (*Vireo bellii pusillus*, vireo), southwestern willow flycatcher (*Empidonax traillii extimus*, flycatcher), San Bernardino kangaroo rat (*Dipodomys merriami parvus*, SBKR), and Santa Ana River woolly-star (*Eriastrum densifolium* subsp. *sanctorum*, woolly-star), and the federally-threatened Santa Ana sucker (*Catostomus santaanae*, sucker) are present in various habitats in the Santa Ana River and in City Creek. The proposed project has the potential to affect these species.

We appreciate the completeness of the analysis of potential project impacts to biological resources presented in the DEIR. In particular we commend Valley District for the acknowledgment that the project may result in significant and unavoidable impacts to the sucker. As indicated in the DEIR, wastewater discharge into the Santa Ana River is the main contributor to perennial low flow in the sucker-occupied portion of river. The project would reduce discharges from RIX by approximately 20 percent, which equates to a loss of 1.1 inches of depth and a 3 percent reduction in total wetted area of the channel. Even if these reductions appear to be minor or insignificant by themselves, because the distribution of sucker in the river is limited and sucker habitat even in the occupied portion of river is degraded, it is important that agencies considering projects that would alter flows in the occupied reach of the river recognize that a reduction in flows would further limit and degrade the portion of the river that is usable by the sucker. Under these circumstances, even a robust mitigation plan would be challenged to ensure that the impacts of decreased flows in the river would be reduced to levels that can be deemed less than significant to the sucker and its habitat.

The volume of perennial low flow in the occupied reach of the river is not the only factor that is relevant to the long-term viability of the sucker in the Santa Ana River watershed. Predation, invasive plant species, a lack of suitable microhabitat, limited habitat connectivity, and a reduction in natural high flow events from flood control infrastructure, are all threats to the long-term viability of the species. Valley District has proposed a mitigation strategy that specifically addresses known threats to sucker and will provide meaningful offsets to the project's impacts to aquatic resources, both upstream and downstream of the RIX discharge pool. The recognition of the existing conditions for the sucker in the river in the DEIR and the comprehensive approach taken by Valley District to address these threats, particularly the commitment to establish a new self-sustaining population in a mountain tributary of the Santa Ana River will serve to reduce the risk to the species in the watershed, and will provide significant conservation benefit to the species.

The project expects to participate in the Upper Santa Ana River Habitat Conservation Plan (HCP). While the HCP is still in development, we are encouraged by the partnerships and comprehensive approach taken by the HCP participants. The HCP has the potential to contribute

1

Mr. Barnes (FWS-SB-16B0182-16CPA0233)

3

greatly to the conservation and recovery of the sucker. Prior to reducing flows in the river, either the HCP or the proposed project will provide habitat enhancement in the mainstem of the river and establish a new sucker population. This two-fold strategy will address degraded conditions in the river, resulting in an increased carrying capacity and healthier fish that are better able to cope with localized stressors and will provide a buffer against a catastrophic event extirpating the species from the mainstem of the river.

The Service is not insensitive to the water supply needs of the San Bernardino Valley and the effort that must be made to meet those needs. Local water production helps to reduce reliance on imported water, reducing or eliminating impacts to areas of imported water origin as well as reducing the overall consumer footprint. The mitigation strategy proposed by Valley District charts a course towards the recovery of the species and we hope it will be emulated by other water projects in the San Bernardino Valley.

We have provided comments and requests for information regarding the analysis of impacts to biological resources provided in the DEIR. We understand that the project is seeking federal funding and we therefore anticipate that a request for consultation on endangered species for the project will be forthcoming. The information and analysis requested below will also help inform that consultation.

Santa Ana Sucker

Habitat for species associated with aquatic and riparian plant communities in the Santa Ana River is supported by tertiary-treated wastewater discharged from two facilities, the RIX facility and the City of Rialto water treatment plant, in the upper portion of the watershed (City of Colton). Since 1996, when RIX began discharging tertiary effluent into the river, the perennial flows have provided a robust riparian canopy and sand transport downstream which makes gravel and cobble substrates available to the sucker. The historic condition of the Santa Ana River was perennial, with contributions to surface flow from mountain tributaries and groundwater upwelling. Alteration to the hydrology of the watershed, in the form of surface water capture (flood control and groundwater recharge), increased groundwater extraction, road building, and other flood control infrastructure and maintenance, has degraded the abundance and quality of the aquatic habitat in the remnant perennial reach of the river. Without the discharge from the RIX facility and flows from Rialto Channel, 3 to 4 miles of the river would be without water for a majority of the year, since storm flows are infrequent and typically short in duration.

The sucker is a small, short-lived, algae-eating fish which exists in three Southern California watersheds; the Los Angeles River, the San Gabriel River, and the Santa Ana River. Of the species listed above, the sucker is threatened most directly by the alteration of the natural flow regime by flood control and water diversion, and conversely the most dependent upon discharges from the City's facility to maintain suitable habitat, composed of substrate with various sized rock and cobble, for spawning and foraging (Service 2014). Designated critical habitat for the sucker exists in all of the areas potentially affected by this project. Designated critical habitat for



1

2

Mr. Barnes (FWS-SB-16B0182-16CPA0233)

the flycatcher and vireo exist in the mainstem of the river and for SBKR in City Creek and a portion of the Santa Ana River. If the project is constructed as proposed all treated wastewater currently discharged into the Santa Ana River from the RIX facility will be treated at the SNRC and transported (piped) further upstream for groundwater recharge, reducing the volume of the perennial flow in the sucker-occupied portion of the river (City of Colton and downstream).

*Sediment Transport*

It is important to consider the temporal shifts that routinely occur in the composition of the sucker’s streambed habitat. Observations made directly after storm events have found very few reaches of the river with appropriate sucker habitat (coarse rocky substrate) (Service 2015). Depending on the scale of the storm event, pulses of transported sand may effectively cover (remove) foraging habitat for the sucker. Perennial low-flow moves the sand downstream, exposing hidden gravel bars. Historically, this low-flow condition was natural, derived from mountain tributaries and multiple location of rising groundwater. Currently, this flow is artificial during most of the year in the upper portion of the perennial river.

*Hydrologic Flow Model*

The hydrologic flow model in the DEIR relied on a report by Saiki (2000) to quantify appropriate flow velocity for sucker habitat. His field work was conducted between 1998 and 1999 near the Metropolitan Water District Pipeline crossing in Riverside County, the portion of the river most used by the sucker at that time. In this portion of the river, both then and now, the substrate is dominated by shifting sand, the water is shallow, and the habitat is primarily composed of runs. Pool and riffle habitat was extremely rare or not present. Sucker habitat was poor quality and contained few fish older than one year. Saiki found that fish from the Santa Ana River were generally in poorer health than the fish sampled in the San Gabriel River. He observed suckers in water with a mean flow less than 0.74 m/s and at shallow depth, generally less than 40 cm. Because that reach of the river is shallow (mean 17 cm) and the occurrence of pool habitat rare, it is no surprise that most fish were observed in shallow water habitat. The skewed abundance ratio toward young sucker may confound the results of this study. Young fish are generally found in shallower and slower portions of the stream. We recommend updating the hydrologic flow model used in the DEIR with recent work conducted by the USGS (Santa Ana River) and BonTerra Psomas (Big Tujunga Creek, Los Angeles River Watershed) on habitat usage by sucker prior to the adoption of the FEIR. These data sets may show sucker use of deeper and higher velocity flow habitat (scour pools created by flow constrictions) than what was reported by Saiki. The conclusions from the revised hydrologic flow model should be presented in the FEIR.

The hydrologic model used a percentage reduction in total flow to estimate surface flow at various locations downstream of RIX. Applying this assumption to an alluvial river system where the surface flows have been observed to go to zero (dry streambed) may be inappropriate, as modeled flows would never reach zero. More explanation to validate the assumptions used in the hydrologic model would be helpful. In addition, please estimate the minimum flow necessary to maintain connectivity in the river, as well as the minimum flow necessary to maintain appropriate sucker habitat, for all life stages, in the potential impact area and include this



Mr. Barnes (FWS-SB-16B0182-16CPA0233)

5

information in the FEIR. We suggest that the potential impact area include the Santa Ana River from the RIX discharge pool to Prado Basin, or as far downstream as effects are detectable.

4

*Red Alga*

In February 2014 the Service conducted a sucker survey to assess the potential effects of the newly established non-native invasive red alga (*Compsopogon caeruleus*) in the river. It was noted during this survey that sucker were observed most frequently in high flow areas where there was an obstruction (log, concrete slab, root mass, etc.) constricting the channel width, and that the red alga was less abundant in these high flow areas. We view this as an indication that high flow areas are used by the sucker, provide foraging habitat for sucker, and importantly, limit the growth of the invasive red alga.

5

High velocity flow habitat is rare within the mainstem of the river and provides both forage and cover for fish even when riparian or emergent plant canopy may be absent. Due to the rarity of this habitat type and the highly altered hydrology of the watershed, the current aquatic environment in the river is generally of poor quality for the sucker.

*Groundwater Contribution*

Changes in groundwater contribution to surface flow dramatically affect the results of the hydrologic model. Recent major changes to groundwater levels in the surrounding lands include a four-year drought and the hydrologic management of the Chino Groundwater Basin. To our knowledge, neither of these changed conditions has been accounted for in the DEIR. Please include in the FEIR a discussion and analysis of how groundwater basin management is expected to influence current and future surface flows in the Santa Ana River.

6

*RIX Discharge*

Over the past decade discharges from RIX have decreased steadily, with the current mean discharge rate at approximately 29.5 MGD (45.6 cfs; CIWQS 2016). The current rate of release from RIX may be lower than what was accounted for in the DEIR and with water conservation measures and storm water capture, the trend is toward a continued decrease in future RIX discharge volume. The analysis of impacts to in-stream resources in the FEIR should take the projected decrease in RIX outflows into consideration.

Another factor complicating the analysis of surface flows in the portion of the river occupied by the sucker is the unknown diurnal fluctuation in releases from RIX. Field observations note regular changes in surface water elevation in the river. An analysis of the instantaneous discharge from RIX, where the focus is on low flow discharge events, needs to be conducted so as to better explain the effect this proposed project on biological resources. The DEIR used mean values for flow in the river downstream of the confluence with RIX. Mean or compiled values mask the periods of low flow in the river where impacts to aquatic resources are most pronounced. Please consider low flow releases from RIX in the FIER in the assessment of impacts to aquatic resources, especially to fish. Seasonality should be considered, as impacts to fish will be greatest during and after spawning season when larvae and small juvenile fishes are present in the stream.

7

Mr. Barnes (FWS-SB-16B0182-16CPA0233)

6

**Santa Ana Sucker Habitat Monitoring and Management Plan**

**SAS-1: Microhabitat Enhancements**

The DEIR proposes to restore or enhance habitat for the sucker in the Santa Ana River. In order to create or optimize habitat for the sucker one needs to first describe the habitat conditions to be used as a benchmark for success. This needs to be done for each life stage. Typically a reference site is used to identify and measure the attributes of high quality habitat. High quality habitat is very rare or does not exist in the Santa Ana River. We recommend that the East Fork of the San Gabriel River be used as a reference drainage because it is the only hydrologically unaltered stream occupied by the sucker. Please include a description of how sucker habitat metrics will be identified and measured for each life stage for use in developing measureable, achievable habitat enhancement goals in the FEIR. We are available to work with you on this process.

8

**SAS-4: High Flow Pulse Events**

The DEIR identified flushing flows to move sand downstream and uncover the gravel and cobble substrate important to the sucker to help offset the impacts from an increase in the sand deposition in the occupied reach of the river and a projected increase in the duration that the deposited sand remains on the rocky substrate resulting from the proposed reduction of 6 MGD (9.3 cfs, 18-21 percent) in surface flow. The flushing flows would come into the river from the RIX facility. Please identify or describe in the FEIR the relationship or mechanism between Valley District and the City of San Bernardino that would facilitate the flushing flow discharges.

The use of flushing flows will provide increased sediment transport over the duration of the high flow event and mobilize in-stream resources. An analysis of how flushing flows will affect suckers residing in the affected reaches, sucker habitat, and the riparian plant community is needed to show the effects of this activity on the river system as a whole. Please provide a model of a high flow pulse events to establish parameters for the required flow volume and duration needed to achieve a desired effect, in this case the uncovering of the rocky substrate. These parameters are necessary for us to adequately evaluate the effect of this action on the river and on sucker habitat. The DEIR proposes two flushing flow events per year. We request that a quantifiable threshold that represents a degraded condition whereby a flushing flow would improve habitat for the sucker be established and adopted instead. Please provide a threshold in the FEIR and describe how it was derived.

9

**SAS-5: Supplemental Water**

The DEIR proposes the use of supplemental cool water supplied by one or more wells along Rialto Channel to reduce the mean water temperature of Rialto Channel when the water temperature of Rialto Channel approaches lethal levels for the sucker (approximately 90 degrees Fahrenheit), rendering the channel uninhabitable by the species.

10

We recognize that cooling the water in Rialto channel during the summer would greatly expand the area of occupiable habitat for the sucker in the summer months and are in full support of this

Mr. Barnes (FWS-SB-16B0182-16CPA0233)

7

strategy. We would like to point out that that providing cooler water year round would further benefit the sucker. Cooler water holds a higher percentage of dissolved oxygen than warmer water; this benefits most aquatic life in the river ecosystem. Higher flow rates incorporate more dissolved oxygen into the water and provided increased sediment transport. Reliable perennial low flows will minimize project impacts. We would like you to consider the use of wells to supply perennial, cool flows to Rialto Channel during a larger portion of the year. As discussed below we think additional cool water will help limit the distribution of the invasive non-native red alga in the river.

10

**Red Alga (*Compsopogon cearuleus*)**

The invasive non-native red alga was first found in the upper portion of the perennial Santa Ana River in February 2014 (Palenscar 2014). This filamentous alga is an exotic tropical species that is now thriving in the warm effluent discharge from the RIX facility in the Santa Ana River. We believe that cooling the temperature of the water in the river could be used as a management tool to control the abundance of this weed in the river. An experimental translocation of this alga upstream of the RIX confluence into water taken from Rialto Channel (Palenscar unpublished data), as well as experiments conducted in fish raceways at the Riverside-Corona Resource Conservation District have found that this alga species does very poorly in systems where water temperature fluctuates and is occasionally cold. Incorporating measures to decrease the water temperature in Rialto Channel will decrease the mean temperature of the river downstream of the RIX plunge pool. Cooling this water will decrease the habitat quality for the invasive non-native alga and may decrease its abundance. This would benefit the sucker and other aquatic resources in the Santa Ana River.

11

The use of flushing flows to increase the transport of sediment may also be used to manage the abundance of the invasive red alga. High flows fragment algal filaments, decreasing its abundance. We request that the FEIR include a discussion of project related effects of the the red alga and how those effects might affect the sucker.

**San Bernardino Kangaroo Rat**

**BIO-2: Disturbance to Special-Status Wildlife**

We have concerns about the potential direct and indirect adverse effects to SBKR and its designated critical habitat that may result from the project as currently proposed in City Creek and its confluence with the Santa Ana River. The Santa Ana River population of SBKR is the largest of the three remaining populations of SBKR. The long-term persistence of this population of SBKR is necessary to the survival and recovery of the sub-species. It is important that any project impacts to SBKR and its designated critical habitat be considered in this context.

12

Perennial discharge of effluent into City Creek will result in the conversion of some alluvial fan sage scrub (SBKR habitat) into riparian habitat, which is unsuitable for SBKR. The converted area will constitute a permanent loss of function of critical habitat for SBKR. We recognize the potential value to the sucker from an increased perennial streamlength in City Creek and would like work with you prior to the adoption of the FEIR to minimize the loss of habitat function for

Mr. Barnes (FWS-SB-16B0182-16CPA0233)

8 ↑

SBKR in City Creek and its confluence with the Santa Ana River. The revised FEIR should quantify and address impacts to SBKR in City Creek.

12

**Least Bell's Vireo and Southwestern Willow Flycatcher**

**BIO-2: Disturbance to Special-Status Wildlife**

The DEIR anticipates a three percent reduction in wetted area due to a 6 MGD reduction in flow, and that this change will have a less than significant effect to the riparian plant community. Regional groundwater management has increased in recent years. In order to analyze cumulative effects to the riparian plant community, a regional assessment is needed to determine the baseline from which you can assess project impacts. Please include in the FEIR a regional groundwater basin assessment for City Creek and the Santa Ana River in the assessment of potential changes to the riparian plant community from the project, as and how those changes will affect flycatcher, vireo, and their critical habitats.

13

**Santa Ana River Woolly-star**

**BIO-1: Disturbance to Special-Status Plants**

Woolly-star may be present in the active floodplain (pioneer alluvial fan sage scrub community) of City Creek and its confluence with the Santa Ana River. Perennial flow of 6 MGD will lead to the type conversion of alluvial fan sage scrub to a riparian plant community; the area of alluvial fan sage scrub which will be lost is not specified. Any woolly-star present in this vegetation transition area will be affected. Please include an assessment of impacts to woolly-star habitat and other special status plants, and an appropriate strategy to offset them, in the FEIR. As with SBKR we would like to work with you prior to the adoption of the FEIR to minimize the loss of habitat function for woolly-star in City Creek and its confluence with the Santa Ana River.

14

We appreciate the opportunity to comment on the DEIR and look forward to working with you on this project. If you have comments or questions regarding this information, please contact Kai Palenscar of the Palm Springs Office at 760-322-2070, extension 208.

Sincerely,



Kennon A. Corey  
Assistant Field Supervisor

cc:  
Jeff Brandt, California Department of Fish and Game, Ontario



Mr. Barnes (FWS-SB-16B0182-16CPA0233)

9

---

Literature Cited

CIWQS 2016. California Integrated Water Quality System Project. State Water Resources Control Board. November 2015. <https://ciwqs.waterboards.ca.gov/>. Accessed January 27, 2016.

Palenscar, Kai T. 2014. A New Invasive Alga for Southern California *Composopogon caeruleus* and its potential impact on the Santa Ana Sucker. Presentation given at California State University Pomona. August 27, 2014.

Saiki, Michael K. 2000. Water Quality and Other Environmental Variables Associated with Variations in Population Densities of the Santa Ana Sucker. National Fish and Wildlife Foundation Final Report. September 28, 2000. 117 pages.

[Service] U.S. Fish and Wildlife Service. 2014. Draft Recovery Plan for the Santa Ana sucker. U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. 61 pp.

[Service] U.S. Fish and Wildlife Service. 2015. Data compiled from 2006-2015 Riverwalk Survey data sheets. On file in the Carlsbad Fish and Wildlife Office, Carlsbad, California.



State of California - Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
Inland Deserts Region  
3602 Inland Empire Blvd., Suite C-220  
Ontario, CA 91764  
(909) 484-0459  
[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

*EDMUND G. BROWN, Jr., Governor*  
*CHARLTON H. BONHAM, Director*



February 1, 2016

Ms. Heather Dyer  
San Bernardino Valley Municipal Water District  
380 E. Vanderbilt Way  
San Bernardino, CA 92408

Subject: Draft Environmental Impact Report  
Sterling Natural Resource Center Project  
State Clearinghouse No. 2015101058

Dear Ms. Dyer:

The Department of Fish and Wildlife (Department) appreciates the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the Sterling Natural Resource Center Project (project) [State Clearinghouse No. 2015101058]. The Department is responding to the DEIR as a Trustee Agency for fish and wildlife resources (California Fish and Game Code Sections 711.7 and 1802, and the California Environmental Quality Act [CEQA] Guidelines Section 15386), and as a Responsible Agency regarding any discretionary actions (CEQA Guidelines Section 15381), such as the issuance of a Lake or Streambed Alteration Agreement (California Fish and Game Code Sections 1600 *et seq.*) and/or a California Endangered Species Act (CESA) Permit for Incidental Take of Endangered, Threatened, and/or Candidate species (California Fish and Game Code Sections 2080 and 2080.1).

### **PROJECT DESCRIPTION**

The proposed project includes several components: construction of the Sterling Natural Resource Center (SNRC), upgrades to the collection system, a treated effluent conveyance system, and discharge facilities. Details pertaining to each project component include:

Sterling Natural Resource Center and Administration Center: The construction and operation of a wastewater treatment facility, including primary treatment, a membrane bio-reactor, ultraviolet light disinfection, and anaerobic solids processing; offsite solids disposal; and construction of administration offices on a total of 26-acres. The proposed facility is located north of East 5th Street, south of East 6th Street on parcels directly east and west of North Del Rosa Drive in the City of Highland. The SNRC would provide tertiary treatment to wastewater generated within the East Valley Water District (EVWD) service area. The SNRC would have a maximum capacity of 10 million gallons per day (MGD). The administrative offices will be surrounded by publicly accessible open space.

*Conserving California's Wildlife Since 1870*

Draft Environmental Impact Report  
Sterling Natural Resource Center Project  
SCH No. 2015101058  
Page 2 of 7

Treated Water Conveyance System: The construction of a recycled water conveyance system comprises of a pump station at the SNRC, 24-inch diameter distribution pipelines to one of three discharge locations (City Creek, East Twin Creek Spreading Grounds, or Redlands Basins), potential crossings of the pipeline, and discharge structures.

For the City Creek discharge alternative, approximately 38,700 linear feet of 24-inch diameter distribution pipeline will be installed within East 6th Street or East 5th Street from the SNRC property to Central Avenue, south to the City Creek channel crossing, then north to the City Creek discharge structure. The pipeline would be installed either within San Bernardino County Flood Control District right-of-way along City Creek or under the City Creek levees using trenchless construction methods.

For the East Twin Creek Spreading Grounds discharge alternative, approximately 22,000 linear feet of 24-inch diameter pipeline would be installed within North Del Rosa Drive to Marshall Boulevard, then to its discharge point within the East Twin Creek Spreading Grounds.

For the Redlands Basins discharge alternative, a 24-inch diameter distribution pipeline would be installed within Alabama Street from East 6<sup>th</sup> Street or East 5<sup>th</sup> Street for approximately 1.3 miles south to the existing Redlands Basins.

Wastewater Collections Facilities: The construction of two sewer lift stations and force mains at East 3rd Street and Waterman Avenue (0.6 MGD capacity) and near 6th Street and Pedley Road (5.4 MGD capacity) in order to convey flows to the SNRC. One six-inch double-barrel force main would be installed within East Little 3rd Street and Pedley Road from the 0.6 MGD lift station to the 5.4 MGD lift station and one 16-inch double-barrel force main would be installed in East 6th Street from the 5.4 MGD lift station to the SNRC facility.

Refurbishing the Rialto Channel Groundwater Wells: The refurbishment and operation of four existing groundwater wells located near Rialto Channel (pending owner-approval) to enable groundwater to be used as supplemental water, to mitigate the potential direct and indirect effects of reduced flow. The groundwater would be conveyed into the Santa Ana River as needed to maintain minimum flows established by the wildlife agencies.

Santa Ana River Pipeline: An existing 36-inch reinforced concrete pipeline extends from Alabama Street to the San Bernardino Water Reclamation Plant (SBWRP) for approximately 5.27 miles. The upper 6,000 feet of the existing pipeline would be relined with PVC liner to re-purpose the pipeline to serve as carrier pipe for the treated water connecting the SNRC to the SBWRP discharge pipeline. The existing 36-inch pipeline would act as the casing for the proposed 24-inch diameter pipeline. In areas where the existing 36-inch pipeline has been removed, new pipeline segments would be installed.

Draft Environmental Impact Report  
Sterling Natural Resource Center Project  
SCH No. 2015101058  
Page 3 of 7

From the SBWRP discharge pipeline connection, the treated water would be conveyed to the existing pipeline connecting to the Rapid Infiltration and Extraction (RIX) facility conveyance system, thus mixing with the secondary treated water produced at the SBWRP. A bypass pipeline will be necessary to connect the Santa Ana River Pipeline with the RIX discharge pipeline. The bypass pipeline would be installed on SBWRP property or on adjacent property, and would allow treated water to be discharged to the Santa Ana River below RIX for short periods to ensure adequate river flows.

**COMMENTS AND RECOMMENDATIONS**

The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species (i.e., biological resources); and administers the Natural Community Conservation Planning Program (NCCP Program). The Department offers the comments and recommendations presented below to assist the San Bernardino Valley Municipal Water District (District; the CEQA lead agency) in adequately identifying and/or mitigating the project’s significant, or potentially significant, impacts on biological resources.

**Environmental Impacts and Mitigation Measures**

The Department is concerned that identification and discussion of all potential project-related impacts have not been addressed in the DEIR. The Department recommends that this information and analysis be included in the revised DEIR to facilitate the Department’s ability to rely on the DEIR for the issuance of a Lake or Streambed Alteration (LSA) Agreement, and potentially a CESA Incidental Take Permit (ITP).

Special Status Species

Impact 3.4-1 determines that construction and operation of the project could have a substantial adverse effect on plant and wildlife species identified as candidate, sensitive, or special-status species. Mitigation Measures BIO-1 and BIO-2 acknowledge that potential project-related impacts to special status species may result from the construction of the SNRC, pipeline extension, discharge structures within City Creek, Redlands Basins, and/or the East Twin Creek Spreading Grounds, and perennial discharges to City Creek or other discharge locations. These special status species and plant communities include: Plummer’s mariposa lily, smooth tarplant, Parry’s spineflower, white-bracted spineflower, slender-horned spineflower, Santa Ana River woolly-star, California satintail, Robinson’s pepper-grass, Parish’s gooseberry, Riversidean alluvial fan sage scrub, southern cottonwood-willow riparian forest, Santa Ana sucker, arroyo chub, Santa Ana speckled dace, western spadefoot, Southern California legless lizard, orange-throated whiptail, coast horned lizard, two-striped garter snake, western burrowing owl, California horned lark, yellow-breasted chat, loggerhead shrike, California gnatcatcher, yellow warbler, least Bell’s vireo, San Diego pocket mouse, San Bernardino Merriam’s kangaroo rat, Western mastiff bat, western yellow



1

Draft Environmental Impact Report  
Sterling Natural Resource Center Project  
SCH No. 2015101058  
Page 4 of 7

bat, San Diego black-tailed jackrabbit, San Diego desert woodrat, and Los Angeles pocket mouse.

Mitigation Measure BIO-3 proposes a plan to offset impacts to Santa Ana sucker (*Catostomus santaanae*) and other aquatic resources, but fails to propose an enforceable mitigation strategy to offset impacts to any of the other sensitive species that may be adversely impacted through construction of the project. Instead, Mitigation Measures BIO-1 and BIO-2 propose to conduct focused surveys to determine the presence/absence of any of the special status species, and consult with the Department and the United States Fish and Wildlife Service (USFWS) if state- or federally-listed species are determined to be impacted by the project. Because specific and enforceable mitigation is not being proposed, and is dependent on the outcome of future surveys, the Department is concerned that appropriate mitigation measures are being deferred to future regulatory discretionary actions, such as a CESA ITP and/or an LSA Agreement. The Department recommends that the District conduct focused surveys for the sensitive species identified as having the potential to occur onsite in order to adequately describe impacts and propose specific and enforceable compensatory mitigation. The Department further recommends that once surveys are complete and specific and enforceable mitigation is formulated, the District recirculate the DEIR for public review. Permit negotiations conducted after and outside of the CEQA process are not CEQA-compliant, because they deprive the public and agencies of their right to know of project impacts and how they are being mitigated (CEQA Section 15002).

1

Santa Ana Sucker

Hydrological modifications within the Santa Ana River have led to the degradation and loss of habitat for a multitude of species. Of particular concern and paramount to this project is the continued persistence of the federally threatened Santa Ana sucker. The species is endemic to the Los Angeles, San Gabriel, and Santa Ana Rivers, and one third of the species range occurs within the Santa Ana River. The USFWS ruling (2000, pp. 19687-19688) states that approximately 70 percent of the Santa Ana sucker's historical range has been lost in the Santa Ana River watershed. Furthermore, because of past, current, and future proposed hydrological modifications, impassable barriers, limited availability of suitable in-stream habitat, dependency on tertiary-treated water, and jeopardy from inconsistent flows associated with the maintenance of water treatment facilities, the Santa Ana River population of Santa Ana sucker is at risk of extirpation.

2

The Department agrees with the DEIR's finding of significant impact for the diversion of 6 MGD on the Santa Ana sucker and other aquatic species within the Santa Ana River. The reduced discharge study concluded that the proposed diversion would reduce the total flow of the Santa Ana River downstream of the discharge location by 18-21%, and would lower water depths by a maximum of 1.1 inches, reduce the wetted area by 6%, and result in an average change in a "velocity class" of 2% of the total channel area. The Department agrees with the DEIR's conclusion that "although these effects are



Draft Environmental Impact Report  
Sterling Natural Resource Center Project  
SCH No. 2015101058  
Page 5 of 7

minor by themselves, the incremental effect of any flow reduction could degrade the already compromised aquatic habitat resulting in increased stress to the federally-listed Santa Ana sucker.”

Within the past 1-2 years, the invasive red algae (*Compsopogon coeruleus*) has been discovered downstream of the RIX outfall, and has been documented to significantly reduce the availability of Santa Ana sucker foraging and spawning habitat due to its smothering growth (USFWS 2014). Given the potential implications the algae may have on the continued persistence on Santa Ana sucker, The Department recommends that the mitigation strategy include a manipulation of water temperature to aid in the reduction of the red algae growth downstream of the RIX outflow.

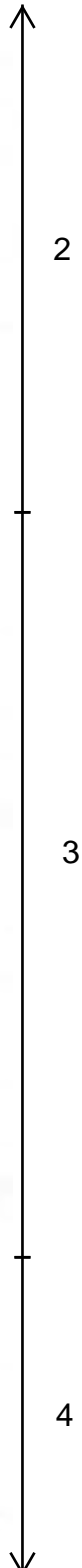
Hydrology

Where a project has the potential to affect the hydrologic regime of a watershed, the necessary elements and/or processes required to successfully maintain downstream biological diversity need to be identified to minimize downstream impacts, propose adequate, specific, and defensible compensatory mitigation (where necessary), and facilitate sound management decisions. The reduced discharge study completed as a part of this DEIR assessed predicted changes to Santa Ana sucker habitat taking into account reduced surface water flows and depth to groundwater (measured at a limited number of locations). The Department is concerned that the interpretation of these variables alone may not be sufficient, and recommends that the evaluation incorporate two additional components to identify impacts to Santa Ana sucker and other aquatic resources, and increase the effectiveness of the proposed mitigation:

1. Identification of minimum flows necessary to maintain the health and persistence of aquatic resources in Rialto Channel and the Santa Ana River downstream.
2. A more comprehensive identification of groundwater resources and seasonal monitoring within the Upper Santa Ana River basin. Recent treatment plant maintenance shutdowns have resulted in complete dewatering of sections of the river, but areas of dewatering have been variable over time. The Department is concerned that without expanded monitoring of baseline groundwater levels, the data used in this analysis may not provide a true representation of current or future conditions.

Nesting Birds and Migratory Bird Treaty Act

Please note that it is the project proponent’s responsibility to comply with all applicable laws related to nesting birds and birds of prey. Migratory non-game native bird species are protected by international treaty under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 et seq.). In addition, sections 3503, 3503.5, and 3513 of the Fish and Game Code (FGC) also afford protective measures as follows: Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or



Draft Environmental Impact Report  
Sterling Natural Resource Center Project  
SCH No. 2015101058  
Page 6 of 7

eggs of any bird, except as otherwise provided by FGC or any regulation made pursuant thereto; Section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by FGC or any regulation adopted pursuant thereto; and Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA

Mitigation Measure BIO-5 states that “construction of the project should avoid the general avian breeding season of February through August” and “if construction must occur during the general avian breeding season, a pre-construction survey should be conducted within 30 days prior to the start of construction.” Please note that some species of raptors (e.g., owls) may commence nesting activities in January. The Department encourages the Lead Agency to complete nesting bird surveys regardless of time of year to ensure compliance with all applicable laws related to nesting birds and birds of prey.

The Department recommends that pre-construction surveys be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner. As mentioned previously, it is the Lead Agency’s responsibility to ensure that the project complies with all applicable laws related to nesting birds and birds of prey, and that violations of these laws do not occur.

Burrowing Owl

The DEIR does not include a mitigation plan to offset impacts to the potential loss of burrowing owl nesting and/or foraging habitat, should burrowing owl be found onsite, and instead implies that development of such a plan would occur at a later date, after public review. Due to lack of information on a mitigation plan to offset impacts to the potential loss of burrowing owl nesting and/or foraging habitat, the Department is unable to determine whether the impacts would be mitigated, and cannot, without further information from the District concur that impacts to burrowing owl would be mitigated to less than significant levels through the implementation of Mitigation Measure BIO-2.

To reduce potential impacts to burrowing owl to a level less than significant the Department recommends that the District revise the DEIR and condition Mitigation Measure BIO-2 to include specific, enforceable, and feasible actions to mitigate impacts to burrowing owl, should they be detected onsite. Current scientific literature supports the conclusion that mitigation for permanent burrowing owl habitat loss necessitates replacement with an equivalent or greater habitat area for breeding, foraging, wintering, dispersal, presence of burrows, burrow surrogates, presence of fossorial mammal dens, well drained soils, and abundant and available prey within close proximity to the burrow. Please note that the Department does not recommend the exclusion of owls using



4

5

Draft Environmental Impact Report  
Sterling Natural Resource Center Project  
SCH No. 2015101058  
Page 7 of 7

passive relocation unless there are suitable burrows available within 100 meters of the closed burrows (Trulio 1995, CDFG 2012) and the relocation area is protected through a long-term conservation mechanism (e.g., conservation easement). The Department recommends that the District notify the USFWS and the Department if owls are found to be present onsite and develop a conservation strategy in cooperation with the USFWS and the Department, in accordance with the Department's *Staff Report on Burrowing Owl Mitigation*.

↑  
5

### Further Coordination

The Department appreciates the opportunity to comment on the DEIR for the Sterling Natural Resource Center Project (SCH No. 2015101058). The Department requests that the DEIR be revised to address the Department's comments and concerns, and recirculated for public review. If you should have any questions pertaining to the comments provided in this letter, please contact Claire Ingel at (909) 484-3979 or at [claire.ingel@wildlife.ca.gov](mailto:claire.ingel@wildlife.ca.gov).

Sincerely,



Leslie MacNair  
Regional Manager

For

cc: State Clearinghouse, Sacramento

### References

California Department of Fish and Game (CDFG). 2012. Staff report on burrowing owl mitigation. State of California, Natural Resources Agency. Available at <http://www.dfg.ca.gov/wildlife/nongame/docs/BUOWStaffReport.pdf>

Trulio, L.A. 1995. Passive Relocation: A Method to Preserve Burrowing Owls on Disturbed Sites. *Journal of Field Ornithology* 66(1):99-106.

[USFWS] U.S. Fish and Wildlife Service. 2000. 65 FR 19686. Endangered and threatened wildlife and plants; threatened status for the Santa Ana sucker. *Federal Register* 65: 19686-19698.

[USFWS] U.S. Fish and Wildlife Service. 2014. Draft Recovery Plan for the Santa Ana sucker. U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. v + 61 pp.



## Comment Letter Colton

**From:** [Tom Barnes](#)  
**To:** [Ashok Dhingra \(Adhingra@eastvalley.org\)](#); [janenn Usher \(j.usher@mpglaw.com\)](#) ([j.usher@mpglaw.com](#)); [Elie, Steve \(S.Elle@MPGLAW.com\)](#); [Jean Cihigoyenette \(JeanCihigoyenette@cgclaw.com\)](#); [Heather Dyer \(heatherd@sbvmwd.com\)](#); [Camille Castillo](#)  
**Subject:** FW: Draft EIR for the Sterling Natural Resource Center  
**Date:** Monday, February 01, 2016 5:00:43 PM

---

---

**From:** Victor Ortiz [<mailto:VOrtiz@ci.colton.ca.us>]  
**Sent:** Monday, February 01, 2016 4:59 PM  
**To:** Tom Barnes  
**Cc:** Bill Smith; Mark Tomich; David Kolk; Reggie Torres  
**Subject:** Draft EIR for the Sterling Natural Resource Center

Dear Tom,

The City of Colton appreciate the opportunity of giving us a chance to comments for the Draft EIR for the Sterling Natural Resource Center. Below is our comments:

- Since the project will divert 6 MGD of water from RIX that is owned and operated by Cities of Colton and San Bernardino, is there any impact to the operation of the RIX plant? We understand that there might be an impact to the habitat of the Santa Ana sucker fish.

1

Please feel free to contact me if you need additional information.

Thanks,

Victor Ortiz, P.E.  
Engineering Superintendent/City Engineer  
Public Works Department  
City of Colton  
160 South 10th Street  
Colton, CA 92324  
e-mail: [vortiz@coltonca.gov](mailto:vortiz@coltonca.gov)  
Tel. (909) 370-5065  
(909) 514-4210 – direct  
Fax (909) 370-5072

CONFIDENTIALITY NOTICE: This communication with its contents may contain confidential and/or legally privileged information. It is solely for the use of the intended recipient(s). Unauthorized interception, review, use or disclosure is prohibited and may violate applicable laws including the Electronic Communications Privacy Act. If you are not the intended recipient, please contact the sender and destroy all copies of the communication.



February 1, 2016

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
626 Wilshire Boulevard, Suite 1100  
Los Angeles, CA 90017

Via Email @ tbarnes@esassoc.com

Subject: Draft Environmental Impact Report Comments concerning the Sterling Natural Resource Center

Dear Mr. Barnes:

The City of Highland appreciates the opportunity to review and comment on the subject DEIR for the Sterling Natural Resource Center. The following comments are for your consideration.

The City's letter dated November 16, 2015 related to the Notice of Preparation noted the City's request to include a General Plan Land Use Map and Zoning Map Amendment from Business Park (BP) to Public/Quasi-Public (P/Q) District. However, the subject DEIR Section 3.10, Land Use and Planning (pages 3.10-1 to 3.10-2) and Section 3.10.3 Impacts and Mitigation (pages 3.10-10 and 3.10-11) include excerpts from the City's General Plan and Municipal Code concluding that the Sterling Natural Resource Center would be substantially consistent with the existing Business Park (BP) Zoning District designation.

Further the DEIR page 3.10-11 cites Government Code 53091 (building and zoning ordinances) and 53095 (General Plan Consistency) to support an exemption from a local General Plan Consistency finding.

Please note that the City of Highland's Land Use and Development Code (Municipal Code Chapter 16) operates under the principals of permissive zoning, meaning that any land use not specifically authorized or identified in the zoning code is prohibited. That being the case, the DEIR incorrectly interpreted the Sterling Natural Resource Center (with all its components) to be compatible with the City's Business Park Zoning District which only permits the *office component* of the Sterling Natural Resource Center project. As suggested in the City's NOP letter dated November 16, 2015, the Public/Quasi-Public Zoning Designation would be the compatible zoning district due to the fact that all components of the Natural Resources Center are listed within the P/Q Land Use Table (Table 16.12.020.A). The P/Q Land Uses Table is attached for your consideration with asterisks (\*) to highlight the specific uses compatible with the Natural Resource Center project (with all its components).



Mayor  
Larry McCallon

Mayor Pro Tem  
Penny Lilburn

City Council  
Sam J. Racadio

City Council  
Jody Scott

City Council  
John P. Timmer

City Manager  
Joseph A. Hughes

27215 Base Line, Highland, CA 92346

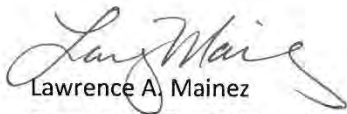
Tel: (909) 864-6861 • Fax: (909) 862-3180 • Web: www.cityofhighland.org

The City suggests that the DEIR be modified to reflect that the existing Business Park Zoning District only permits the office component of the Natural Resource Center project and that the City's Public/Quasi-Public Zoning District would be the more appropriate zoning designation. In regards to Government Code 53091 (building and zoning ordinances) and Government Code 53095 (General Plan Consistency), it is the City's hope that we can work collaboratively in the review and approval of street improvement plans and construction permits for facilities open to the general public, and to amend the City's General Plan and Zoning Map from Business Park (BP) to a Public/Quasi-Public (P/Q) Zoning Designation.

↑  
1

Should you have any questions concerning the City comments, please contact me at (909) 864-8732, Ext. 215 or email me at [lmainez@cityofhighland.org](mailto:lmainez@cityofhighland.org).

Sincerely,

  
Lawrence A. Mainez  
Community Development Director

Att:

Cc: Joseph Hughes, City Manager  
Ernie Wong, Public Work Director/City Engineer  
Kim Stater, Assistant Community Development Director  
Craig Steele, City Attorney (Richard/Watson/Gershon)

February 4, 2016

Michael T. Fife  
Attorney at Law  
805.882.1453 tel  
805.965.4333 fax  
MFife@bhfs.com

**VIA E-MAIL TBARNES@ESASSOC.COM**

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
626 Wilshire Boulevard, Suite 1100  
Los Angeles, CA 90017

RE: DEIR Comments - Sterling Natural Resource Center

Dear Mr. Barnes:

Our office has received a copy of the Draft Environmental Impact Report for the Sterling Natural Resource Center. We represent the City of Rialto with respect to its wastewater change petition currently pending before the State Water Resources Control Board (SWRCB), and submit these comments on behalf of Rialto.

Recycled water is a critical resource in the face of continuing drought and ever increasing restrictions on the availability of imported water. The Santa Ana Watershed has been at the forefront of water recycling in the State and its efforts have been lauded by numerous agencies including the SWRCB. Both the local region as well as the State as a whole have a strong interest in promoting the greatest amount of water recycling as possible.

The DEIR examines a water recycling project that will result in the cessation of discharge of approximately 6 MGD of treated wastewater to the Santa Ana River (SAR) from the City of San Bernardino's Rapid Infiltration and Extraction (RIX) facility. The DEIR analysis finds that the cessation of 6 MGD will not cause harm to biological resources of the SAR. The DEIR further finds that cessation of discharges of even as much as 12 MGD will not necessarily harm biological resources of the SAR. The DEIR identifies four Rialto wells as potential sources of supplemental water that can be used to mitigate any unforeseen impacts.

Rialto's wastewater change petition also requests the ability to cease the discharge of 6 MGD to the SAR. Rialto supports the analysis of the Sterling DEIR as it is consistent with our analysis to the extent that at least 12 MGD, if not more, of wastewater can stop being discharged to the SAR without causing harm to biological (and other) resources. Rialto also concurs in the finding that management tools exist, such as the use of Rialto's wells, that can mitigate potential unforeseen impacts.

Please further describe the interaction between the groundwater underlying the four Rialto wells identified in the DEIR and the SAR, in order to confirm whether the water pumped by these wells is supplemental water rather than part of the baseflow of the SAR.

1

017106\0001\14434330.1

1020 State Street  
Santa Barbara, CA 93101-2711  
main 805.963.7000

Tom Barnes  
February 4, 2016  
Page 2

Rialto looks forward to continuing to work with the parties in the Santa Ana Watershed to develop an approach acceptable to all parties to best promote water recycling in the region.

Thank you for the opportunity to comment on the DEIR.

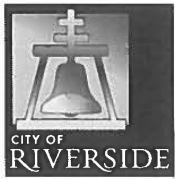
Sincerely,

A handwritten signature in black ink, appearing to read "Michael T. Fife".

Michael T. Fife

MXF:olr

cc: Robert Eisenbeisz, PE – Director of Engineering, City of Rialto



City of Arts & Innovation

February 1, 2016

Mr. Tom Barnes  
 Environmental Science Associates  
 626 Wilshire Boulevard, Suite 1100  
 Los Angeles, CA 90017

**RE: STERLING NATURAL RESOURCE CENTER, DRAFT ENVIRONMENTAL IMPACT REPORT COMMENTS**

Dear Mr. Barnes:

The City of Riverside, through its Public Utilities Department (RPU), has reviewed the Sterling Natural Resource Center’s Draft EIR, and requests that several items be addressed prior to issuing a Final EIR so that RPU can fully understand the scope and potential impacts of the proposed project. RPU looks forward to working with San Bernardino Valley Municipal Water District (Valley District) and East Valley Water District (EVWD) to address our concerns.

**Background**

RPU provides domestic water service to approximately 320,000 from 50 active potable wells. RPU is entirely dependent on groundwater resources and became imported water independent in 2008, following construction of its John W. North Treatment Plant located in the Riverside North Basin. RPU has established water extraction rights in the Bunker Hill, Rialto-Colton, Riverside North, and Riverside South groundwater basins through the Western-San Bernardino Judgment.

**Project Understanding**

The Sterling Natural Resource Center is a project which plans to discontinue sending wastewater to San Bernardino’s Water Reclamation Facility and the RIX facility, and begin treating this wastewater and future demands at a newly constructed 10 MGD facility located at North Del Rosa Drive in the City of Highland. The tertiary treated wastewater would be conveyed to one of three discharge locations: City Creek, East Twin Creek spreading grounds, and/or the Redlands basins. The City Creek discharge would be implemented such that all discharges would fully infiltrate prior to reaching the confluence with the Santa Ana River.

**Project Concerns**

**Impacts to Gage Wells and Future Groundwater Extractions**

As expressed in our NOP comment letter, RPU owns 16 Gage Canal Company wells in the Bunker Hill Basin which are used for potable supply. The most northeastern Gage wells are 46-1R and 56-1, which are located approximately 3 miles downstream of the Redlands ponds and 2 miles downstream of City Creek’s confluence with the Santa Ana River. RPU is concerned that the proposed project could have an adverse impact to our wells and in our NOP comment letter, requested that a study be completed to demonstrate to RPU and the Division of Drinking Water (DDW) that no adverse impacts would occur. No such study has been presented to RPU and our concerns remain the same.

1

Riverside Public Utilities • Administration

3750 University Avenue, 3rd floor • Riverside, CA 92501 • 951.826.2135 • RiversidePublicUtilities.com



Mitigation Measure HYDRO-2 was proposed to implement a groundwater monitoring program to characterize the effects of the proposed discharge. If a beneficial use of the groundwater were to become adversely affected by the new effluent discharge, the measure proposed to modify the plants treatment, modify the well screen or provide compensation through replacement of the affected well(s) or through replacement water. While a groundwater monitoring program is an important aspect of the proposed project, this mitigation measure proposes solutions to remedy an impact after it has occurred and been identified. RPU needs to know in advance if an impact will occur and requests that a study be completed and shared with RPU and DDW to determine if any adverse impacts will occur to RPU's groundwater wells. In the event the analysis was flawed and an impact was to occur, RPU would expect Valley District to discontinue discharging until the problem at the treatment plant was resolved; and does not accept this mitigation measure as an appropriate solution to resolve any unidentified impacts.

2

In addition to our existing Gage wells, RPU is also concerned that the proposed project could prevent future potable production from occurring at some of our vacant properties located east of our existing wells, as described in our NOP comments. These parcels include the exclusive right to develop water from them. Our concern was not addressed in the DEIR and RPU requests that a study be completed to inform RPU if the groundwater beneath our property will be adversely impacted by the project such that it would prevent future potable use, and that as a mitigation measure; Valley District agree to create a MOU with RPU that describes appropriate solutions to remedy the potential impact.

3

**Possible Impacts to Riverside Basin Wells and the Riverside North ASR Project**

Mitigation measure HYDRO-5 states that Valley District would prepare an Operational Manual for City Creek Discharges where the discharge would be conveyed to other discharge basins to avoid contributing to flood flows in City Creek during peak flow periods. As stated in the DEIR, RPU assumes that the new City Creek discharge will fully infiltrate prior to reaching the confluence with the Santa Ana River, even during storm flows. RPU owns wells downstream of the proposed project which are considered to be under the influence of surface water, and would be adversely impacted should effluent reach this area. In addition to our wells, the planned Riverside North Aquifer Storage and Recovery Project could also be impacted if City Creek discharges were to mix with storm flows and reach the Colton Basin. Please confirm that the Operational Manual for City Creek Discharges will ensure that under all conditions (dry weather to varying degrees of storm flow), the proposed City Creek effluent discharges will always remain above the confluence with the Santa Ana River; and that the Operational Manual include a Contingency Plan should the effluent reach beyond the confluence with the Santa Ana River.

4

**Possible Impacts to RPU's Blending Capacity and Wastewater Discharges**

RPU treats its 50 active potable wells by blending all of the sources at the Linden and Evans Reservoir before entering our distribution system. Groundwater produced from our Gage wells and other wells located in the Bunker Hill B Management Zone, produce some of our lowest TDS concentrations; and are extremely helpful in blending down RPU's total water supply.

The DEIR states that "anticipated TDS concentrations in the effluent would be similar to existing groundwater concentrations and within the identified assimilative capacity of the groundwater quality objective." As of 2012, the assimilative capacity for TDS in Bunker Hill B is 70 mg/L. Should Valley choose to utilize assimilative capacity; this would imply that the planned effluent discharges would have a greater TDS concentration than the current ambient concentration and thus increase current concentrations. While the utilization of assimilative capacity may be permitted by the Regional Board, the TDS increase could have an adverse impact to the City of Riverside by increasing TDS concentrations in some of our Gage Canal Company wells and reducing our blending capacity. As a result of potentially higher TDS concentrations within our distribution system, Riverside would become impacted at its Regional Water Quality Control Plant effluent discharges and in its ability to accept new industrial discharges from new businesses. Please provide groundwater modeling results so that RPU can analyze what if any increase in TDS concentrations will occur at the Gage wells and at other RPU wells located in the Bunker Hill B Management Zone, and at the Regional Water Quality Control Plant.

5

**Violation of the Western-San Bernardino Judgment**

As stipulated in paragraphs VII and VIII of the Western-San Bernardino Judgment, extractions from Colton and Riverside basin by San Bernardino County entities for use in Valley District shall not be limited. However, Valley District has certain obligations for managing the Colton and Riverside Basin within San Bernardino County which include maintaining water levels above the 1963 water level in key index wells and maintaining its agreement with the City of San Bernardino in committing to discharge 16,000 acre-feet annually of municipal effluent. As summarized from paragraph VIII (g), these provisions are to allow maximum flexibility to Valley District in the operation of a coordinated replenishment and management program, to protect Valley's interests in meeting its obligation at the Riverside Narrows and; to protect the area as a major source of groundwater supply available to satisfy the historic extractions therefrom for use within Western's District.

Cumulatively with the proposed Clean Water Factory, less than 16,000 acre-feet annually is proposed to be discharged to the river. This is a violation of the Judgment and would have an adverse impact to RPU and the entities that extract groundwater from this area for use within Riverside County. As a signatory and Watermaster to the Judgment, RPU expects Valley district to adhere to all stipulations within the Judgment. In addition, RPU expects that the 16,000 acre-foot effluent commitment will not consist of over-extracted Riverside North groundwater generated from the RIX extraction wells, treated effluent generated from Colton's discharge, or mitigation groundwater produced by Valley for use in Rialto Channel.

RPU recognizes the regional approach Valley is taking in managing the groundwater basins and commends Valley District for being a proactive basin manager. RPU looks forward to a healthy dialog with Valley District and to continue to learn more about the proposed project and other projects planned to occur within Valley District's Sphere of Influence. In addition, RPU also looks forward to understanding how this "new water" to the Bunker Hill Basin will be accounted for by Watermaster.

6

Sincerely,



Kevin S. Milligan  
 Deputy General Manager





## Inland Valley Development Agency

---

January 29, 2016

San Bernardino Valley Municipal Water District  
C/O Tom Barnes, Environmental Science Associated  
626 Wilshire Boulevard, Suite 1100  
Los Angeles, CA 90017

**RE: STERLING NATURAL RESOURCE CENTER DRAFT ENVIRONMENTAL  
IMPACT REPORT**

Dear Mr. Barnes:

This letter is in response the Draft Environmental Impact Report (DEIR) on the proposed Sterling Natural Resource Center (SNRC) dated December, 2015. We understand that the San Bernardino Valley Municipal Water District (SBVMWD) is serving as lead agency for compliance with the California Environmental Quality Act (CEQA) and that the project is proposed to be located at North Del Rosa Drive between 5<sup>th</sup> Street and 6<sup>th</sup> Street in the City of Highland.

The Inland Valley Development Agency (IVDA) is a regional joint powers authority charged with the effective reuse of the former Norton Air Force Base in San Bernardino, California. This project includes a public-private partnership and industrial park known as Alliance-California which is home to major Fortune 100 and 500 companies, as well as a 14,000 acre base reuse project area surrounding the former Base. The IVDA is also the successor in interest to a number of former United States Air Force facilities, systems, and utilities.

The proposed SNRC is located approximately 1.4 miles north of IVDA-owned property. As an adjacent owner and operator, IVDA staff has reviewed the DEIR and would like to provide the following comments and suggestions.

- 1) In general, the DEIR seems to address environmental impacts and mitigation from more of a programmatic view, while what is being proposed is a site-specific development. More detail and analysis should be included to identify specific mitigation measures and management programs. Additional explanation should be provided to demonstrate that the objective can be met by the proposed project. In several areas such as biological, stormwater, geotechnical, and flood hazards, specific mitigation measures and some of the referenced technical studies are being deferred.
- 2) Specific financial and operational analyses should be provided regarding the costs for construction and on-going maintenance and operation of the facility. Cost estimates for mitigation measures and related costs should be considered in that analysis.

1  
2

- 3) Please provide more detail as to what odor control systems will be implemented and the expected efficiency of those systems. Assessment of potential residual odors should be provided. 3
- 4) Additional descriptions and analyses regarding specific locations of proposed well sites designed to capture percolated water should be provided in relation to potential recharge sites. The DEIR references refurbishment of wells in Colton to offset losses from the RIX facility, but it does not address this project component in the analysis sections. 4
- 5) Additional noise and vibration information should be provided including a background noise measurement and information regarding anticipated construction and operational noise levels and mitigation. Operational emissions data should include assessment of pump stations, refitted wells, and generators, along with emissions inventory. Construction traffic trips should be considered in the traffic analyses. 5
- 6) IVDA has developed design and engineering plans for some of the adjacent street sections which address installation of additional utility infrastructure. The DEIR proposes several new pipelines and interconnections. This information will be made available to you to facilitate coordination and to help avoid potential utility conflicts. 6

Staff is available to discuss the project and potential solutions more specifically as the project is further developed. If you have any questions or require any additional information, please do not hesitate to contact me at (909) 382-4100.

Sincerely,

**INLAND VALLEY DEVELOPMENT AGENCY**



Michael Burrows  
Executive Director



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

January 28, 2016

VIA EMAIL AND US MAIL

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
626 Wilshire Boulevard, Suite 100  
Los Angeles, CA 90017

Dear Mr. Barnes:

Notice of Availability of the Draft Environmental Impact Report for the Sterling Natural Resource Center

The Metropolitan Water District of Southern California (Metropolitan) has reviewed the Notice of Availability of the Draft Environmental Impact Report for the Sterling Natural Resource Center (SNRC). The proposed project will construct and operate a new wastewater treatment plant to provide tertiary treatment of wastewater generated in the East Valley Water District's (EVWD) service area, modify EVWD's wastewater collection facilities, and construct treated water conveyance systems for beneficial uses in the upper Santa Ana River watershed.

The proposed project includes:

- Constructing a new Treatment Facility in the City of Highland;
- Constructing a treated water conveyance system, which includes a pump station, 24-inch diameter conveyance pipelines to the Santa Ana River or one of three discharge facilities including City Creek, East Twin Creek Spreading Grounds, or the Redlands Basin;
- Modifications to the wastewater collection facilities including construction of two lift stations and foremains, as well as additional collection sewers;
- Connecting the SNRC with a 24-inch discharge pipe to the San Bernardino Water Reclamation Plant (SBWRP); and
- Refurbishing and equipping groundwater wells near the Rialto Channel.

Metropolitan is a public agency and regional water wholesaler. It is comprised of 26 member public agencies serving approximately 18.4 million people in portions of six counties in Southern California, including Los Angeles County. Metropolitan's mission is to provide its 5,200 square mile service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Mr. Tom Barnes  
Page 2  
January 28, 2016

Upon review of the project location, Metropolitan has determined that the Project has the potential to impact Metropolitan's facilities including the possibility of impacting one of our feeder pipelines. Metropolitan owns and operates the Inland Feeder near the City Creek Extension. The Inland Feeder is a 144-inch inside-diameter pipeline that runs in a general north-south direction near Boulder Avenue, north of the 210 Freeway, adjacent to the proposed project area ending at City Creek. This pipeline is a critical part of our distribution system and work in the area of the pipeline will require coordination with Metropolitan. This letter contains Metropolitan's comments to the proposed project as a potentially affected public agency.

Metropolitan must be allowed to maintain its facilities in order to maintain and repair its system. In order to avoid potential conflicts with Metropolitan's facilities and rights-of-way, we require that any design plans for any activity in the area of Metropolitan's pipelines or facilities be submitted for our review and written approval. Any future design plans associated with this project should be submitted to the attention of Metropolitan's Substructures Team. Approval of the project should be contingent on Metropolitan's approval of design plans for portions of the proposed project that could impact its facilities.

Detailed prints of drawings of Metropolitan's pipelines and rights-of-way may be obtained by calling Metropolitan's Substructures Information Line at (213) 217-6564. To assist the applicant in preparing plans that are compatible with Metropolitan's facilities and easements, we have enclosed a copy of the "Guidelines for Developments in the Area of Facilities, Fee Properties, and/or Easement of The Metropolitan Water District of Southern California." Please note that all submitted designs or plans must clearly identify Metropolitan's facilities and rights-of-way.

We appreciate the opportunity to provide input to your planning process and we look forward to receiving future documentation and plans for this project. For further assistance, please contact Ms. Malinda Stalvey at (213) 217-5545.

Very truly yours,



Deirdre West, Team

By Thomas Napoli, Principal Environmental Specialist

MS:mks

J:\Environmental Planning&Compliance\COMPLETED JOBS\January2016\EPT Job No. 20160113EXT

Enclosures: Metropolitan Planning Guidelines

1

DIRECTORS

PHILIP L. ANTHONY  
DENIS R. BILODEAU, P.E.  
JORDAN BRANDMAN  
SHAWN DEWANE  
JAN M. FLORY  
CATHY GREEN  
DINA NGUYEN  
ROMAN A. REYNA  
STEPHEN R. SHELDON  
ROGER C. YOH, P.E.



ORANGE COUNTY WATER DISTRICT  
ORANGE COUNTY'S GROUNDWATER AUTHORITY

OFFICERS

President  
CATHY GREEN  
  
First Vice President  
DENIS R. BILODEAU, P.E.  
  
Second Vice President  
PHILIP L. ANTHONY  
  
General Manager  
MICHAEL R. MARKUS, P.E., D.WRE

February 1, 2016

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
626 Wilshire Blvd, Suite 1100  
Los Angeles, CA 90017

**Re: Draft Environmental Impact Report, Sterling Natural Resource Center, December 2015**

Dear Mr. Barnes:

The Orange County Water District (OCWD, the District) is a special district formed in 1933 by an act of the California Legislature. The District manages the groundwater basin that underlies north and central Orange County. The District owns more than 2,000 acres of land in the Prado Basin and is keenly interested in projects that may affect the basin.

The Prado Basin contains sensitive environmental habitat for threatened and endangered species; essentially all of the Prado Basin is designated as critical habitat for the federally endangered least Bell's vireo. In 1995, OCWD executed an agreement with the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers to cooperatively manage biological resources in the Prado Basin. This agreement allows for temporary storage of stormwater in Prado Basin for subsequent release from the Prado Dam to enable OCWD to recharge the water into the groundwater basin. This longstanding water conservation program is contingent upon the continued health of biological resources in Prado Basin. Potential impacts to riparian habitat, the Least Bell's Vireo, and other biological resources in the Prado Basin can negatively impact OCWD's water conservation program.

In addition, OCWD owns and operates a 465-acre treatment wetlands system in the Prado Basin (OCWD Prado Constructed Wetlands). Approximately half of the Santa Ana River baseflow is diverted through these wetlands. The proposed project would increase the amount of water that is recycled in the Bunker Hill Basin and thereby decrease the amount of tertiary treated water discharged into the Santa Ana River, a portion of which flows in the Santa Ana River to OCWD Prado Constructed Wetlands.

OCWD appreciates the opportunity to comment on this proposed project. The District submitted comments on the Notice of Preparation of an EIR for this project. While the PEIR addressed a number of concerns, the District believes that some issues remain.



Mr. Tom Barnes  
February 1, 2016  
Page 2 of 5

OCWD supports water recycling. OCWD, however, is concerned that projects to recycle water, such as the proposed project, in combination with other projects, may remove water from the Santa Ana River at a rate that leaves insufficient water in the Santa Ana River to support riparian habitat and beneficial uses in Prado Basin and other portions of the water bodies upstream of Prado Basin.

The Prado Basin Management Zone (PBMZ) is one of the largest riparian ecosystems in southern California, covering over 4,000 acres. The PBMZ is home to threatened and endangered species ("T/E species") that rely on healthy and vigorous riparian habitat. Recognizing the unique importance of this area, the Water Quality Control Plan for the Santa Ana River Basin established the PBMZ and designated the beneficial uses of Warm Freshwater Habitat (WARM), Wildlife Habitat (WILD), and Rare, Threatened or Endangered Species (RARE). Additional Beneficial Uses identified in the PBMZ in the Regional Board's Basin Plan include Agricultural Supply (AGR), Groundwater Recharge (GWR), Water Contact Recreation (REC1), and Non-contact Water Recreation (REC2). OCWD is concerned that the proposed project, in combination with other projects, may remove water from the Santa Ana River at a rate that leaves insufficient water in the river to support the beneficial uses in Prado Basin identified in the Basin Plan.

Baseflow in the Santa Ana River and its tributaries and shallow groundwater recharged by baseflow support this ecosystem. Reliable baseflow is especially critical during the growing season when T/E species are present. In recent years, there has been a significant decline in the amount of baseflow entering the PBMZ (a decline of more than 60,000 acre-feet per year since 2005, as documented in the Santa Ana River Watermaster Annual Report dated April 30, 2015).

Vegetation comprising the riparian habitat in the PBMZ is dominated by native trees such as black willow and Fremont cottonwood. These species are phreatophytes, which are plants that rely on direct access to flowing water or shallow groundwater for survival. Reductions in flowing water and lowering of the groundwater table can adversely affect the health and vigor of phreatophytes and, in turn, degrade riparian habitat for T/E species and beneficial uses in the PBMZ.

OCWD has recently observed and documented areas in the PBMZ where riparian habitat has degraded in recent years, potentially as a result of declines in baseflow and associated groundwater levels. In August 2015, OCWD commissioned a team of plant and restoration ecologists and water resource engineers to prepare an assessment of Prado Basin. A report prepared by Stetson Engineers, dated October 26, 2015 and included as Attachment 1, presents the results of this assessment. Several areas in the PBMZ were observed where riparian habitat showed signs of distress, such as leaf senescence, branch sacrifice, and crown dieback. A number of dead Fremont cottonwood trees and black willow dieback were observed. The team found indications of potential conversion from obligate

1

Mr. Tom Barnes  
February 1, 2016  
Page 3 of 5

(phreatophytic) riparian habitat to riparian scrub in some areas. Measurements were taken of surface flow and depth to groundwater. Hydrologic conditions, including inadequate surface flow and depressed groundwater levels, appeared unsuitable to support healthy and vigorous riparian habitat. These observations are consistent with lowering of groundwater levels and reductions in surface flows.

Further reductions in baseflow, such as that which would result from the proposed project, could potentially cause commensurate reductions in water supply to riparian habitat resulting in further degradation and conversion to drier scrub habitat. Current and foreseeable future actions in the upper Santa Ana River watershed are anticipated to cumulatively and significantly reduce baseflow entering the PBMZ and lower groundwater levels even further. The information developed in this assessment is not conclusive but it is highly suggestive and supportive that further reductions in recycled water discharges have the potential to harm riparian habitat in the PBMZ.

Regarding future flow rates in the Santa Ana River, estimates of future flow rates have been prepared by the Santa Ana Watershed Project Authority (SAWPA) and other entities. It is important to note that with respect to riparian habitat health, the seasonal aspect of the flow rate must be considered, not just the annual flow rate. Riparian plants need water in the hot summer months. If there is plenty of water in the winter but not enough in the summer, the riparian vegetation is at risk. Wildermuth Environmental, Inc. (WEI) created a 50-year daily inflow hydrograph at the Prado Basin for estimated year 2021 and year 2071 conditions using the Waste Load Application Model (WLAM). This work builds on the 2020 Prado Basin hydrograph generated for SAWPA in 2009 and more recently for the OCWD in 2012. The modeled hydrograph developed by the WLAM incorporates future land use conditions, flood control, recycled water discharge, and water conservation practices in the watershed tributary to the Prado Basin. The attached report (included as Attachment 2) from WEI dated January 24, 2014 provides background information on the WLAM, a summary of the 2021 and 2071 planning assumptions, and presents the Prado Basin daily inflow hydrographs for 2021 and 2071 conditions. It is important to note that the 2071 condition is so named since it has assumed 2071 land use, but this condition could occur in approximately 15 to 30 years.

The significance of the WEI January 24, 2014 model report is that it illustrates how low surface water flow into Prado Basin is estimated to decrease in the future. As shown in the figure below, identified as Figure 7 in the WEI model report, the estimated summer-time flow into Prado Basin is in the range of 15 to 18 cubic feet per second (cfs). This value includes the total inflow to Prado Basin, including from the Santa Ana River, Chino Creek, Mill Creek, and Temescal Creek. In this estimated condition, the minimum baseflow requirements for the 1969 Santa Ana River Judgment are satisfied, but the summer-time flow rate is likely too low to support riparian habitat in Prado Basin.



1

Mr. Tom Barnes  
 February 1, 2016  
 Page 4 of 5

For illustrative purposes, if it is assumed the water demand of riparian habitat in Prado Basin is 4.11 acre feet per acre per year and this water demand occurs during the warmest six months of the year, then the monthly water demand in the warmest six months is 0.685 feet per month (per unit area). Assuming there are 6,000 acres of riparian habitat in Prado Basin, then during the warmest six months the total water demand is 4,110 acre feet per month. If the inflow to Prado Basin is 15 cubic feet per second, within the range estimated in the WEI report (as shown in the figure below), then the estimated surface flow into Prado Basin is 894 acre feet (assuming 30 days per month). The value of the water demand of 4,110 acre feet per month is much greater than the surface inflow of 894 acre feet per month. While some of the deficit could be made up by shallow groundwater, shallow depth to groundwater is maintained to some degree by surface inflow (see Attachment 1). Additionally, there are on-going management activities in the Chino Basin that can affect groundwater levels in Prado Basin (see Attachment 1). Suffice to say, this example demonstrates the potential for insufficient quantities of water to sustain riparian habitat during the warmest parts of the year.

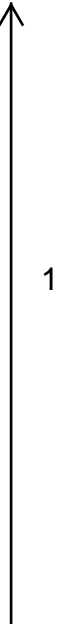
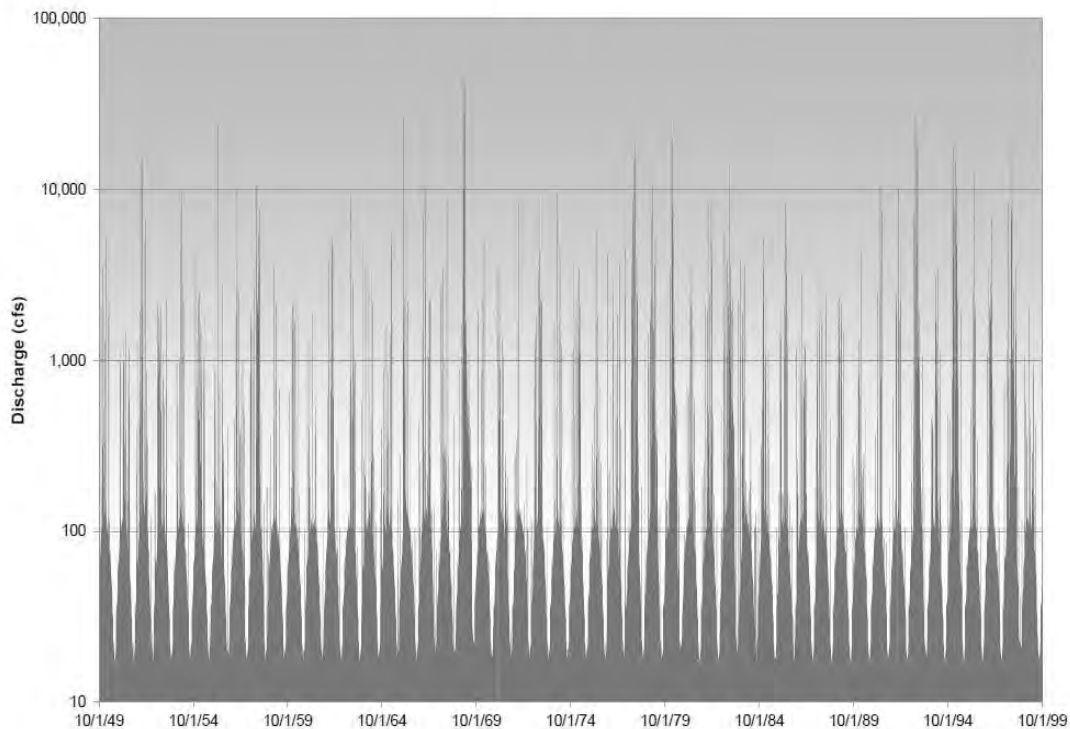


Figure 7  
 Daily Inflow to Prado: 2071 Conditions



1/23/2014 -- 4:38 PM  
 AnnualPradoFlow (Recovered)\_v1 -- Ch2



Source: Wildermuth Environmental, Inc., January 24, 2014



Mr. Tom Barnes  
February 1, 2016  
Page 5 of 5

The cumulative analysis for the proposed project is very important, since the proposed project needs to be evaluated in light of the other proposed projects in the watershed. The following projects, at a minimum, should be included in the cumulative impact assessment with respect to reduced flow in the Santa Ana River or its tributaries and impacts to riparian habitat:

- Projects in the proposed Upper Santa Ana River Habitat Conservation Plan
- Inland Empire Utilities Agency recycled water projects
- Chino Basin Watermaster Recharge Master Plan (including stormwater diversion projects)
- County of San Bernardino Flood Control District stormwater diversion projects
- Riverside County Flood Control District stormwater diversion projects
- City of Corona recycled water projects and stormwater diversion projects, including diversions of stormwater from Temescal Creek and its tributaries
- City of Riverside recycled water projects
- City of Colton recycled water projects
- City of Rialto recycled water projects
- City of San Bernardino recycled water projects, including the Clean Water Factory project
- San Bernardino Valley Municipal Water District stormwater diversion projects
- San Bernardino Valley Municipal Water District/Western Municipal Water Districts stormwater diversion projects, including water conservation at Seven Oaks Dam
- Western Riverside County Regional Wastewater Authority Water Recycling Project (Wastewater Change Petition WW-0067)
- Eastern Municipal Water District recycled water projects, including reduced discharges to Temescal Creek
- Elsinore Valley Municipal Water District recycled water projects

2

Thank you for the opportunity to submit these comments.

Sincerely,



Michael R. Markus, P.E., D.WRE, BCEE, F.ASCE  
General Manager

Attachments: Preliminary Assessment of Hydrologic Conditions Related to Riparian Habitat Health and Vigor in the Prado Basin Management Zone, Stetson Engineers Inc., October 26, 2015

Prado Basin Daily Discharge Estimates for 2021 and 2071 Using The Wasteload Allocation Model, Wildermuth Environmental Inc., January 24, 2014



Department of Public Works
Environmental & Construction • Flood Control
Operations • Solid Waste Management
Surveyor • Transportation

Gerry Newcombe
Director

February 1, 2016

San Bernardino Valley Municipal District
Attn: Tom Barnes
Environmental Science Associates
626 Wilshire Blvd., Suite 100
Los Angeles, CA. 90017
tbarnes@esassoc.com

File: 10(ENV)-4.01

RE: CEQA – NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT FOR THE STERLING NATURAL RESOURCE CENTER FOR THE SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

Dear Mr. Barnes:

Thank you for giving the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. We received this request on December 17, 2015 and pursuant to our review, the following comments are provided:

- 1. The City Creek Discharge Alternative as described on page 2-15 does not offer enough detail on how the water is to be discharged into the Creek; it does not indicate the probable resulting wetted area within the creek or ponding method (if any). Also, the new water source will prompt a biological conversion change as described elsewhere in the report but it does not describe how the new vegetation will be managed so that the hydraulic capacity of the system is maintained.
2. The proposed turnout into Twin Creek Basin is proposed within a levee section. These facilities (levees) were constructed by the US Corps of Engineers and require a 408 permit and must also meet FEMA design criteria. Also, additional information is needed on the anticipated improvements within the basins on how the imported water will be stored for percolation. It is likely that the cross dikes will need to be repaired and that is not outlined in the document. Also, the report should address the likely additional needed maintenance in the system for both the recharge and the flood control capacity.
3. Page 6-19 discusses Alternative 4 which proposes to drain into a future San Bernardino County Flood Control District (District) basin within Plunge Creek. There is not a planned facility proposed by the District at this time. Also, the overall project exhibits do not indicate where this basin is at or what the impacts are.
4. Page 3.4-57 states that there is a proposal to "increase habitat availability" in Rialto Channel by furnishing cool freshwater into the system. This is not a natural condition for this channel and

1
2
3
4

BOARD OF SUPERVISORS

ROBERT A. LOVINGOOD
Vice Chairman, First District

JANICE RUTHERFORD
Second District

JAMES RAMOS
Chairman, Third District

CURT HAGMAN
Fourth District

JOSIE GONZALES
Fifth District

GREGORY C. DEVEREAUX
Chief Executive Officer

T. Barnes, SB Valley Municipal District  
CEQA-NOA Draft EIR Sterling Natural Resource Center  
February 1, 2016  
Page 2 of 4

- may increase vegetation and decrease channel capacity and decrease the District's ability to construct needed future improvements. 4
5. The primary function of the District's facilities that the project will impact is to provide flood protection during storm events. Introduction of perennial water flows would encourage the growth of vegetation which will result in reducing the capacity of these facilities. The proposed project shall ensure that the flood protection function of the District's facilities is not compromised. 5
  6. Any work within the District right-of-way will require a permit from the District's Permits/Operation Support Division, Permit Section and may require easements. Other on-site or off-site improvements may be required which cannot be determined at this time. 6
  7. SBVMWD will be responsible for any vector control and vegetative management issues caused by the discharge. 7
  8. Any proposed connections to, or work on, District land, will require a permit from the Permits Division. 8
  9. Within the Summary of Impacts and Mitigation Measures, pages ES-8-10, and more specifically ES-10, describes mitigation measures to offset impacts to biological resources. Unless specifically authorized by the District and the County of San Bernardino Board of Supervisors, District land is not to be offered/used as mitigation for any agency other than the District. 9
  10. City Creek is an improved flood control system designed to provide 100 year flood protection for thousands of residents. The introduction of trees will impair the system's ability to convey the required storm flows. Also, City Creek is designated as critical habitat because it is a source of gravel that the Santa Ana Sucker (SAS) needs downstream. The introduction of trees and the establishment of riparian vegetation, where it has not historically existed, may impede the ability of the system to convey the gravels downstream and will have an impact on the overall geomorphology of the system. 10
  11. Page ES-10 BIO-3: Disturbance to SAS discusses measures to reduce potential project related impacts to avoid, minimize and compensate for impacts to the SAS while contributing to the long-term conservation of the species. It appears that the proposed mitigation measures may and will occur within District land. While the District is a partner in the Habitat Conservation Plan, this in no way allows for other agencies to utilize District land for mitigation. 11
  12. We are concerned regarding the proposed type conversion of Riversidean alluvial fan sage scrub (RAFSS) to riparian/mulefat scrub. 12
    - The District is concerned regarding the proposed discharge locations identified by Figure 2-7 a, Boulder Avenue Potential City Creek Discharge Location, Figure 2-7 b, 5<sup>th</sup> Street Potential City Creek Discharge Location and Figure 2-7 c, Baseline Street Potential City Creek Discharge Location. These locations are vegetated with RAFSS, and known to be occupied by San Bernardino Kangaroo Rat (SBKR), Santa Ana River woolly star (SAWS) and many other sensitive species. Type conversion of RAFSS to riparian habitats such as mulefat or willow scrub vegetation, due to the constant unseasonable runoff would make the habitat unsuitable for SBKR and SAWS, increasing the project impacts for these species and habitat including long term effects. 13

T. Barnes, SB Valley Municipal District  
CEQA-NOA Draft EIR Sterling Natural Resource Center  
February 1, 2016  
Page 3 of 4

- The District is concerned regarding the statement on 3.4-43, which specifically states “Discharge into City Creek will gradually replace, through type conversion, an inset channel portion of the existing alluvial scrub habitat within the ephemeral wash to riparian vegetation responding to perennial flows.” The document is not clear how the project proponent proposes to significantly impact an existing habitat occupied by multiple listed species to the benefit of another? SAS is found in several other large drainage systems, whereas SBKR is found within only the Santa Ana Water Basin region. 13
  - RAFSS is listed as part of the scale broom series within Sawyer, Keeler-Wolf and Evens A Manual of California Vegetation, Second Edition. This is a distinctive and rare plant community found mainly on the alluvial fans and floodplains emanating from the coastal side of the Transverse Ranges (Barbour, M.G. and J. Wirka. 1997. Classification of Alluvial Scrub in Los Angeles, Riverside, and San Bernardino Counties). Should the project proponent apply and be granted an encroachment permit from the District property to construct the proposed project, the District will require the project proponent to acquire long term maintenance permits from the regulatory agencies for the project proponent to maintain the riparian vegetation ensuring Flood Control requirements are met. 14
13. Section 2.4.4 Santa Ana River Pipeline discusses how the existing pipeline would be relined with HDPE, PVC or similar liner. The section discusses some segments within the San Bernardino International Airport Authority property may have been removed. This area is known to be occupied by burrowing owl, SAWS and SBKR and the repair of this section of pipeline could have significant impacts. This document does not address the impacts to these species and proposed mitigation measures. 15
  14. Page 2-33, Section 2.6 states “End uses for recycled water would include groundwater replenishment and habitat enhancement within City Creek or Santa Ana River.” Both of these drainages are owned and maintained by the District. Any habitat enhancement offered as mitigation or otherwise must be authorized by the District prior to making any assurances to the regulatory agencies or the general public. As stated in previous comments, District land is not to be utilized as mitigation for any agency other than the District. 16
  15. Page 3.4-52 discusses how, in the absence of a fully executed Upper SAR HCP, Mitigation Measure BIO-3 commits Valley District to the preparation and implementation of a SAS Habitat Monitoring and Management Plan (HMMP). The DEIR should address several other species other than SAS and proposes to obtain approval from United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). We are concerned a SAS HMMP will be lacking in addressing the minimization and mitigation measures for the other species and habitats. 17
  16. The HMMP proposed on Page 3.4-57 to address impacts to SAS includes the following mitigation measures: SAS-1: Microhabitat Enhancements, SAS-2 Aquatic Predator Control Program, SAS-3 Exotic Weed Management Program and SAS-4 High Flow Pulse Events would all occur on District property. While the District is a partner in the Habitat Conservation Plan, this in no way allows for other agencies to utilize District land for mitigation. 18
  17. Page 3.4-58 discusses the Implementation of Mitigation Measure BIO-1 would ensure that impacts to listed plants such as slender-horned spineflower (*Dodecahema leptoceras*), Santa Ana River woolly-star (*Eriastrum densifolium* ssp. *sanctorum*) are avoided where feasible and 19



T. Barnes, SB Valley Municipal District  
CEQA-NOA Draft EIR Sterling Natural Resource Center  
February 1, 2016  
Page 4 of 4

appropriately compensated through consultation with the CDFW and USFWS. As the project is proposing to type convert RAFSS to riparian, this mitigation measure would need to address permanent impacts to these species as the habitat would be left unsuitable. Furthermore, this mitigation measure, nor this document, addresses project impacts, both temporary and permanent to SBKR.

↑  
19  
20  
21  
22  
23  
24

18. Page 3.4-64 states, "Additionally, the operational requirement of the project could contribute to the long-term conservation goals of the Upper SAR HCP for Santa Ana sucker by discharging water back into City Creek which would support riparian habitat growth." As stated in our previous comments, the type conversion of RAFSS to riparian is a significant impact. The District was led to believe the HCP was for multiple species, not just the SAS.

19. Mitigation Measure BIO-2 discusses the relocation of sensitive species within the immediate construction zone, including silvery legless lizard, orange-throated whiptail, coastal whiptail, San Bernardino ring-necked snake, coast horned lizard, two-striped garter snake, Cooper's hawk, tri-colored blackbird, Southern California rufous-crowned sparrow, California horned lark, yellow-breasted chat, loggerhead shrike, yellow warbler, Lawrence's goldfinch, pallid bat, northwestern San Diego pocket mouse, western mastiff bat, western yellow bat, San Diego black-tailed jackrabbit, San Diego desert woodrat, Los Angeles pocket mouse, and American badger. We are concerned that the relocation of these animals is not feasible, let alone the disturbance to adjacent habitat would be a further impact.

20. Mitigation Measure BIO-3 would include measures to reduce invasive vegetation in the river corridor. As stated above, this mitigation may not occur within District lands.

21. Specific mitigation proposed on property which is not under direct control of the applicant is not necessarily meeting the "feasible" mitigation definition under CEQA. In addition, potential significant impacts resulting from implementation of a mitigation measure must be fully discussed, disclosed and minimized.

22. Installation and Maintenance of the proposed project would need to be reviewed and addressed by both the District's and Transportations Operations Divisions to ensure public facilities are not compromised, impeded, or disrupted to fulfill their required purpose.

If you have any questions, please contact Patrick Egle, Associate Planner, at 909-387-1865 or email at [Patrick.Egle@dpw.sbcounty.gov](mailto:Patrick.Egle@dpw.sbcounty.gov).

Sincerely,



**NIDHAM ARAM ALRAYES, MSCE, PE, QSD/P**  
Public Works Engineer III  
Environmental Management

NAA:PE:sr

cc: Kevin Blakeslee, Deputy Director, Flood Control  
Annesley Ignatius, Deputy Director, Land Development and Construction



**Regional Parks**

**MAUREEN A. SNELGROVE**  
Interim Director

January 4, 2016

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
626 Wilshire Boulevard, Suite 100  
Los Angeles, CA 90017

**NOTICE OF AVAILABILITY OF THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR  
THE STERLING NATURAL RESOURCE CENTER**

San Bernardino County Regional Parks has no comments regarding the Draft EIR for the Sterling Natural Resource Center.

Sincerely,

**MAUREEN A. SNELGROVE**  
Interim Director

**BOARD OF SUPERVISORS**

**ROBERT A. LOVINGOOD**  
Vice Chairman, First District

**JANICE RUTHERFORD**  
Second District

**JAMES RAMOS**  
Chairman, Third District

**CURT HAGMAN**  
Fourth District

**JOSIE GONZALES**  
Fifth District

**GREGORY C. DEVEREAUX**  
Chief Executive Officer



February 1, 2016

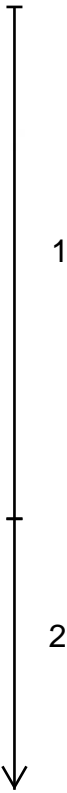
Via Electronic Mail

San Bernardino Valley Municipal Water District  
 c/o Tom Barnes, Environmental Science Associates  
 626 Wilshire Boulevard, Suite 1100  
 Los Angeles, CA 90017  
[tbarnes@esaassoc.com](mailto:tbarnes@esaassoc.com)

Re: Sterling Natural Resource Center (SNRC) Project: Draft Environmental Impact Report

Dear Mr. Barnes:

On behalf of the City of San Bernardino Municipal Water Department (SBMWD), we provide the following comments on the Draft Environmental Impact Report (DEIR) for the Sterling Natural Resource Center (Project). These comments also include concerns regarding the Project itself. SBMWD supports the goal of increasing recycled water use within the region, but it has many unanswered questions about the Project and its potential impacts. The Project as proposed requires SBMWD's approval and cooperation to implement, including use of SBMWD's pipeline, easements/rights of way, and points of discharge. It has the potential to impact SBMWD's adherence to its contractual obligations to maintain 16,000 acre-feet annually (afy) of effluent discharges to the Santa Ana River. Further, the Project has the potential to compromise the SBMWD's long-pending Clean Water Factory project, and increase the operational burden and cost, as well as regulatory risks, to the SBMWD. The Project also appears to duplicate services without corresponding local or regional benefits. Accordingly, SBMWD requests more information and clarification about various aspects of the Project and areas of potential operational and environmental concern.

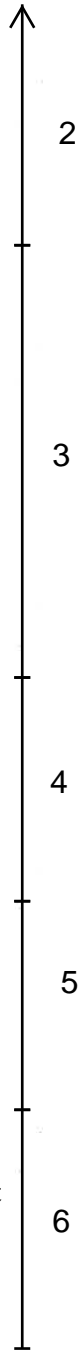


**I. Project Purpose and Objectives**

SBMWD is concerned the Project could increase costs for City of San Bernardino (City) residents within East Valley Water District (EVWD) without commensurate benefit. The DEIR states that the Project will provide the community with greater control over the cost of wastewater treatment. (DEIR at pp. ES-1, 1-1, 5-4.) A more accurate statement would be that EVWD (or San Bernardino Valley Municipal Water District

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
Re: Sterling Natural Resource Center Project: Draft Environmental Impact Report  
February 1, 2016  
Page 2

(Valley District), however Project administration is established) would have greater control over the cost of wastewater treatment. It seems reasonable to assume the cost for wastewater treatment will be higher for EVWD customers when compared with the current arrangement, due to the technologies proposed and economies of scale. Rates could increase to cover the costs of this new treatment facility, yet City residents may not receive any of the benefits of the facility.



**II. Project Description**

The DEIR does not provide sufficient information about the Project for the SBMWD to evaluate its environmental impacts or how it would affect SBMWD operations and liability.

*Design*

Page 2-6: Please clarify the proposed Project design flow: Will the Project treat all EVWD wastewater or only average dry weather flow? What portion of untreated wastewater, if any, is assumed to continue to be treated by the SBMWD's Water Reclamation Plant (WRP)?

Page 2-23, Section 2.4.3: The method of wastewater diversion is important and should be clarified to ensure that pertaining solids also are diverted. Please provide more information about the design of the proposed 5.4 million gallons per day (mgd) lift station. Does the 5.4 mgd represent average dry weather flow, average wet weather flow, and/or average daily flow? What is the peaking factor included in the preliminary design?

The DEIR states that in the event of a Rapid Infiltration and Extraction (RIX) facility shutdown, SNRC effluent would be diverted to the RIX facility to maintain Santa Ana River flows. However, in the event of a RIX facility shutdown, discharge to the river does not occur.

*Biosolids Offloading and Dewatering*

On page 2-11, the DEIR states that proposed practices are "consistent with current biosolids reuse and disposal practices from the RIX facility." Biosolids are not generated or disposed at the RIX facility. They are generated at and disposed from the WRP. WRP biosolids are co-composted by Nursery Products in Southern California.



San Bernardino Valley Municipal Water District  
 c/o Tom Barnes, Environmental Science Associates  
 Re: Sterling Natural Resource Center Project: Draft Environmental Impact Report  
 February 1, 2016  
 Page 3

*Supplemental Water Wells*

Page 2-33: Not enough information is provided for SBMWD or the general public to understand this component of the Project or its potential impacts. What is the quality and temperature of the groundwater proposed for discharge to the Rialto Channel? How does the quality and temperature compare to existing water quality and temperatures in the channel? To what extent could supplemental flows reduce temperatures in the channel? How far would the well water travel in the storm drain before being discharged to the Rialto Channel and would it still be cool upon discharge? Finally, the DEIR does not identify that this Project aspect would require its own National Pollutant Discharge Elimination System (NPDES) permit.

7

*Santa Ana River Pipeline*

The Project and DEIR assume that the Project would utilize SBMWD facilities and property including the Santa Ana River (Alabama Street) pipeline. The Santa Ana River pipeline has been identified for SBMWD use in SBMWD's 2005 Reclamation Feasibility Study and SBMWD's Clean Water Factory project. The Project's proposed use of the Santa Ana River pipeline appears to be inconsistent with the City's long-planned use of that facility for its Clean Water Factory project. Project use of the pipeline may also result in unacceptable cost, permitting and operational uncertainty, and potential liability, with no benefit to the SBMWD. Use to support the Project would require extensive coordination and approval by SBMWD, including some or all of the following:

8

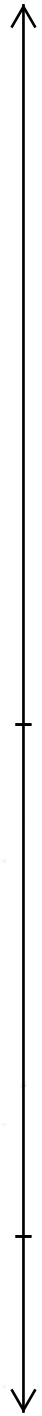
- Possible adjustment of SBMWD's source control program;
- Reserving capacity in the RIX pipeline and the RIX facility;
- Modification, and additional pipeline, in the WRP to convey SNRC effluent to the system that conveys to the RIX.
- Modification of operations: This element has critical implications for the WRP operations due to the requirement of maintaining a 20:1 dilution ratio, the relationship to the RIX facility capacity, etc.
- Amending the WRP NPDES permit to allow the Project's wastewater to be discharged at the WRP;

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
Re: Sterling Natural Resource Center Project: Draft Environmental Impact Report  
February 1, 2016  
Page 4

- Amending the RIX NPDES permit to allow the Project’s wastewater to be discharged at the RIX;
- Assumption of liability for discharging commingled effluent, which includes the effluent from SNRC’s facility, of which SBMWD has no control.

The list of required approvals (Table 2-9, page 2-34) should include the following approvals required to support use of the Santa Ana River pipeline:

- Approval to install a pipeline and flow control structures at the WRP.
- Agreement to maintain reserve capacity in the secondary effluent pipeline between the WRP and RIX.
- Reservation of standby capacity at the RIX facility.
- Amendment of the WRP NPDES permit.
- Amendment of the RIX NPDES permit.



**III. Environmental Impact Analyses**

*Biological Resources*

The DEIR’s determination that Project impacts to Santa Ana suckers from the RIX facility discharge reduction would be “significant and unavoidable” seems overly conservative in light of the DEIR evidence and impact analysis. Notably, the DEIR states that the Project will not result in adverse modification to critical habitat and “would benefit the aquatic habitat through quality enhancements compared with existing conditions.” (DEIR at p. 3.4-55.) If Valley District proceeds with the Project, the impact conclusion should be revised in the final EIR to more accurately reflect the analysis, as well as other recent evidence relating to the effect of flow reductions on the Santa Ana sucker, including SBMWD’s Flow Study prepared for the Clean Water Factory EIR (provided to Valley District in December 2015 following release of SNRC DEIR).

The DEIR includes a mitigation measure requiring release of high flow pulses in coordination with the City. (Mitigation Measure BIO-3, SAS 4, DEIR at p. 3.4-57.) Insufficient information is provided to assess the feasibility and effect of the proposal to provide “high flow pulse events.” What is the basis for the determination that two high

8

9

10

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
Re: Sterling Natural Resource Center Project: Draft Environmental Impact Report  
February 1, 2016  
Page 5

flow pulse events per year are appropriate? Also, this mitigation requires a cooperative agreement with SBMWD. What alternative is proposed if an agreement cannot be reached?

At page 3.4-48, entitled *Operational Impacts*: Contrary to the DEIR’s statement, Santa Ana suckers do not spawn in the RIX facility discharge. There are too many predators and too much water to support spawning. Spawning takes place in the Rialto Channel.

*Hydrology & Water Quality*

Groundwater quality is of substantial concern to SBMWD. The DEIR does not adequately evaluate impacts to groundwater quality, and SBMWD does not believe that the proposed mitigation is adequate to avoid significant impacts. The Project will result in substantial increases in total dissolved solids (TDS) in groundwater, which creates the potential for both direct and indirect significant adverse effects on municipal water treatment and supply, as well as wastewater discharge.

The DEIR lacks evidence to support its conclusion that “[a]nticipated TDS concentrations in the effluent would be similar to existing groundwater concentrations and within the assimilation capacity of the groundwater objective. As a result, the discharge to City Creek, East Twin Creek Spreading Grounds, or the Redlands Basins would not increase TDS concentrations in the underlying groundwater.” (DEIR at p. 3.9-22.) In fact, TDS concentrations in effluent will likely be substantially higher than existing groundwater concentrations. TDS levels in source water range from 247-284 parts per million (ppm), and after potable use, TDS levels in wastewater influent are 110-205 ppm higher. The SNRC’s proposed treatment will not remove salts, resulting in effluent with TDS levels likely ranging from 357-412 ppm, well above Basin Plan objectives and assimilative capacity.

The Bunker Hill Basin groundwater management zones have background TDS levels of 310 ppm for the A Zone, which has no assimilative capacity, and 330 ppm for the B Zone, which has only a small amount of assimilative capacity. Discharge at the TDS levels likely to be present in SNRC effluent will exceed available assimilative capacity and adversely effect groundwater quality and beneficial uses. Higher levels of TDS in groundwater that is proposed for recycling have the potential to compound over time, resulting in increasingly salty groundwater, thus adversely affecting domestic supply and making it harder for wastewater treatment facilities to meet effluent limitations.



10

11

12

13

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
Re: Sterling Natural Resource Center Project: Draft Environmental Impact Report  
February 1, 2016  
Page 6

Given these circumstances, SBMWD believes the Regional Water Quality Control Board (RWQCB) cannot make the required antidegradation analysis findings. In any event, the RWQCB’s future consideration of discharge requirements does not answer the question of whether the Project will result in a substantial adverse change in groundwater quality. The RWQCB’s antidegradation analysis allows for the RWQCB to authorize discharge that results in substantial degradation based on other, non-environmental factors (e.g., economic or other benefit). The Valley District has a separate and distinct obligation under the California Environmental Quality Act to evaluate and disclose the potential *environmental* impacts associated with an exceedance of water quality objectives and assimilative capacity.

14

Mitigation HYDRO-2 proposes to address groundwater quality impacts through “treatment modifications” or compensation by providing a replacement well or water. The DEIR provides no explanation of the type or feasibility of treatment modifications that would occur, or how the timing of any modifications would relate to discovery of impacts. Moreover, providing an alternative water supply is not legally adequate mitigation for impacts to water supply. (*Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1117-1118.) Thus, the mitigation as currently proposed does not support the DEIR’s finding that impacts to groundwater would be less than significant.

15

Finally, SBMWD is concerned about the Project’s proposal to use groundwater pumped from unidentified wells to supplement flow in the Rialto Channel. No information or analysis is provided regarding the potential for this element of the Project to adversely effect groundwater levels or surface water quality, or the impact of potentially higher flow velocity on spawning and juvenile Santa Ana suckers in the channel. How was the expected stream temperature reduction analysis for the Rialto Channel conducted? The DEIR should include summer groundwater temperature data for the Rialto wells that are proposed to be used for the Project. This information is needed to demonstrate the Project’s effect on channel temperatures.

16

*Cumulative Impacts*

The DEIR lists SBMWD’s Clean Water Factory project in its list of cumulative projects, but does not actually evaluate the potential cumulative impacts of these projects on Santa Ana River flows.

17

Also, the groundwater analysis only addresses the capacity of the Redlands Basin to accommodate the SNRC project and Redlands, and omits consideration of the proposed Clean Water Factory project.

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
Re: Sterling Natural Resource Center Project: Draft Environmental Impact Report  
February 1, 2016  
Page 7

**IV. Alternatives**

The existing WRP and the proposed Clean Water Factory accomplish all but one of the Project objectives. Under Alternatives Not Evaluated, the “Expanded Trunk Sewer Alternative” was rejected since it “met none of the project objectives.” (DEIR at p. 6-4, Section 6.1.4.4) However, SBMWD believes that all of the Project objectives actually can be met with this alternative combined with the proposed Clean Water Factory project (and at a lower cost).

18

SBMWD disagrees with the DEIR’s conclusion that, under the “No Project Alternative,” “future wastewater treatment needs would not be met.” (DEIR at p. 6-11.) In addition, SBMWD questions what evidence supports this determination.

19

EVWD recently completed a collection system master plan. That plan suggested several smaller projects (small recycled water plants) to address capacity limitations in its collection system. The DEIR should have considered one or more of the projects identified in the master plan as potential alternatives as they likely would reduce or avoid the Project’s potential significant impacts to biological resources, hydrology and water quality while more easily and affordably achieving most, if not all, of the Project’s basic objectives.

20

Finally, the DEIR’s conclusions about the feasibility and environmental benefits of various alternatives are not supported by substantial evidence. In particular, the DEIR includes an alternative with 3 mgd less diversion reduction but concludes the proposed Project is environmentally superior, on the theory that Project “benefits” would be scaled back with alternatives that involved lesser levels of flow reduction. However, nothing in the Project objectives, Project description, or description of alternatives limits the scope of the Project’s “beneficial” aspects to the level of recycled water produced (or the level of flow reduction in the Santa Ana River). If the project were smaller, then it seems clear that less mitigation would be required; it is not clear how a larger project requiring more mitigation (where the mitigation is scaled to the Project impacts) is environmentally superior to a smaller project with similarly scaled impacts and mitigation.

21

**V. Project Effect on SBMWD Legal Obligations and Finances**

*Water Rights Considerations*

The proposed 6 mgd reduction in the RIX facility flows makes up a substantial portion (6,700 af) of the 16,000 afy of effluent that the SBMWD is obligated to continue discharging to the Santa Ana River pursuant to its April 16, 1969, agreement with Valley

22



San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
Re: Sterling Natural Resource Center Project: Draft Environmental Impact Report  
February 1, 2016  
Page 8

District (1969 Agreement), and the Orange County Judgment and Western Judgment. Moreover, these flows represent a significant portion (approximately 19%) of the current discharge quantities from the RIX facility.

The DEIR does not evaluate the Project’s effect in light of these long-standing obligations. Moreover, the DEIR provides inconsistent descriptions of Valley District’s obligations under and intent regarding compliance with the Orange County Judgment that make it difficult to understand Valley District’s intentions with regard to Project operations or the feasibility of alternatives. On page 3.9-5, the DEIR describes Valley’s District’s flow obligation at Riverside Narrows as 15,250 afy, which SBMWD understands to be the obligation under the judgment. However, later in the same section the DEIR states: “Valley District is committed to contributing a minimum of 12,420 AFY at Riverside Narrows.” (DEIR at p. 3.9-28.) The DEIR continues: “In addition, as other recycled water projects are implemented, the cumulative reduction in discharges from RIX would be required to maintain a minimum flow to meet the lower water rights appropriation rights as required in the Stipulated Judgment.”

22

The 1969 Agreement obligates the SBMWD to discharge at least 16,000 afy for the use and benefit of Valley District. SBMWD was treating EVWD’S flows at the time that agreement was executed. It is likely the flow ratios have remained the same, so this would place a greater burden on SBMWD. In addition, EVWD collects wastewater from portions of the City, representing a significant portion of their flow. Valley District reminded the SBMWD of a concession made as part of the RIX water sales EIR (under Hydrology), that “[s]hould average groundwater levels approach the stipulated minimum elevation of 822 feet, MUNI shall implement appropriate measures to maintain the groundwater elevations. Among other measures, the RIX project may initiate groundwater replenishment.” Accordingly, continuing access to wastewater flows is an important component of meeting SBMWD’s various existing legal and environmental obligations.

*Financial Effect on SBMWD*

SBMWD owns the effluent it discharges to the Santa Ana River and relies on it to fulfill various legal obligations. To the extent the SNRC reduces the amount of water discharged from the WRP, the reduction could have an adverse financial impact on the WRP. Moreover, removal of the 6 mgd of flows from the effluent stream could affect the financial viability of the SBMWD’s proposed Clean Water Factory Project.

23

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
Re: Sterling Natural Resource Center Project: Draft Environmental Impact Report  
February 1, 2016  
Page 9

## VI. Conclusion

SBMWD appreciates the opportunity to engage in a dialogue with Valley District and EVWD to answer these questions about the Project and resolve its concerns. SBMWD looks forward to continuing to work cooperatively with Valley District and EVWD to advance the agencies' mutual goals in a cost-effective and environmentally sensitive manner.

Very truly yours,

A handwritten signature in black ink that reads "Kelley M. Taber". The signature is written in a cursive style with a horizontal line at the end.

Kelley M. Taber

KMT:mb



## Memo

To: John Claus, City of San Bernardino Municipal Water Department  
 From: Craig Wolf and Ashley Ficke  
 Lee Bergstedt, Reviewer  
 Date: January 20, 2016  
 Re: **Review of Sterling Natural Resource Center Environmental Impact Report**

---

GEI Consultants Inc. (GEI) was asked to review specific findings in the Sterling Natural Resource Center Draft Environmental Impact Report (EIR 2015a) to evaluate whether predicted impacts to the Santa Ana Sucker (*Catostomus santaanae*) habitat are consistent with GEI's previous conclusions regarding effects of reduced flow on habitat conditions in the Santa Ana River. In addition, we also reviewed proposed mitigation measures to minimize or otherwise reduce the significant impact to Santa Ana Sucker habitat. The specific environmental impact and mitigation measure in the EIR include the following:

### Environmental Impact

*The construction and operation of the project could have a substantial adverse effect, either directly or through habitat modifications on the Santa Ana Sucker. The impacts and modifications to the Santa Ana Sucker habitat would be significant and unavoidable.*

The EIR defines significant impacts as those adverse environmental impacts that meet or exceed the significance thresholds; while less-than-significant impacts would not exceed the thresholds. Mitigation measures are designed to avoid, minimize, or otherwise reduce significant impacts to a less-than-significant level.

### Mitigation Measure

*Valley District will increase habitat availability in Rialto Channel during the summer months by providing cool supplemental water from nearby groundwater source to lower the water temperature in this tributary. Supplemental water will be added to the Rialto Channel when water temperatures reach 85 degrees. Supplemental water could be pumped groundwater or other water source. The discharge into the Rialto Drain will require a discharge permit from the Regional Water Quality Control Board.*



**GEIs Opinion on the Environmental Impacts to the Santa Ana Sucker**

In the EIR, the conclusion that there would be significant impacts to the Santa Ana Sucker is solely based on the premise that any reduction in aquatic habitat metrics would result in a significant impact to the federally-listed sensitive species. However, in the reduced discharge study, ESA (2015b) concluded that depth and velocity modifications would not substantially reduce habitat extent or quality, even when placed in the context of Santa Ana Sucker habitat requirements (i.e., Primary Constituent Elements; PCE) identified by the USFWS and other studies (Sakai 2000). The reduced discharge study (ESA 2015b) predicted that a 6 MGD (9.3 cfs) reduction in discharge would decrease baseflows by 18-21%, decrease water depth up to 1.1 inches, decrease wetted area by 3% in the upper reach, decrease higher flow velocities while increasing mid-range flow velocities. Despite the general reduction in habitat metrics, ESA still concluded that flow velocities would continue to be sufficient to prevent silting of cobble substrates in areas that currently exhibit low sand and silt deposition and water depths would remain usable to all life-stages of the Santa Ana Sucker. Furthermore, based on our prior analyses, an increase in the mid-range flow velocities would create more suitable habitat conditions for the Santa Ana Sucker. The noted effects that led to the significant impact determination for the Santa Ana Sucker include:

- Decreased wetted habitat (acreage) available for each life stage;
- Decreased habitat suitability: shallower pools, warmer water, fewer high velocity areas leading to overall reduced long-term viability of population;
- Increased risk of predation;
- Decreased fecundity resulting from degraded conditions and/or increased competition for suitable habitat and resources;

yet none of these effects are quantified or compared to a threshold level to determine the significance of impacts.

The environmental impact findings in the EIR (ESA 2015a) are not consistent with the conclusions provided in the reduced discharge study (ESA 2015b) or other available studies (GEI 2014, WEI 2014, Jenkins and McGill 2015) and do not exceed the PCE thresholds identified by the USFWS, or other specific significance thresholds as required for a finding of a significant impact. Notably, the EIR review of the existing Santa Ana Sucker status and biology does reflect the most recent knowledge of the fish.

**OTHER CONCLUSIONS OF EIR**

There are other conclusions within the EIR that also contradict findings in other studies and were not fully vetted or supported in the discussion of environmental impacts section of the EIR.

The EIR states that Santa Ana Sucker has declined in the Santa Ana River (pg. 3.4-21) and the Draft Recovery Plan states that it continues to do so (USFWS 2014). However, a review

24

25

26

27

28



of this and more recent data in GEI's low flow study (2014) indicates that the population is in a state of fluctuation, as would be expected in a highly variable shallow alluvial system like the Santa Ana River. We recommend an evaluation of the Santa Ana Sucker population metrics to determine whether the postulated decline is truly occurring, or whether it is an artifact of a short sampling period and the difficulties associated with sampling a mobile population in a variable environment.

28

The EIR also states that habitat is currently limited for the Santa Ana Sucker in the study area (pg. 3.4-51), and that this species is already exposed to many environmental stressors. While GEI generally agrees with these statements, we do not believe the conclusion of unavoidable and adverse effects naturally follow from the data presented in the EIR. There was no quantitative estimate of habitat loss for the Santa Ana Sucker, and as noted in previous studies (GEI 2014, ESA 2015b), a reduction in flow velocity would likely increase usable habitat for the Santa Ana Sucker and substrate conditions should remain the same as existing conditions.

29

GEI's low-flow study (2014) linked proposed flow changes from construction of the Clean Water Factory with changes in suitable and preferred Santa Ana Sucker habitat and evaluated environmental impacts based on the exceedance of specified threshold levels (i.e., percent changes in useable fish habitat). The study included multiple Santa Ana Sucker life stages (e.g., juvenile and adult) habitat utilization relationships for depth, velocity, and substrate and ultimately relied on a depth only model and depth-substrate model to identify potential impacts. The velocity data could not be calibrated to observed velocities due to inadequate pairing of depth and velocity measurements and was unreliable for determining impacts to the Santa Ana Sucker. GEI concluded that deeper habitats in the upper reach (Reach 1) will be reduced with a 6 MGD reduction in flow; however, this habitat characteristic is offset by the substrate conditions in Reach 1 which is largely comprised of cobble and gravel. These size classes are the preferred substrate by Santa Ana Sucker. The availability of coarse substrates within the upper reach and upstream in the Rialto Channel would benefit the Santa Ana Sucker by providing a forage base and substrate for spawning; therefore a reduction in discharge of this magnitude would have no impact on available habitat in the upper reach of the Santa Ana River. Further downstream in Reach 2, while a 6 MGD reduction in flow would decrease the useable habitat for both juvenile and adult Santa Ana Sucker, although this reduction would be considered less than a significant impact to the population.

WEI's (2014) sediment transport study concluded that average velocity in all three reaches would still be above the 1.21 ft/s threshold that ESA contends would allow transport of coarse sand, even with reductions in RIX flow of 6 and 9 MGD (ESA 2015b). An additional study by Jenkins and McGill (2015) showed that a "sand blanket" resulting from post-flood deposition could be moved in less than one day by maximum RIX flows (64 MGD) and in just under six days by flows of 29 MGD, typical of what was observed in 2014. This study



also showed that “scour hot spots” would expose coarse substrate shortly after deposition, because transport throughout the reach is by no means uniform. Both of these studies indicate that there would be a mosaic of sediment transport and local storage at low flows, which is to be expected in this reach.

#### **REVIEW OF THE SUPPLEMENTAL WELL WATER AS A MITIGATION MEASURE**

GEI was asked to specifically address the following questions regarding the use of supplemental well water or other source water as a mitigation measure. The use of supplemental well water, to benefit environmental conditions, is proposed to be used under three scenarios; 1) supplemental water may be added to the Rialto Drain when water temperatures reach 85°F (29.4°C, pg. 2-6); 2) when supplemental flow is needed to maintain minimum flows established by the wildlife agencies (pg. 2-27); and 3) when temporary maintenance shut-down of the RIX facility periodically eliminates discharge for an hour or more (pg. 3.4-54).

#### Question

#### **Will the flow augmentation really have an effect on stream temperature?**

Under Scenario 1, Supplemental well water (or water from another source, pg. 3.4-53) could be provided from four nearby refurbished wells located within existing industrial facilities, which include a Union Pacific rail yard, the Veolia Water North America Sewage Treatment Plant, and the Agua Mansa Properties Landfill (pg. 3.4-3). It is proposed that well water will be conveyed from these locations and discharged into the Rialto Drain. The Rialto Drain is a concrete lined channel, exposed to direct sunlight that will temper any cooler water discharged to the Rialto Drain, especially during mid-summer when water temperature may exceed 85°F. The Rialto Channel is closer to the confluence with the Santa Ana River and is a cobble-gravel channel containing vegetation that provides shade cover and will help limit excessive water temperature.

The EIR is lacking any water quality or temperature data for these four wells, so it appears the assumption that supplemental well water will cool the surface waters is largely based on the premise that groundwater is cooler than surface water. In addition, there is no discussion of the physicochemical conditions of “other source waters” (pg. 3.4-53) that may be used instead of the refurbished wells. Furthermore, there is no information regarding the water discharge rate expected to be produced by the wells or other source waters which would provide insight into the cooling potential of the supplemental water to the Rialto Channel.

Given the lack of quantifiable information on the supplemental water conditions and expected discharge rates, plus considering the fact that the Rialto Drain is a concrete lined channel, the likelihood of the supplemental water having a cooling effect on the surface water temperatures in the Rialto Channel is very small. Furthermore, any cooling effect on the Santa Ana River water temperatures will likely be negligible given the channel

30



characteristics and conveyance. We recommend that additional water quality information and flow rates be identified to provide some context as to the cooling potential or the supplemental water inputs to the Rialto Drain.

↑ 30

#### Question

#### **What effect, if any, will the supplemental flow have on recruitment of Santa Ana Sucker given the Rialto Channel provides spawning and rearing habitat?**

In this context, recruitment in the Santa Ana Sucker fishery is defined as the survival of a fish from one life-stage to the next (i.e., egg to larval stage, larval to juvenile stage, or juvenile to adult stage).

Under Scenario 3, supplemental well water would benefit recruitment of certain life stages, particularly if the temporary shut-down of the facility occurred when sensitive life stages were present, such as the egg or larval stages. These life-stages are more sensitive to changes in their environment and eliminating surface water flow, even for a few hours, would greatly reduce the likelihood of recruitment for these sensitive life-stages. As for the juvenile life-stage, a temporary shut-down on the order of an hour or more would have negligible effects on the recruitment of juveniles to adult life-stage. Juveniles along with adults are less sensitive to short-term changes in surface flows (i.e., order of hours), because they have the ability to seek out residual pools during these types of flow interruptions. Therefore, the proposed addition of supplemental well water will have negligible effects on the recruitment of juveniles to the adult life-stage under Scenario 3.

↑ 31

Under Scenario 2, the term “minimum flow” should be clarified because this term can take on different meanings depending on narrative or numerical definitions. Minimum flow could simply mean maintaining a low flow condition in the channel such that aquatic habitat is maintained during brief periods (i.e., order of days), or it could signify achieving a numerical flow rate (i.e., cfs) or velocity (0.01 ft per second, per USFWS). While this Scenario essentially addresses Scenario 3 (short-term interruptions in flow), it is considered separate in this context because it is assumed that surface flow is present but does not meet the minimum flow threshold which could have greater implications from a water management standpoint than just recruitment. However, regardless of minimum flow is defined, the supplemental water would have a minor effect on the recruitment of any life-stage, because it is assumed that surface flow exists in the channel, just not a minimum threshold.

↑ 32

#### ***Literature Cited***

ESA. (2015a). Sterling Natural Resource Center draft environmental impact report. Prepared for San Bernardino Valley Municipal Water District.



- ESA (2015b) Technical memorandum modeling effects of a potential 6 MGD reduction in flow releases from the RIX facility on the Santa Ana River: velocity, depth and bed sedimentation. Report prepared for San Bernardino Valley Municipal Water District.
- GEI Consultants, Inc. (GEI) 2014. Evaluation of the phased RIX flow reduction plan on Santa Ana Suckers, based on predicted changes in physical habitat in the Santa Ana River from the Rialto Drain to the MWD Crossing. Report submitted to Somach Simmons and Dunn.
- Jenkins, S., and T. McGill. 2015. Clean water factory rapid infiltration/extraction (RIX) low-flow sediment scour and transport modeling in the Santa Ana River. Prepared for the City of San Bernardino Municipal Water Department.
- Sakai, M.,K. 2000. Water quality and other environmental variables associated with variation in population densities of the Santa Ana sucker. Unpublished report prepared for the National Fish and Wildlife Foundation, San Francisco, CA.
- U.S. Fish and Wildlife Service (USFWS). 2014. Draft Recovery Plan for the Santa Ana Sucker (*Catostomus santaanae*). Region 8 U.S. Fish and Wildlife Service, Sacramento, CA.
- Wildermuth Environmental, Inc. (WEI) 2014. Draft in-depth analysis of the Santa Ana River HEC-RAS hydraulic modeling results from the river reach between RIX and the MWD Crossing.



## San Bernardino International Airport

---

January 29, 2016

San Bernardino Valley Municipal Water District  
C/O Tom Barnes, Environmental Science Associated  
626 Wilshire Boulevard, Suite 1100  
Los Angeles, CA 90017

**RE: Sterling Natural Resource Center DEIR**

Dear Mr. Barnes:

This letter is in response the Draft Environmental Impact Report (DEIR) on the proposed Sterling Natural Resource Center (SNRC) located at North Del Rosa Drive between 5<sup>th</sup> Street and East 6<sup>th</sup> Street in the City of Highland and the associated effluent conveyances and discharge locations. We understand that the San Bernardino Valley Municipal Water District (SBVMWD) is serving as lead agency for compliance with the California Environmental Quality Act (CEQA).

The San Bernardino International Airport Authority (SBIAA) operates the San Bernardino International Airport, a commercial airport certificated by the Federal Aviation Administration (FAA). The Airport is a 24-hour operation serving various types of aeronautical activities including air cargo, law enforcement air support, and essential US Forest Service aerial fire response.

As a commercial airport, there are specific requirements set forth through the FAA, Public Law, and State of California guidelines that SBIAA maintains compliance with in order to ensure the safety of aircraft operations on and around the Airport. The proposed SNRC is located approximately 1.4 miles north of the Airport and within the Airport Influence Area where low-flying aircraft routinely operate. The SBIAA requests that the Valley District carefully consider the potential impacts of the proposed SNRC development and specifically address the concerns set forth in FAA Advisory Circulars 150/5200-33B, 150/5200-34, as well as Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21<sup>st</sup> Century (Public Law 106-181), and State guidelines including the provisions set forth in the California Airport Land Use Planning Handbook.

1

The FAA requires SBIAA, under its Commercial Operating Certificate, to ensure lighting does not negatively affect the operation of aircraft. Specific positioning or shielding of exterior lighting is required in order to prevent negatively impacting the night vision of pilots. In the DEIR, under Impact 3.8-4, the exterior building lighting is identified as having no impact to the Airport. SBIAA requests that SBVMWD provide clarification on the guidelines that will be followed for the design of exterior lighting, and provide SBIAA an opportunity to review and approve lighting components involving height, position, type, direction of aim, and light intensity.

2

Impact 3.11-5 states that the proposed SNRC will be minimally impacted by noise generated from low flying aircraft as the site would not be located near either end of the Runway. Because the SNRC is proposed to be located within the Airport Influence Area, low-flying aircraft, including helicopters, law enforcement, and fire response aircraft currently operate at or above 500 feet in the surrounding areas of the Airport and within the vicinity of the SNRC. As background noise readings were not provided in the DEIR for the project, we request that the DEIR acknowledge such over flights (including single event noise spikes) in the background noise condition of the site.

3

The SNRC treatment plant and associated water features can provide wildlife with ideal locations for feeding, loafing, reproduction, and escape that can produce substantial attractions for various wildlife species with the potential to pose hazards to aircraft operations. The SBIAA requests information on how SBVMWD plans to mitigate wildlife attractants and standing water conditions at the proposed SNRC in conformance with the requirements set forth in FAA Advisory Circulars 150/5200-33B, 150/5200-34, and Public Law 106-81.

4

The DEIR identifies construction of the SNRC site as having no impact to the San Bernardino Kangaroo Rat. However, special attention to ensure protection of this species and the Santa Ana Woolly Star during the construction/upgrades of the Santa Ana River Pipeline conveyance is required. Further information on proposed pipelines residing on or adjacent to SBIAA owned property is required, as access to the buried pipelines has been identified to take place in close proximity to Kangaroo Rat and Santa Ana River Woolly Star habitats within an established Conservation Management Area and would necessitate coordination with the U.S. Fish and Wildlife Service.

5

SBVMWD should ensure that both construction activities and the SNRC facility operation adhere to requirements set forth by the FAA, Public Law, and the State of California for the continued safety of pilots operating in the vicinity of the San Bernardino International Airport. For more information on these requirements, please reference the following: FAA Advisory Circular 150/5200-33B; FAA Advisory Circular 150/5200-34; Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21<sup>st</sup> Century (Public Law 106-181); and the California Land Use Planning Handbook. SBIAA requests that SBVMWD take into consideration and address the aforementioned concerns as they relate to the proposed design and construction of the SNRC.

Sincerely,



Mark Gibbs  
Director of Aviation  
San Bernardino International Airport Authority

# ENDANGERED HABITATS LEAGUE

DEDICATED TO ECOSYSTEM PROTECTION AND SUSTAINABLE LAND USE



January 28, 2016

VIA ELECTRONIC MAIL

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
626 Wilshire Boulevard, Suite 1100  
Los Angeles, CA 90017  
[tbarnes@esassoc.com](mailto:tbarnes@esassoc.com)

**RE: Draft Environmental Impact Report for Sterling Natural Resource Center**

Dear Mr. Barnes:

Endangered Habitats League (EHL) appreciates the opportunity to comment on this project. For your reference, EHL is Southern California’s only regional conservation group, with a focus on the upper Santa Ana River and its tributaries.

This project proposes to remove water now discharged into the Santa Ana River system from the RIX facility and to use it for groundwater recharge at one of several possible locations. It would remove about 20% of the in-stream flows now being discharged from RIX and which currently support the endangered Santa Ana sucker (Sucker). A number of compensatory mitigation measures are proposed to enhance or create habitat for the Sucker.

While the project’s impacts and mitigations are supposed to fit into the larger Upper Santa Ana River Habitat Conservation Plan (HCP), the project could also move forward *absent* the HCP. As a supporter of the HCP process, EHL is very concerned about piecemeal projects that may undermine or even preclude HCP success. For this reason, it is vital that the EIR for the Sterling facility properly assess the individual and cumulative impacts of the project.

Endangered Habitat League has the following concerns over the adequacy of the DEIR:

1. The water needed for Sucker survival and recovery within the Santa Ana River has not been defined in terms of quantity, quality, and flow regime. Absent this essential information, the impacts of loss of water from the Sterling project – as well as the cumulative impacts of other foreseeable diversions – cannot be adequately assessed. Without knowing how much in-stream water the Sucker needs, there is no way to know if an impact is significant or can be mitigated.





The EIR must identify and disclose the water that should to remain in-stream for the Sucker and compare those parameters (quantity, quality, and timing of flows) to the effects of Sterling and other cumulative diversions. Special consideration should be given to flows required to flush accumulated fine sediments, which are detrimental to the Sucker. On the basis of this analysis, the project should retain ample flows in the system, and fully mitigate the impacts of diversion.

↑  
2

2. The suite of recharge sites should be analyzed and compared not only with reduction of impacts in mind but also with an eye to enhancement and restoration opportunities. The ultimate choice should reflect this complete analysis.

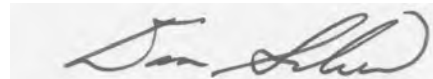
3

Also, while the proposed mitigation measures could indeed benefit the Sucker, ultimate success for the Sucker and other species depends upon a cooperative, regional approach among public agencies. Specifically, lands needed for enhancement and restoration should be made available for these purposes *even if the mitigating agency is not the landowning agency*. Thus, public agencies should make their lands available – with appropriate monetary compensation, of course – as mitigation for the Sterling project and other components of the Upper Santa Ana River HCP.

4

Thank you for considering our views. Please retain EHL on all mailing and distribution lists for this project.

Yours truly,



Dan Silver  
Executive Director

- cc: U.S. Fish and Wildlife Service  
Calif. Dept. of Fish and Wildlife  
U.S. Environmental Protection Agency  
Regional Water Quality Control Board  
Interested parties



San Bernardino Valley  
Audubon Society



---

*via electronic mail and USPS*

February 1, 2016

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
626 Wilshire Boulevard, Suite 1100  
Los Angeles, CA 90017  
[tbarnes@esassoc.com](mailto:tbarnes@esassoc.com)

**Re: Comment on Draft Environmental Impact Report for Sterling Natural Resource Center**

Dear Mr Barnes:

These comments are submitted to the San Bernardino Valley Municipal Water District (the “District”) on behalf of the Center for Biological Diversity (the “Center”), San Bernardino Valley Audubon Society and the San Gorgonio Chapter of the Sierra Club regarding the Draft Environmental Impact Report (“DEIR”) for the Sterling Natural Resource Center (“SNRC”). The project is anticipated to result in unmitigable significant impacts to the federally threatened Santa Ana sucker and will ultimately decrease the water flow of the Santa Ana River by six (6) million gallons per day (“MGD”). This flow is critical to sustaining the current population of the Santa Ana sucker in its namesake river. Our groups support sustainable management of local water resources that includes the preservation of native flora and fauna and their habitats. For the reasons detailed below, we urge substantial revisions to the DEIR to better analyze, mitigate or avoid the Project’s significant environmental impacts.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has 50,186 members and over 900,000 online activists, including 31,862 members and 111,877 online activists in California. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people and wildlife in San Bernardino County.

The San Bernardino Valley Audubon Society (“SBVAS”) is a local chapter of the National Audubon Society, a 501(c) 3 corporation. The SBVAS chapter area covers almost all of

Riverside and San Bernardino Counties and includes the project area. SBVAS has about 2,000 members. Part of the chapter’s mission is to preserve habitat in the area, not just for birds, but for other wildlife, and to maintain the quality of life in and around San Bernardino County.

The Sierra Club is a national nonprofit organization of over 732,000 members dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth’s ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. Over 193,500 Sierra Club members reside in California. The San Gorgonio Chapter of the Sierra Club focuses on issues within the inland empire, including San Bernardino County.

While the diversion of wastewater from release into the Santa Ana River to the proposed SNRC tertiary water treatment plant may provide a benefit to biological resources by ultimately assuring continuous flows to the occupied habitat of the federally threatened Santa Ana sucker fish, the California Environmental Quality Act (“CEQA”) analysis of the project is inadequate. We are not therefore, able to determine if this release will be helpful or harmful and the District cannot move forward in approving this project based upon this inadequate and incomplete DEIR.

1

In addition to the direct impacts that the diversion will cause, we are also concerned about the impacts on biological resources of installing new pipes and outlet structures to existing infiltration basins (Twin Creeks and Redlands) and to a new location in City Creek; the activation of wells to provide water into the Rialto Ditch to when the outflow in that ditch is too warm to sustain Santa Ana sucker fish; and re-purposing an existing pipe to bring reclaimed water to the Rialto Ditch.

2

**A. Inadequate and Deferred Surveys**

Analysis of biological resources has been impermissibly deferred and the one “survey” that was conducted is wholly inadequate. Even though there is an area of high biodiversity with an exceptional number of protected species - 27 special-status plant species and 44 special-status wildlife species acknowledged in the DEIR - there has not been a sufficient biological surveys completed and only one questionable focused study for a protected species.

3

The only on-the-ground effort to analyze biological resources was a “reconnaissance-level survey” that did not include any data for 9 months of the year and did not even cover the entire project area: “in areas that were not accessible at the time of the survey, visual observations were made from the nearest accessible locations.” (DEIR at p. 3.4-1.) The only discussion of the highly imperiled San Bernardino Merriam’s kangaroo rat, known to be present in the area and protected as an endangered species across its entire range is as follows: “Surveys for San Bernardino [Merriam’s] kangaroo rat were conducted by a permitted biologist on the SNRC site and resulted in negative findings of the species due to the lack of suitable habitat” (DEIR at 3.4-21). There is no further information provided on this survey, the surveyor’s report is not attached to or cited in the DEIR, and there is no indication of whether the survey was conducted in accordance with USFWS survey protocol for this species. The survey protocol for the San

4

5

Bernardino Merriam’s kangaroo rat requires an intensive five consecutive nights of trapping, conducted when the animal is active aboveground at night, and preferably during a new moon phase. Without any information as to the survey we cannot determine if the District’s efforts were in compliance with the protocol, but given the acknowledged, extremely-close proximity of known populations, it appears highly likely that the methodology employed is not acceptable.

↑  
5

The District did not conduct any focused studies for burrowing owls, for the remaining sixteen rare plants that have medium to high potential to occur on the project site (at pg. 3.4-12), or the thirty-five rare animals that the DEIR lists as having medium to high potential to occur on the project site (at pg. 3.4-20). All such surveys are to be deferred to prior to construction even though the project impacts federally designated critical habitat for the endangered San Bernardino Merriam’s kangaroo rat in City Creek and possibly along the mainstem of the Santa Ana River. Lacking the basic facts on the existing resources, an adequate CEQA evaluation of impacts is impossible and the District cannot demonstrate, as required by CEQA, that its conclusions are supported by substantial fact.

6

**B. Rare Animals**

**i. Southwestern Willow Flycatcher**

7

The DEIR fails to mention southwestern willow flycatcher federally designated critical habitat which occurs in the proposed project area at the proposed SBWRP bypass area. This oversight in of itself makes for a legally insufficient DEIR.

The DEIR fails to quantitatively estimate the decrease in southwestern willow flycatcher habitat due to the decrease of 6MGD into the Santa Ana River. While we believe the impact from the decrease could be offset by some of the proposed mitigation measures, without a quantitative estimate of impact, clear goals for mitigation cannot be developed or implemented to truly offset the impact.

8

**ii. San Bernardino Merriam’s Kangaroo Rat**

The proposed project will impact San Bernardino Merriam’s kangaroo rat habitat in numerous places, yet the identification of the impact remains vague or unidentified. For example, all of the City Creek outlet structure alternative locations are within federally designated critical habitat. The permanent impact of the structure themselves are proposed to be 900 square feet (at 2-15), yet there is no estimate of temporary impacts. Although temporary, these impacts may be extensive and profound.

9

While the DEIR recognizes that “Construction of discharge facilities within City Creek and the introduction of perennial flow would result in a shift from RAFSS [Riversidean Alluvial Fan Sage Scrub] to Southern Cottonwood-Willow Riparian Forest, displacing sensitive wildlife,” mitigation measure Bio-2 relies on surveys for the kangaroo rat that will be performed in the future, prior to construction, so it is unclear how many animals would be impacted and the amount of critical habitat impacted. Bio-2 also proposes mitigating impacts through

10  
↓

conservation measures and compensation requirements that remain unidentified, and rely totally on the Biological Assessments submitted to the wildlife agencies through Section 7 and 2081 consultations. Unfortunately that approach fails to provide the public and decision makers with adequate data and analysis of impacts and it also removes the opportunity for interested public to comment on the proposed conservation measures and compensation that the agencies require.

10

If perennial flows in City Creek are established as part of the project, we agree that the cover of RAFSS would decrease while some type of riparian forest could develop depending on the amount of water released and the infiltration rate. The DEIR does not attempt to quantify this change of decreasing RAFSS and increasing riparian habitat or the impacts and benefits to rare and endangered species. The San Bernardino Merriam’s kangaroo rat relies extensively on the RAFSS community, especially early and mid-successional stages. The conversion of existing RAFSS to riparian will decrease the amount of available habitat (including critical habitat) for the San Bernardino Merriam’s kangaroo rat. We recognize that the creation of riparian habitat would benefit other species including riparian obligate sensitive avian species. However the DEIR fails to estimate the decrease in RAFSS and the increase in riparian that would result from the implementation of the project. It is likely that a decrease in RAFSS would require mitigation, but in the absence of an analysis in the DEIR, it remains unclear. The DEIR needs to fully address the anticipated decrease in RAFSS and the increase in riparian habitat in City Creek and if mitigation will need to be implemented to offset impacts, particularly to the decrease in RAFSS.

11

At pg. 2-24, the DEIR discusses that some segments of the 36-inch Santa Ana River Pipeline that extends from Alabama Street to the SBWRP may have been removed and would need to be replaced (in addition to lining the existing segments of the pipeline for the purposes of the proposed project. While not discussed in the impact sections, any segments that needed to be replaced likely lie within federally designated critical habitat for the San Bernardino kangaroo rat. Again, the DEIR falls short of identifying and quantifying potential impacts to critical habitat and ways to avoid, minimize or mitigate the impacts.

12

**iii. Santa Ana Sucker Fish**

We agree with the determination in the DEIR that the project will result in significant and unmitigable impacts to Santa Ana sucker due ultimately to the removal of 6MGD of water from the Santa Ana River, which is 18-21 percent of the 28.5 MGD currently discharged into the Santa Ana River at the Rapid Infiltration and Extraction facility (RIX) (at pg. 3.4-48).

13

To determine if this impact can be mitigated, there needs to be much more clarity on the operation of the wells – when they would be activated, how much water etc. To partially mitigate the Santa Ana sucker impacts, the DEIR proposes to refurbish existing wells close to the Rialto Channel, pump groundwater and release it into the Rialto Channel. As the DEIR states “The wells will enable groundwater to be used as supplemental water, to mitigate the potential direct and indirect effects of reduced Santa Ana River flow. The groundwater would be conveyed into the Santa Ana River as needed to maintain minimum flows established by the wildlife agencies.

The wells would be operated by Valley District” (at pg.2-27). It is unclear what the minimum flows going into the Santa Ana River would be.

13

iv. **Gambel’s watercress**

The DEIR fails to examine the opportunity for re-introduction of Gambel’s watercress back into the Santa Ana River watershed from which it has been extirpated. Based on the extreme rarity of Gambel’s watercress (at pg. 3.4-17), this species would greatly benefit from having more than a single location on the planet. Because so much of the aquatic habitat would be highly managed, re-introduction and management to prevent hybridization would be a great benefit. We strongly suggest that re-introduction be part of the strategy for recovering this very rare species.

14

v. **Arroyo Chub**

Table 3.4-4 identify the arroyo chub as having only medium potential for impact on the project site, but that seems wrong since the arroyo chub is sympatric with the Santa Ana sucker in the Santa Ana River. Please clarify.

15

**C. Habitat Mitigation and Monitoring Plan (HMMP) Mitigations Vague**

While a HMMP is not actually provided, measures are provided that could be incorporated into the HMMP. The generalized language of the measures however is inadequate to assure effective mitigation. Some of the proposed measures that need clarity include:

SAS-1 – Microhabitat Enhancements are proposed that entail using placement of large boulders or woody debris to increase scour and pool formation. While we support increasing scour and pool formation in the Santa Ana sucker habitat, previous efforts at using gabions did not result in the desired scour and pool formation – the gabions sunk into the sand. This measure may be more effective if the boulders/woody debris is placed at appropriate places in the river, but absent a fully developed HMMP or more clarity in the measure, the DEIR leaves great room for implementation of ineffective mitigation by putting the boulders/woody debris in ineffective locations. In addition, it is unclear that Flood Control Districts would even allow the installation of boulders/woody debris, due to the boulders/woody debris’ potential to back up water, cause flooding or cause downstream damage to existing infrastructure. These issues must be clarified and addressed in the EIR.

16

SAS-2 – We support aquatic non-native predator control for all the benefits reduced predation provides the Santa Ana sucker and other native aquatic fauna. However it is unclear why the control is limited to “the upstream reach of the affected river segment” (at pg. 3.4-52). What defines the “upstream reach” and “affected river segment”. While we recognize that species do move downstream, so there is value in treating the upstream reach, predators also move upstream. A comprehensive measure would include treatments both upstream and downstream.

17

SAS-3 - We support management for exotic weeds for all the benefits reduced exotic vegetation provides the habitat for both native plants and animals. However, weed abatement must be systematically implemented from the top of the watershed to the bottom; otherwise exotic plants will continually re-infest downstream reaches resulting in an ongoing weed problem and an unending source of temporary, but illusory, mitigation credits for permanent development impacts. The measure needs to identify a goal for exotic reduction and triggers for action if exotics reappear.

18

SAS-5 – We support keeping the water cool enough in the Rialto Channel so that Santa Ana sucker and other aquatic fauna can use it as habitat. However, water temperature and quantity should both be triggers for augmentation in Rialto Channel. Revegetation of the channel above Agua Mansa to provide shade in the channel (and remove the hardened surface) would not only provide additional habitat but also reduce heating of the pumped groundwater.

19

SAS-6 – For well over a decade, we have supported establishing additional populations of Santa Ana sucker in the Santa Ana River, due to the limited habitat available to the existing population and its vulnerability to catastrophic events. This measure needs to clarify the goals and success criteria of the translocation plan. The translocated fish should not be considered an experimental population under the ESA.

20

**D. Biological Assessment Missing**

Bio-1 commits to seeking state and federal Endangered Species Act permits from the wildlife agencies. A Biological Assessment will be prepared as part of that process (at ES-9). In our experience, Biological Assessments are typically provided, often as an appendix as part of the DEIR. In this case a Biological Assessment would provide more specific data on the existing resources with potential for impact and clear avoidance, minimization and, if necessary mitigation measures to reduce or eliminate the impact.

21

**E. Unclear Project Description**

The text of the DEIR describes different alignments of Treated Water Conveyance System pipelines to City Creek and Figure 2-5 includes a proposed pipeline that traverses City Creek at 5<sup>th</sup>/Greenspot road and continues east to some undisclosed terminus. We could not locate a description of this pipeline or an impact evaluation of it.

22

**F. Cumulative Impacts**

The results of the cumulative impacts analysis indicates a catastrophic decline in water for the Santa Ana sucker, other aquatic organisms and the riparian corridor along the Santa Ana river downstream of RIX. In coordination with the Cities of San Bernardino for their Clean Water

23

Factory Project proposal<sup>1</sup>, for the City of Rialto, the District needs to carefully consider the need to divert water from the Rialto channel through the three separate projects. The channel supplies most of the surface flow upon which the Santa Ana sucker relies and the cumulative impacts of these projects could be catastrophic. We agree with the conclusion the District reaches in the DEIR that, if all of the three projects move forward, the Santa Ana sucker faces extirpation from its namesake river. We urge the San Bernardino Valley Municipal Water District and the Cities to safeguard against this extirpation, and the state and federal wildlife agencies to prevent this extirpation as they implement protections for the Santa Ana sucker.

Thank you for the opportunity to submit comments on this proposed Project. We look forward to working to assure that the Project and environmental review conforms to the requirements of state law and to assure that all significant impacts to the environment are fully analyzed, mitigated or avoided. In light of the significant, unavoidable environmental impacts to the Santa Ana sucker fish, the incomplete biological surveys of the project area that are a prerequisite to adequate impact analysis, we strongly urge the DEIR be vastly improved and recirculated. Please do not hesitate to contact the Center with any questions at the number listed below. Please keep us on the “interested public” list with regards to any notifications about this project.

Sincerely,



April Rose Sommer  
Staff Attorney  
Center for Biological Diversity



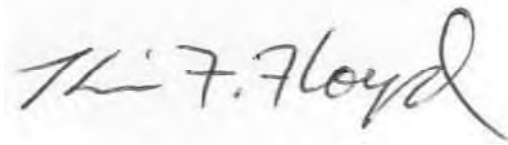
Ilene Anderson  
Senior Scientist  
Center for Biological Diversity  
8033 Sunset Blvd., #447  
Los Angeles, CA 90046  
323-654-5943  
[ianderson@biologicaldiversity.org](mailto:ianderson@biologicaldiversity.org)



Drew Feldman  
Conservation Chair  
San Bernardino Valley Audubon Society

<sup>1</sup> <http://www.usbr.gov/lc/socal/envdocs/2014/SBMWD%20Clean%20Water%20Factory%20NOP.pdf>



A handwritten signature in black ink that reads "Kim F. Floyd". The signature is written in a cursive style with a large, looping 'F' and 'D'.

Kim Floyd  
Conservation Chair  
San Geronio Chapter  
Sierra Club

cc (via email):

Heather Dyer, SBVMWD, [heatherd@sbvmwd.com](mailto:heatherd@sbvmwd.com)

Karin Cleary-Rose, USFWS [karin\\_cleary-rose@fws.gov](mailto:karin_cleary-rose@fws.gov)

Kai Palenscar, USFWS [kai\\_palenscar@fws.gov](mailto:kai_palenscar@fws.gov)

Rosemary Burk, USFWS [rosemary\\_burk@fws.gov](mailto:rosemary_burk@fws.gov)

Jeff Brandt, CDFW [jeff.Brandt@wildlife.ca.gov](mailto:jeff.Brandt@wildlife.ca.gov)



**LAFCO**

**Local Agency  
Formation Commission**  
*for San Bernardino County*

215 North "D" Street, Suite 204  
San Bernardino, CA 92415-0490  
909.388.0480 | Fax 909.885.8170  
E-mail: [lafco@lafco.sbcounty.gov](mailto:lafco@lafco.sbcounty.gov)  
[www.sbclafco.org](http://www.sbclafco.org)

Established by the State of California  
to serve the Citizens, Cities, Special Districts  
and the County of San Bernardino

**COMMISSIONERS**

- JIM BAGLEY  
Public Member
- KIMBERLY COX, Vice Chair  
Special District
- JAMES V. CURATALO, Chair  
Special District
- ROBERT A. LOVINGOOD  
Board of Supervisors
- LARRY McCALLON  
City Member
- JAMES RAMOS  
Board of Supervisors
- DIANE WILLIAMS  
City Member

**ALTERNATES**

- STEVEN FARRELL  
Special District
- JANICE RUTHERFORD  
Board of Supervisors
- SUNIL SETHI  
Public Member
- ACQUANETTA WARREN  
City Member

**STAFF**

- KATHLEEN ROLLINGS-McDONALD  
Executive Officer
- SAMUEL MARTINEZ  
Assistant Executive Officer
- MICHAEL TUERPE  
Project Manager
- REBECCA LOWERY  
Clerk to the Commission

**LEGAL COUNSEL**

CLARK H. ALSOP

Sent via mail and email at [tbarnes@esassoc.com](mailto:tbarnes@esassoc.com)

February 1, 2016

San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
626 Wilshire Boulevard, Suite 1100  
Los Angeles, CA 90017

RE: Sterling Natural Resource Center Draft Environmental  
Impact Report

Dear Mr. Barnes:

LAFCO received a copy of the Sterling Natural Resource Center (SNRC) Draft Environmental Impact Report (EIR). We have provided this document to our environmental consultant, Tom Dodson and Associates, who has formulated a response. Based upon that analysis, LAFCO has the following comments and/or concerns:

Executive Summary

There is no information provided that addresses the greater control over costs. Nothing in this document demonstrates that this objective can be met by the proposed project. Therefore, even the proposed project cannot meet all of its objectives and may not be approved.

1. Introduction

- Page 1-2 (San Bernardino Valley Municipal Water District). The reference to East Highland and Highland, in this instance, should be one and the same, which is (City of) Highland.
- Page 1-2 (East Valley Water District). The description of the District's service area should clearly identify that it primarily serves the City of Highland.
- Page 1-4 (Overall Introduction). One issue not addressed is the location of the East Valley Water District (EVWD) wells relative to the recharge sites. In essence, how much benefit will EVWD receive - after evapotranspiration components are calculated, after the recycled water connects to the groundwater, and what percentage of water will the wells capture?

1  
2  
3  
4

- Figure 1-2 (Page 1-5) does not provide a legend for the lines on the map. 5
2. Project Description
- Figure 2-1 (Page 2-2): The location of Rialto well pumps are not shown. 6
  - Page 2-13 (Stormwater Management) The capacity of the retention system is for a two-year 24 hour storm. What happens when a larger storm occurs; where does the excess flow drain to? 7
  - Page 2-27 (Groundwater Wells) Who owns the four existing groundwater wells near the Rialto Channel? Do they have current outlets to the Santa Ana River (SAR)? What groundwater basin will they draw from and what is the current status of that basin? 8
  - Page 2-32. (SAR Pipeline) No information is provided related to the length of new 24" SAR pipeline to the existing Rapid Infiltration Extraction (RIX) discharge pipeline. In addition, there are no operational scenarios for SAR deliveries to RIX or pumping and delivering of groundwater to SAR for mitigation. Please provide estimates of these future mitigation scenarios for impact evaluation. 9
3. Environmental Setting, Impacts and Mitigation Measures
- Page 3.3-13. Please remove "San" from text "City of **San** Highland." This error is also displayed in other parts of the Draft EIR. 10
  - Page 3.3-14 (City of Redlands General Plan). Please replace "City of San Highland" text to "City of Redlands" 11
  - Section 3.8 Hazards. Is the installation of this facility that is directly adjacent to a school and residential uses suitable given the potential modes for failure of this facility? 12
  - Page 3.8-14 & 8-15 (Impact 3.8-2); No analysis of release of any of the chemicals is provided - what type and level of hazards would such accidental releases cause to adjacent land uses? 13
  - Page 3.10-10 (SNRC). The statement "generally consistent" to Business Park has no evaluation of what consistency is, only a conclusion. A treatment plant is—most likely—incompatible due to presence of large quantities of chemicals, human waste processing, noise, totally different daily activity pattern than the adjacent uses. 14
- Also, this facility is primarily a wastewater treatment facility, not a water infrastructure; therefore, this statement is flawed. 15

- Page 3.12-11 (Impact 3.12-4). The environmental justice discussion is flawed. The SBVMWD was requested to provide an evaluation of future operational costs to the minority and low income residents of the city of San Bernardino. This issue is not addressed.

16

A detailed discussion of the effects on costs to residents of EVWD's service area needs to be provided to determine whether they will incur significant rises in water fees as a result of this project.

17

- Page 3.13-4 (County of San Bernardino). Again, the reference to East Highland and Highland, in this instance, should be one and the same, which is (City of) Highland.
- Page 3.13-5 (City of Redlands). Please correct the text "Local **Area** Formation Commission..." to "Local **Agency** Formation Commission."
- Page 3.13-12 & 13-13 (Impact 3.13-1). The text identifies wastewater treatment as a "critical public demand." This is not accurate as the public already receives adequate treatment at the SBWRP. The need is for additional water.
- Page 3.13-13&13-14 (Impact 3.13-3). Because this wastewater treatment project will result in significant impacts, the impact under this CEQA issue must also be found to be an unavoidable significant adverse impact. Please make appropriate modifications.

18

19

20

21

#### 4. Cumulative Impacts

- Page 4-13 (Biological Resources). The analysis of cumulative hydrology impacts needs to include an evaluation of all upstream agency plans for reductions in flows into the Prado Basin. We believe that it is critical to survey all of the water/wastewater management agencies located upstream of Prado Dam to evaluate the cumulative impact of potential water withdrawals from the Santa Ana River.
- Page 4-16 (Hydrology and Water Quality). Please provide substantiation for the conclusion that the Redlands Basins have sufficient capacity to accommodate both discharges. There is no data in the EIR to substantiate this finding.

22

23

#### 6. Alternatives

- Page 6-4 (Alternatives Not Evaluated). Several of the alternatives that were rejected were due to proximity to residential development. If this consideration applies to the rejected alternatives, it should also apply to the project site.

24

Thus, several of the rejected alternatives should have been considered based on the test of compatibility used for the proposed project.

↑  
24

Thank you for allowing us to provide comments on the Draft EIR. If you have any questions concerning the information outlined above, please do not hesitate to contact Samuel Martinez, Assistant Executive Officer, at (909) 388-0480 or Tom Dodson, Environmental Consultant to LAFCO. Please maintain LAFCO on your distribution list to receive further information related to this process.

Sincerely,



KATHLEEN ROLLINGS-McDONALD  
Executive Officer

cc: Tom Dodson, LAFCO Environmental Consultant  
Doug Headrick, General Manager & Chief Engineer, San Bernardino Valley  
Municipal Water District  
John Mura, General Manger/CEO, East Valley Water District



**STEPHEN W. ROGERS, P.E. CONSULTING**  
820 CHURCH ST. REDLANDS, CA 92374  
PHONE: 909.556.1988 (CELL) EMAIL: STEVE\_ROGERS@VERIZON.NET

February 1, 2016

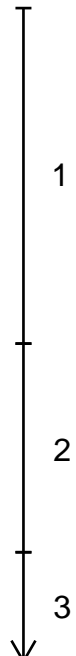
San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
626 Wilshire Boulevard, Suite 1100  
Los Angeles, CA 90017  
(sent by email only to: [tbarnes@esassoc.com](mailto:tbarnes@esassoc.com) )

SUBJECT: STERLING NATURAL RESOURCE CENTER ENVIRONMENTAL  
IMPACT REPORT

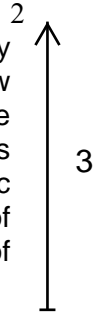
Dear Mr. Barnes:

The following comments are being submitted on behalf of the Mentone Area Community Association (MACA) pertaining to the subject wastewater treatment plant facility proposed to be constructed in the City of Highland, and which is anticipated to provide sewerage system capacity to areas within the East Valley Water District (EVWD) and other areas covered by the San Bernardino Valley Municipal Water District (SBVMWD) service area.

1. It has been suggested by the City of Highland, EVWD as well as the developer for the proposed Harmony Specific Plan project, that sewer service will be made available to the Harmony project in conjunction with the development and construction of the subject Sterling Natural Resource Center wastewater treatment plant project. However, there is no mention of the proposed SBVMWD wastewater treatment plant project in the Harmony Specific Plan Environmental Impact Report (EIR) document which is in it's final review stages. Therefore a lack of consistency exists between the two documents which needs to be corrected in advance of the distribution of the Final EIR documents for both projects.
2. Additionally, and although the City of Highland indicates there has been significant discussion with EVWD and the Harmony project developer over at least the last years time, the outfall sewer which will be necessary to connect the proposed Harmony Specific Plan project to the proposed Sterling Natural Resources Center wastewater treatment plant has not been identified in either project's Environmental Impact Report (EIR).
3. Much of the unincorporated area of Mentone, which is located within the Sphere of Influence for the City of Redlands and within the SBVMWD service area, is without sewerage service availability and instead is utilizing individual



septic systems for wastewater disposal. The Mentone Area Community Association (MACA) is interested in having an appropriate service review conducted and having sewer service made available in conjunction with the proposed Sterling Natural Resources Center project and the outfall facilities that would need to be constructed to provide service to the Harmony Specific Plan area. The Harmony project was previously also located in the City of Redlands Sphere of Influence before the area was annexed into the City of Highland through the Local Agency Formation Commission (LAFCo) in 2000.



Thank you for this opportunity to comment on the Sterling Natural Resources Center project. If there are any questions concerning this correspondence, please call me at (cell:909-556-1988) or email to [steve\\_rogers@verizon.net](mailto:steve_rogers@verizon.net).

**BLUM | COLLINS** LLP

Aon Center  
707 Wilshire Boulevard  
Suite 4880  
Los Angeles, California  
90017

213.572.0400 phone  
213.572.0401 fax

February 1, 2016

Valley District  
c/o Tom Barnes  
Environmental Science Associates  
626 Wilshire Blvd., Suite 1100  
Los Angeles, CA 90017  
[Tbarnes@esassoc.com](mailto:Tbarnes@esassoc.com)

*Via Email & U.S. Mail*

Re: *Comments on Sterling Natural Resource Center EIR*

Dear Mr. Barnes and Valley District:

This letter is to serve you with comments on behalf of the SoCal Environmental Justice Alliance (“SEJA”) regarding the planned Sterling Natural Resource Center (“SNRC”) and its Environmental Impact Report (“the EIR” or “the DEIR”). SEJA believes the document is deeply flawed with regard to its project description, analysis of impacts, analysis of alternatives, and analysis of cumulative impacts. We believe you should redraft and recirculate the document after these flaws have been remedied. Thank you for this opportunity to comment. We provide our comments in the order they come up relative to the document.

1

**Project Description Discussion**

The Project Description (at 2-5 to 2-6) leaves much to be desired. First of all, it does not describe how much if any water will be going to City Creek, the East Twin Creek Spreading Grounds, or the Redlands Basin. It appears from your map (at Figure 2-7f) that all three will be used, as you have depicted facilities going to each, as well as to the Santa Ana River (“SAR”) Pipeline. It is impossible to tell how much water you intend to divert to each location and thus to determine what the impacts will be. This leaves the public, as well as your agency, as well as other responsible agencies, in the dark. It also is impossible to tell why you have designated SBVMWD (“Valley District”) as lead agency when the project will serve East Valley Water District (“EVWD”) customers and will be built on EVWD land.

2

3

At 2-24 you indicate (we think for the first time) that some (although you do not say how much) water will be piped via the SAR Pipeline to the San Bernardino Water Recycling Plant (“SBWRP”) where it will be mixed with the SBWRP’s secondary-treated water and

4



Valley District c/o Tom Barnes, ESA  
February 1, 2016  
Page 2

sent to the Rapid Infiltration and Extraction (“RIX”) Facility. We do not understand why you are sending tertiary-treated water into a secondary-treated water flow; it sounds like a waste of energy. Can you please explain this?

At 2-33 you have a table to truck trips per year. The table appears to diverge from the text in a couple of different ways. First, the text immediately above the table indicates that there will be 600 truck trips with dewatered biosolids per year, whereas the table indicates there will be 720. More fundamentally, elsewhere in the EIR you indicate that there could be up to 5 truck trips per day with biosolids, which is far in excess of the 720 you estimate in the table (and, we believe, use for your air quality estimates).

**Aesthetics**

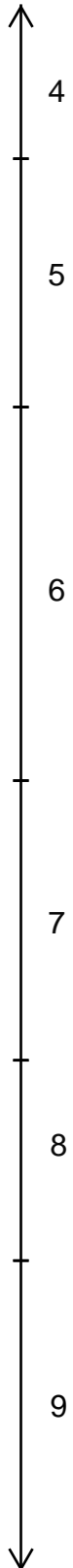
At 3.1-11, you state that the project would not have a substantial adverse effect on a scenic vista. However, it is apparent that you did not take photographs in the direction of the mountains, see Figure 3.1-1 (Inset) which is the direction in which there could be a scenic vista from the project site. We therefore question your conclusion that there is no significant impact from construction of the project. As you note yourself, the City of Highland Conservation and Open Space Element reflects a goal to preserve views and vistas including of the San Bernardino Mountain ridgelines.

**Air Quality**

At page 3.3-19, you indicate “The analysis of localized air quality impacts focuses only on the on-site activities of a project, and does not include emissions that are generated offsite such as from on- road haul or delivery truck trips (SCAQMD, 2003).” We are surprised if that is SCAQMD’s guidance and question its validity if so. We believe haul and construction truck trips must be included for the air quality construction impact analysis to have any validity.

At page 3.3-20 you indicate that you modeled the mobile source emissions from operation on the assumption that there would be 25 employee visits per day. Elsewhere in the document you state that there will only be 5 employees there per day. We agree with you that your estimates should be conservative.

At page 3.3-21 you conclude that the project would not conflict with or obstruct the implementation of an Air Quality Management Plan (“AQMP”). In reaching this conclusion you assume that the project is consistent with the land use designation in the City’s General Plan. We do not believe that it is. The land is zoned for Business Park but will be having traffic from five diesel trucks per day according to other portions of the DEIR. We do not believe that an industrial facility such as the SNRC is in fact what the site was zoned for. Accordingly, it is not consistent with the Southern California Association of Government’s (“SCAG’s”) growth projections and it conflicts with the AQMP.



Valley District c/o Tom Barnes, ESA  
February 1, 2016  
Page 3

On the same page you claim that the SNRC would replace treatment processes and air emissions at the RIX facility. With growth, we suspect the SNRC will be doing more than replacing the RIX facility's emissions. Prior statements indicate that the SNRC will be operating in conjunction with RIX. We think your air quality emissions analysis should take this into account.

10

At page 3.3-24 with regard to Impact 3.3-2 you concede that the project could violate an air quality standard or contribute substantially to an existing violation with regard to NO<sub>x</sub> and you have termed this impact significant and unavoidable. We note that if you were to defer construction of one or more discharge structures into 2017 you would not have a significant impact; thus, the significant impact is avoidable and capable of mitigation.

11

At page 3.3-28 concerning Impact 3.3-3 you recognize that the area is in nonattainment for ozone, PM<sub>10</sub> and PM<sub>2.5</sub>. Yet you rely on SCAQMD's cumulative impact methodology to conclude that because the individual project does not result in emissions of criteria pollutants in excess of its thresholds, you need do no more. We take issue with SCAQMD's methodology and do not find it reliable. Under CEQA an analysis of cumulative impacts is meant to look at whether a project *in combination with other projects* has a cumulative effect. In any event there is a duty to mitigate the impacts relating to NO<sub>x</sub>. We recommend you consider reducing your construction activities while school children are present at the school across the street.

12

At page 3.3-30 you state that Local Significance Thresholds ("LST's") at a receptor distance of 82 feet are used conservatively even when the receptor is closer. Some of the receptors likely are closer and thus SCAQMD's numbers are underestimates. The impact therefore is greater and may exceed the LST's for PM<sub>10</sub>, PM<sub>2.5</sub> (*see* Table 3.3-12).

13

At page 3.3-33 you state that the two year construction period is much less than the 70-year period used for risk determination by OEHHA. This is for cancer risks. OEHHA has recognized that Diesel Particulate Matter ("DPM") can inflame the airways, enhance allergic responses, and make children more susceptible to allergies and asthma. DPM is one of "five toxic air contaminants that may cause children and infants to be especially susceptible to illness." OEHHA Press Release No. 01-02 (Sept. 18, 2001) (included as Attachment 1). The conclusion that this potential impact is less than significant without even discussing it is an abuse of discretion.

14

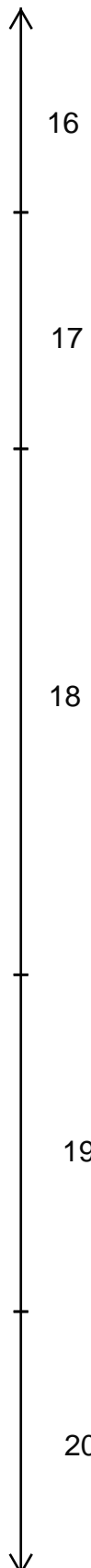
At page 3.3-33 you also contend that the operational emissions of Toxic Air Contaminants ("TACs") from the planned cogeneration facility will be dealt with in an air permit from SCAQMD. This is segmentation. You should have evaluated the operational emissions from the cogeneration facility *in this document*. CEQA is meant to inform the public and decisionmakers about the environmental consequences of decisions *before* they are made. This document does not disclose the size of the proposed cogeneration facility or the TACs it would likely emit.

15

On the same page under Impact 3.5-5 you recognize that the proposed project could create objectionable odors affecting a substantial number of people. You claim that a

16

complaint response protocol and operating procedures will reduce these impacts to less than significant. We do not believe this is adequate. Further, you have not specified that the trucks for biosolids would be enclosed – we think this mitigation should be added.



**Biological Resources**

At page 3.4-5 the DEIR concedes that the assessment of the biological resources for the Twin Creek Spreading Grounds was conducted as a “desktop exercise” and “must be field verified.” We think that should have been done for this DEIR as it is what the agency and the public will rely upon in making a decision regarding the project as well as this aspect of the project (again, you have not specified how much water is going to go to each of the four outlets you have planned for).

***Impact 3.4-1: Construction and operation of the project could have a substantial adverse effect, either directly or through habitat modifications on plant and wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.***

With regard to special status plants, we note that Mitigation Measure BIO-1 only provides for compensation or relocation of *state or federally listed* species. See DEIR at 3.4-55. You have an obligation to mitigate significant impacts and you have not dealt with a number of special status plants other than those that are listed species. We don’t believe the HCP addresses all of them either. Also there should have been focused plant surveys done as part of the DEIR, not afterward. The public is entitled to know what the project will do. From what we can tell from your Biological Resources Report special status plants with a high probability of being in the project area along the floodplain of City Creek include the Plummer’s mariposa lily, the smooth tarplant, the Parry’s spineflower and the white-bracted spineflower.

At 3.4-46 to 3.4-47 you indicate that terrestrial wildlife species could be impacted by the construction of discharge facilities in City Creek or other locations (again, you did not do the surveys to look for these species before doing the EIR, which is a separate CEQA violation). You state that Mitigation Measure BIO-2 requires that “Valley District would compensate for the impact through compliance with the state and federal Endangered Species Acts.” However, this only relates to *listed* species and not special status species. Impacts to other special status species could therefore be significant. You are required to mitigate for these impacts. That means you should have done the surveys and identified mitigation measures for these species in the EIR.

The DEIR states that the western burrowing owl has the presence to be at the site of the proposed SNRC or its pipelines. “Presence/absence of this species must be determined prior to the start of construction.” DEIR at 3.4-47. Focused surveys should have occurred prior to the drafting of the EIR so the public and responsible agencies would know this before Valley District passed upon the project. Regarding the burrowing owl and other special status, non-listed species, the DEIR claims that Mitigation Measure BIO-2 would require pre-construction surveys and “removal” of the species from

Valley District c/o Tom Barnes, ESA  
February 1, 2016  
Page 5

construction areas. What, exactly, do you propose to do with them? The Mitigation Measure (listed at 3.4-55) only deals with state or federally listed species. There thus is no mitigation. What does this “removal” entail? This is why these surveys should have been done already, so that solutions could be found in advance. The public and responsible agencies should have the opportunity to consider what should happen to these species.

↑  
20

Also at 3.4-47 you state that the operation of the discharge facilities at City Creek will result in a change in the habitat from Riversidean Alluvial Fan Sage Scrub (“RAFSS”) to Cottonwood-Willow Riparian Forest, which you acknowledge is not suitable for the federally listed SBKR (the San Bernardino Merriam’s Kangaroo Rat). This is in critical habitat for the species and we believe it is adverse modification in violation of the federal Endangered Species Act. You state that implementation of Mitigation Measure BIO-2 would ensure that impacts would be “avoided where feasible and appropriately compensated when unavoidable through consultation with the CDFW and USFWS.” Mitigation Measure BIO-2 does not acknowledge that the Upper Santa Ana River Habitat Conservation Plan has not been implemented. Thus compensation is not presently possible, and avoidance is not feasible in the case of the SBKR.

21

At 3.4-48 you indicate there could be construction impacts to special status aquatic wildlife (including the western spadefoot and the western pond turtle) by the construction of the discharge facilities in City Creek and possibly the East Twin Creeks Spreading Grounds basin. Again you state that “Mitigation Measure BIO-2 would require pre-construction surveys to clear the construction zone of these species.” As noted above Mitigation Measure BIO-2 only deals with state or federally listed species. There is no provision for habitat or conservation for these other special status species.

22

On the same page you are inconsistent as to the results of the Reduced Discharge Study included in the Appendices. Here it states that it would reduce the wetted area by 6 percent, not 3 percent, and result in an average change in velocity class by 2 percent (not exceeding 6 percent) of the total channel area (earlier you said 3 percent). We are glad that you were conservative and concluded in the report that there could be a significant impact to the Santa Ana sucker (“SAS”), as is discussed at 3.4-51.

23

At page 3.4-51 as well you mention that Valley District is preparing an HCP for the Upper SAR “while allowing for a number of covered projects to proceed.” You do not list these projects which could have cumulative effects to the present project. You should have discussed them in the Cumulative Impacts discussion of the DEIR but did not. In fact the DEIR notes that there are other projects which could further reduce the flow at RIX, but you do not mention them or the magnitude of their potential reduction. This is a critical flaw in the DEIR.

24

At 3.4-52 you indicate that one of the proposed projects within the as-yet unfinalized Upper SAR HCP may be to introduce flows to City Creek. We are unsure whether this will mitigate impacts to the SAS as there have been no sightings of the SAS in City Creek since 1982 and the substrate may not be suitable.

25

Valley District c/o Tom Barnes, ESA  
February 1, 2016  
Page 6

At 3.4-52 to -53 you list aspects of a Habitat Mitigation and Monitoring Plan (“HMMP”) which you propose in lieu of the HCP. Reliable funding is needed for all aspects of the HMMP listed. What is the funding, when will it be established, and how are we to rely upon it? Note that HMMP measure SAS-5 includes discharge into the Rialto Drain, which will require a discharge permit from the Regional Water Quality Control Board. When will this be obtained? Also in this chart SAS-6 requires “establishment” of an SAS population in City Creek. When and how do you propose that this will happen relative to the cutoff of flow at RIX? These questions should have been answered before the DEIR was drafted. The agency and the public should have information on impacts and mitigation measures before it passes on the project. Again, we have not been informed of the magnitude of the flows proposed at City Creek.

26

Less reduction in the discharge at RIX, that is, piping more of the effluent in the SAR pipeline that you propose to refurbish, could reduce impacts to the SAS.

27

At 3.4-54 you state, under “Construction Impacts” to critical habitat (it really should be under operational impacts), that the reduction in RAFSS at City Creek would reduce the amount of habitat for the SBKR. Yet you conclude without analysis that this is not “adverse modification.” We disagree. In any event, it is an impact under CEQA – one that is apparently not mitigated. You state without support that “[a]dditionally there is potential for the project to improve SBKR habitat and terracing along the edges of the Creek which would result in additional function and quality.” We’d like support for this statement. We believe introducing flows into the Creek will reduce habitat for the SBKR.

28

You also reiterate on that page that habitat for the SAS can be developed in City Creek. We are concerned for the reasons stated earlier.

29

At page 3.4-55, you state “Therefore, there will be no adverse modification of Critical Habitat as a result of the operational requirements of the project.” We disagree both as to the modification of RAFSS which is likely to support the SBKR at City Creek, and as to the reduction in flow below RIX as to the SAS. Also at page 3.4-54 to 3.4-55 you state that the drainage of water into City Creek “or other basins” will support the growth of riparian habitat. But this is not critical habitat and you have not convinced us that you are not destroying or adversely modifying critical habitat. In fact, the construction of drainage channels in City Creek will destroy critical habitat for the SBKR.

30

At 3.4-55 you list Mitigation Measure BIO-1. This calls for focused plant surveys (which should have been done already) and for the relocation of state or federally listed plants. As you know, CEQA concerns itself with more than merely state or federally listed plants. There should be plans for the relocation of nonlisted species of special concern. Also (and this is one of the reasons why focused surveys should have been done already) there is no guarantee that relocated plants will survive, and usually relocation also involves attempts to propogate additional specimens of the species. You have no provision for this in the DEIR.

31

Valley District c/o Tom Barnes, ESA  
February 1, 2016  
Page 7

At 3.4-55 to -56 you have Mitigation Measure BIO-2. Again, CEQA concerns itself with more than state or federally listed animal species. Your mitigation measure does not include any steps to protect special status species other than federally or state listed species, except with regard to the burrowing owl. With regard to the burrowing owl, you propose passive relocation “if burrowing owl avoidance is infeasible,” even during nesting. We believe you are required under CDFW guidance to wait until the nesting season has ended. This is not presently included in Mitigation Measure BIO-2.

32

We have commented on our concerns regarding Mitigation Measure BIO-3, regarding the SAS, previously. We note with regard to the SAS that the USFWS Draft Recovery Plan, included in your Appendices, indicates that the highest priority for the recovery of the SAS is “implementation of management actions to restore and improve habitat conditions *throughout the current range* of the species.” Draft Recovery Plan at iii (emphasis supplied). That includes in particular below the RIX discharge. We do not think withdrawing waters from the RIX discharge contribute to the recovery of the species.

33

At 3.4-58 you concede that Impact 3.4-1 (“Construction and operation of the project could have a substantial adverse effect, either directly or through habitat modifications on plant and wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS”) could be significant and unavoidable. As stated above you do not adequately mitigate for these impacts, nor do you analyze them sufficiently.

34

At 3.4-58 to 3.4-59 you conclude that Impact 3.4-2 (“Construction of the project could result in potential direct and indirect impacts to riparian habitat and other sensitive natural communities identified in local or regional plans, policies, and regulations or by CDFW or USFWS”) would be less than significant. Yet you concede that both construction and operation of the project within City Creek will affect (that is, ultimately eliminate) the RAFSS habitat there. This is a “sensitive natural community identified . . . by CDFW or USFWS.” We disagree with your significance determination, and believe you have to mitigate for it. You have not identified any mitigation measures other than Mitigation Measure BIO-4, which requires the installation of drip pans and other measures to limit machinery spills and entrapment of animals. This does not address impacts to the habitat. Additionally, Mitigation Measure BIO-4 does not address direct construction impacts to terrestrial animal species by the presence of workers and machinery. We believe the impacts are significant and mitigation is not adequate. Workers should be trained to avoid sensitive species, among other things.

35

Also on these pages you conclude that impacts to plants will be reduced to less than significant levels by Mitigation Measure BIO-1. Again, this only deals with listed plants.

36

At 3.4-61 you conclude that Impact 3.4-4 (“Construction of the project could result in the interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites”) would be less than significant. We believe the SAR

37

below RIX is a native wildlife nursery site and corridor for the SAS and that reduced flows could impact this site. You have previously concluded as much yourselves. The impact should be listed as significant. Your conclusion that the diversion to City Creek could increase the potential for SAS migration in the future is presently unsupported.

↑  
37

At 3.4-61 to 3.4-62 you have Mitigation Measure BIO-5. It indicates that you do not plan to engage in construction activities from February through August. It is not apparent that you actually plan to avoid these construction months based on your Air Quality modeling. In the alternative you indicate that you will develop a “suitable buffer” for any active nest observed. You do not define “suitable buffer.” Also you state that onsite monitoring “may” be required. We do not believe your conclusion that impacts to avian species is less than significant has a basis with the present mitigation measure.

38

At 3.4-63 to 3.4-64 you include a brief discussion of cumulative impacts, noting that the City of San Bernardino and the City of Rialto are also considering projects that would contribute to a further reduction of the flow at RIX. You should quantify the potential impacts of those other projects. We have no guarantees that the other agencies will sign on to an Upper SAR HCP or that such an HCP (or additional HMMPs) will work. As you concede, at some point, “flow reductions would result in direct impacts to the [SAS] and mortality of fish.” These cumulative projects should, at a minimum, be gradually introduced so that we can be assured that your mitigations will work. We are unsure that the agency has any ability to assure this. Accordingly, a functioning HCP is vital.

39

**Cultural Resources**

At 3.5-40 you conclude that there is no significant impact with regard to historical or archaeological resources (“The project could have a significant impact if it would cause a substantial adverse change in the significance of a historical or archaeological resource, as defined in CEQA Guidelines Section 15064.5”) based on implementation of Mitigation Measures CUL-1, CUL-2, and CUL-3. These mitigation measures require the hiring of a qualified archaeologist to conduct a Phase I survey, having that archaeologist train all construction personnel, and ceasing all activities within 100 feet in the event of a find, until it can be evaluated. We don’t believe you can conclude impacts are insignificant when you do not know what is there. Why wasn’t an archaeologist contracted to review the site beforehand?

40

At 3.5-42 you conclude there would be no significant impact to tribal resources (“The project could have a significant impact if it would cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074”). We do not see how you can determine the impact is less than significant before conducting a detailed search for such items. Only Mitigation Measure CUL-5, relating to human remains, calls for consultation with the California Native American Heritage Commission (“NAHC”), and none of your mitigation measures call for consultation with individual tribes.

41

Valley District c/o Tom Barnes, ESA  
 February 1, 2016  
 Page 9

**Geology and Soils**

The SNRC site is located between two Alquist-Priolo fault zones in an area where the liquefaction probability is high. See Figure 3.61 at 3.6-5. At page 3.6-4 you acknowledge that “The probability of an earthquake of a Mw of 5.0 or higher occurring within about a 50 kilometer radius of the proposed SNRC site within the next 20 years is between 80 and 100 percent (USGS, 2009).” The peak ground acceleration (“PGA”) estimated for this site is 1.036 g when it was listed at 0.64 near the epicenter of the Loma Prieta earthquake, “which using the modified Mercalli intensity scale would be considered a violent event at Intensity IX.” This means – according to the DEIR at 3.6-6 – that there would be “Damage considerable in specially designed structures; well designed frame structures thrown out of plumb; great in substantial buildings with partial collapse; buildings shifted off of foundations; ground cracked conspicuously; underground pipes broken.” Despite this information Valley District has prepared an EIR without a geotechnical study. As the DEIR itself notes, “Geotechnical studies are essential for facility and pipeline design because it is information that informs the structural design of the foundation *and determines whether the geologic materials underlying the proposed facilities are capable of supporting the proposed uses.*” DEIR at 3.6-19 to 3.6-20 (emphasis supplied). Since you have not yet done this evaluation it is not possible to determine whether the SNRC can be safely built. At DEIR 3.6-20 you concede that your impact analysis “assumes that geotechnical recommendations . . . would be fully implemented,” however you have not informed the public of what they are. We doubt that your Air Quality analysis assessed the impacts of criteria pollutants from the massive cut-and-fill activities that would be necessary if soils underneath the project were (as they likely are) determined to be inadequate to prevent liquefaction.

42

At DEIR 3.6-21 you baselessly conclude as to Impact 3.6-1 that “The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving rupture of a known earthquake fault; strong seismic ground shaking; or seismic-related ground failure, including liquefaction or landslides.” We don’t see how you can reach this conclusion based on the location of the project and the information you have already given us, without even a geotechnical study of how the project can safely be implemented. There clearly can be injury or death not only of SNRC workers but residents in the area assuming there is a halt to the safe functioning of a sewage plant. This is a public health concern you have ignored entirely.

43

On the same page you note the grounds underneath the plant could be subject to liquefaction. You identify methods to correct this but none are identified as Mitigation Measures. You can’t define those mitigation measures because you have not quantified the extent of the problem. This deferral violates CEQA. Meanwhile you concede that “an earthquake with a magnitude of 5.0 or higher has a 90 to 100 percent chance of occurring in the San Bernardino region within the next 20 years.”

44

At DEIR 3.6-22 you state that the area of the SNRC has undergone historical subsidence but that the project would not be subsidence for unknown reasons. Though the project

45



Valley District c/o Tom Barnes, ESA  
February 1, 2016  
Page 10

involves groundwater recharge you cannot guarantee that there will not be subsidence and this should be acknowledged as a potentially significant impact.



**Greenhouse Gas Emissions**

At DEIR 3.7-14 you conclude there would be no significant impact from the operation of the SNRC because the emissions from the SNRC would be offset by reduced emissions from the SBWRP. The fact remains that the construction of the SNRC would increase capacity for water recycling and that capacity would likely be (if not now, later) used. As such you should have evaluated the combined GHG emissions from the two plants at full capacity.

**Hazards and Hazardous Materials**

At 3.8-14 with regard to Impact 3.8-2 you conclude the proposed project “would not result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school.” To the contrary, it would. As you note, the project is within one-quarter mile of the Indian Springs High School (actually, it is adjacent to it), as well as Highland Head Start day care center and Laura’s Day Care. The fact that all hazardous materials would reportedly be “used in compliance with existing federal, state, and local regulations” does not change the fact that you are using hazardous materials within less than a quarter mile of a school. This is a risk the school children are exposed to that they were not exposed to before. You have no basis for concluding that this impact is less than significant. As such, you need to identify plans to mitigate this impact. Specifically, you should include hazardous materials handling requirements in the DEIR.

**Hydrology and Water Quality**

At Impact 3.9-1, at DEIR page 3.9-21, you indicate that the proposed project would discharge effluent into City Creek, which has an intermittent MUN designation – that is, it is drinking water. The effluent is tertiary treated recycled water which has been identified as permissible for full body contact but not for drinking. As you note this means that the MUN designation would have to be removed or the Division of Drinking Water would need to allow the discharge. This is a potential (serious) violation of a water quality standard and a public health issue. We don’t believe you have mitigated this impact to a level of insignificance merely by changing the water designation or by getting a discharge permit. The water quality will be reduced.

At DEIR 3.9-22, you also note that discharge to City Creek, the East Twin Creek Spreading Grounds or Redlands Basins could result in effluent infiltrating into groundwater that is designated MUN. This presents the same issue. You say “compliance with WRR and NPDES discharge limits would be protective of MUN beneficial uses,” but elsewhere you note that the groundwater basins need assimilative capacity for TDS and nitrate. Are there any guarantees that the effluent will not go into Bunker Hill Basin B, which does *not* have assimilative capacity? The DEIR contains no

maps from which we can reach any conclusion on this issue. At 3.9-23 you indicate Valley District will have to prepare an antidegradation analysis – that should have been done in conjunction with the DEIR. Mitigation Measure HYDRO-2 at 3.9-23 would require the District to install a groundwater monitoring network, and if that monitoring finds neighboring wells to be adversely affected, the District would have to either modify treatment, modify the wells by screening them, *or compensate the well owner through providing a replacement well or water.* This is a major potential impact and the mitigation measure does not (by providing replacement water) reduce it to less-than-significant levels.



49

At 3.9-24 regarding the potential for excessive siltation (Impact 3.9-3, “The project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation or flooding on- or offsite”), you indicate that the project could alter the existing pattern of drainage at City Creek and that this could result in “minor” sediment transport. On what basis do you conclude that it would be “minor”?

50

Regarding Impact 3.9-9 you conclude that the reduced discharge would not adversely affect downstream uses but you acknowledge that there are other cumulative recycled water projects which will reduce flows from RIX and that eventually maintaining minimal flow commitments will be the responsibility of the District. You should have identified the other potential cumulative projects, their timing and the quantity they will withdraw from RIX, as well as how you intend to maintain minimum flows.

51

**Land Use**

DEIR page 3.10-10 concludes that the Business Park designation is “generally consistent” with the use planned for the SNRC. We disagree. Highland’s General Plan designation for Business Park facilities allows for “light industrial facilities and administrative facilities.” A sewage treatment plant is a heavily industrial facility. At 3.10-11 you concede that you are relying on Gov. Code section 53091 which exempts you from zoning ordinances. That does not make the project consistent with the land use designation. This is a significant impact and should be identified as such.

52

**Noise**

Impact 3.11-1 recognizes that the project could result in exposure of persons to noise levels in excess of standards established in a local general plan or noise ordinance. The DEIR acknowledges that intermittent noise levels that are substantially greater than the existing ambient noise levels will be generated. You claim that the implementation of Mitigation Measure NOISE-1 will minimize the effects of construction noise “to the maximum extent feasible,” but the Mitigation Measure merely says steps “may” include noise barriers, curtains, or shells. The project is adjacent to a school. Noise barriers, curtains, or shells should be required, as should be mufflers on all machinery.

53

**Environmental Justice**

The SNRC would be bordered on three sides by low income residential areas and a public high school. You emphasize the community meeting offerings of the Administration Center but do not provide any indication that these facilities will be made available to local residents. Moreover, this is a sewage treatment plant in what you concede is a highly impacted community.

54

**Public Services, Utilities and Energy**

With regard to Impact 3.13-2 you indicate the project would have a significant impact if it would exceed the wastewater treatment requirements of the applicable RWQCB and you note that the valley segment of City Creek has an intermittent MUN designation. With regard to the discharges to City Creek we note that you apparently need them for habitat for the planned HCP or the HMMP. If you cannot get a permit from the DDW then this planned (potential, untested) habitat is at risk. You conclude this impact is less than significant – this depends on whether you can (or should) get the permit.

55

**Cumulative Impacts**

Your cumulative impact analysis, DEIR 4-1 *et seq.*, represents an abuse of discretion. You chose to list a series of public works projects in some cities and then other types of construction projects in the City of San Bernardino. With regard to biological resources, you should have been focusing on a list of other water recycling projects that will affect SAR habitat including the SAS.<sup>1</sup> We see no basis for your using public works projects within a five mile radius of the project. If you were looking to air quality impacts, which you did not analyze in any detail at all, it is totally illogical to limit your list to public works projects.

56

At DEIR 4-12 you use the SCAQMD threshold that only if a project has a significant impact on its own will it have cumulative impacts. This threshold is contrary to the CEQA Guidelines and should not be relied upon.

57

At DEIR 4-13 you assess biological resources cumulative impacts and you acknowledge the other projects that may reduce flows from RIX but you do not quantify this reduction. Also you acknowledge that the cumulative reduction in water could reduce riparian vegetation but you claim that Mitigation Measure BIO-3 requiring reduction of invasive vegetation would reduce this impact to less-than-significant levels. The mitigation measure does not indicate how long the agency is committed to reducing invasive vegetation or who specifically is going to do it. Moreover, if the water flow is reduced the riparian vegetation will almost certainly be reduced regardless, and this is a significant impact.

58

<sup>1</sup> At DEIR 4-4 you do include the Clean Water Factory planned by SBMWD, but you do not analyze the impacts to flow with any numbers as to quantity of reduction.

Valley District c/o Tom Barnes, ESA  
February 1, 2016  
Page 13

At DEIR 4-13 we are told that at a greater than 12 MGD reduction from RIX there would be direct impacts to SAS and mortality of fish. Yet we do not know the scope of the other water recycling projects so we cannot determine how likely this impact will be.

59

At DEIR 4-15 with regard to GHG emissions, you simply state that the project on its own won't have a significant impact on emissions. We disagree with any threshold that states that a project is not cumulatively significant if it is not significant on its own.

60

**Growth Inducement**

At DEIR 5-4 you indicate that because the project is limited to the provision of water supply infrastructure, as opposed to housing or community development, "the proposed project would not directly contribute to the creation of additional housing or jobs." However, the recycled water supply improves the overall water supply for the region, including, apparently, MUN water, so it can lead to growth inducement, and you should acknowledge this. As you acknowledge at DEIR 5-5, the facility removes an impediment to growth. The fact that the Cities of Highland and San Bernardino have adopted Statements of Overriding Consideration for the significant unavoidable environmental effects of further planned growth in their General Plan EIRs does not absolve you of acknowledging an impact and mitigating for it.

61

**Alternatives Analysis**

At DEIR 6-6 you discuss the different discharge alternatives. You do not indicate here or anywhere else in the document the magnitude of flows from each of the discharges and it appears you intend to rely on all four of them. You should quantify what your plan involves as it is critical, and this is one of the reasons why the DEIR should be revised and recirculated (with the studies you are presently missing).

62

At DEIR 6-7 you state that three alternatives have been considered but your analysis includes four (other than the proposed project and the no project alternative).

63

With regard to your alternatives analysis proper, you need to choose an alternative site that would make a difference in the proposed project, at least from an environmental justice perspective. Alternative 2 does not do this. Also with regard to Alternative 2 the Cultural Resource impacts could be different but we don't know because you have not evaluated them at either site.

64

At DEIR 6-17 with regard to the Reduced Capacity Alternative we do not believe you have adequately described or analyzed the alternative. Only if you do not send water down the SAR Pipeline would there not be a reduction in the withdrawal of water from RIX. There is no point in analyzing the Reduced Capacity Alternative if you don't simultaneously send some of it to RIX. (Again, you should be specifying how much goes to each outlet.)

65

Valley District c/o Tom Barnes, ESA  
February 1, 2016  
Page 14

At DEIR 6-19 with regard to the Reduced Capacity Alternative as to Transportation and Traffic you have only looked at employee trips and deliveries rather than the reduction in biosolids trucks leaving the facility. This improperly skews your analysis. Also on that page you indicate there would be greater secondary effects to growth due to the Reduced Capacity Alternative. We think the opposite would occur. It would create an obstacle to growth and would reduce growth.

66

At DEIR 6-19 to 6-21 you evaluate creating a fifth source to send water to at Plunge Creek Basins but we can't evaluate it because we don't know how much water would go to the other sites or to this one – under the original alternative (the planned project) or the Plunge Creek Basins alternative. At 6-21 you indicate that Land Use and Planning could be subject to the Wash Plan HCP. What is this? You indicate there would be greater impacts to land use – what, specifically? There is no basis for evaluating this alternative as you have not provided a map indicating where it is.

67

At DEIR 6-22 you evaluate a “Reduced Diversion Alternative,” which would construct the proposed project but would return 3 MGD at all times to the RIX facility. *How does this differ from the proposed project?* You state the proposed project would only divert 6 MGD from RIX when it is as 10 MGD plant. The public has no basis for evaluating what you are proposing here. On the same page you conclude that this Reduced Diversion Alternative would still have a significant and unavoidable impact on biological resources. Your reduced flow study does not support this conclusion as it seems to imply that even 6 MGD would not have an impact. That aside, it is clear that the difference between 3 MGD and 6 MGD could be significant for the SAS.

68

At DEIR 6-24, 6-25, despite the presence of the Reduced Diversion Alternative, you conclude that the project is the environmentally superior alternative because there will be more habitat mitigation. We frankly find this absurd. There is no viable habitat for the SAS in City Creek at this time and there are no guarantees that you can create it. It is simply not as good as existing habitat, much less better.

69

**Additional Comments**

You have not indicated what security you will have for the plant or the security of the cogeneration plant. You have indicated that you may require an electrical substation but you have not evaluated its potential impacts or hazards. In your Project Description you have not identified the types of wastewater facilities or the processes for each type other than those of the proposed project.

70

We look forward to your responses. Please forward a notice of availability of the Final EIR to [collins@blumcollins.com](mailto:collins@blumcollins.com) and [bentley@blumcollins.com](mailto:bentley@blumcollins.com). Thank you.

Sincerely,

Craig M. Collins



From the Desk of Anthony Serrano

Sent Via E-Mail "tbarnes@esassoc.com"

**TO:** San Bernardino Valley Municipal Water District  
c/o Tom Barnes, Environmental Science Associates  
626 Wilshire Boulevard, Suite 1100  
Los Angeles, CA 90017

**FROM:** Anthony Serrano, Local Taxpayer  
7517 Mr. McDuffs Way  
Highland, CA 92346  
(909) 496-4733 Cell/ e-mail "anthonyaserrano@gmail.com"

**DATE:** Monday, February 1, 2016

**SUBJECT:** **Comments Submitted**  
**Sterling Natural Resource Center Environmental Impact Report**

Thank you for the opportunity to submit comments, I support the proposed project but I have concerns and I have read section 1.4.5 of the report that states the following:

***"1.4.5 Final EIR Publication and Certification***

*Once the DEIR public review period has ended, Valley District will prepare written responses to all comments. The Final EIR will be comprised of the DEIR, responses to comments received on the DEIR, and any changes or corrections to the DEIR that are made as part of the responses to comments. As the Lead Agency, Valley District has the option to make the Final EIR available for public review prior to considering the project for approval (CEQA Guidelines §15089(b)). The Final EIR must be available to commenting agencies at least 10 days prior to certification (CEQA Guidelines §15088(b))."*

My comments are:

1. **Costs** - my original questions submitted dated November 15, 2015, question #22 asked for costs. Your report does not include any costs for the "cost/benefit scenarios for the mitigation of alternatives?" Public Resources Code 21001. ADDITIONAL LEGISLATIVE INTENT: The Legislature further finds and declares that it is the policy of the state to: ***"(g) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment."*** If your report does not include any cost information will the Lead Agency be proving the cost information pursuant to state law?
2. **Harmony Project in City of Highland** - Mr. Steve Rogers and I met with Mr. Larry Mainez, Director Community Development week of week of January 25, 2016 and Larry stated that the City has had many meetings and discussions to connect the Harmony Project into the proposed waste water treatment facility but your report does not include any provisions for the connection? Has your team have any records or plans for the connection?
3. **Lockheed Martin** - your report does not include any references to the water pollution cause by Lockheed. Attached is a recent report dated year 2011.

1

2

3

Thank you.

W/attachment

**From:** Tom Barnes  
**To:** Camille Castillo  
**Subject:** Fwd: Anthony Serrano and SNRC comment letter?  
**Date:** Tuesday, February 02, 2016 1:25:04 PM  
**Attachments:** 2-1-2016 Tom Barnes re Comments Sterling Natural Resource Center EIR.doc  
110215K5-att2.pdf

---

Tom  
323-829-1221 cell

----- Original Message -----

**Subject:** FW: Anthony Serrano and SNRC comment letter?  
**From:** Heather Dyer <heatherd@sbumwd.com>  
**To:** "Elie, Steve (S.El@MPGLAW.com)" <S.El@MPGLAW.com>,"Jean Cihigoyenetche (JeanCihigoyenetche@cgclaw.com)" <JeanCihigoyenetche@cgclaw.com>,"Jane Ellison Usher (j.usher@mpglaw.com)" <j.usher@mpglaw.com>,"Aladjem, David" <daladjem@DowneyBrand.com>,"Pearson, Amanda MacGregor" <apearson@DowneyBrand.com>,"Tom Barnes" <TBarnes@ESASSOC.COM>,"ash@akdconsulting.com" <ash@akdconsulting.com>  
**CC:** Kelly Malloy <kmalloy@eastvalley.org>

*Heather*

~~~~~  
Heather Dyer  
Water Resources Project Manager  
San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way, San Bernardino, CA 92408  
909-387-9256  
heatherd@sbumwd.com

**From:** Anthony Serrano [mailto:anthonyaserrano@gmail.com]  
**Sent:** Tuesday, February 02, 2016 1:11 PM  
**To:** Heather Dyer <heatherd@sbumwd.com>  
**Subject:** Re: Anthony Serrano and SNRC comment letter?

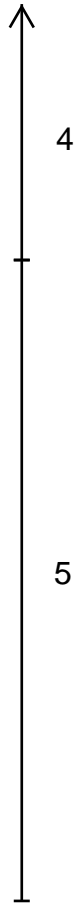
2-2-2016: Heather - thank you for your e-mail inquiry and here are the two docs I sent to Tom Barnes yesterday via e-mail re my three comments...I kept my comments short. One of my comments dealt with the old Lockheed Martin polluting problem and my expanded comments are provided below. Based on this information, I think Tom Barnes needs to provide some followup to his Draft EIR to address this issue as well as the other issues raised.



**Lockheed Martin Propulsion Company Polluting**

Given the problems in Flint, Michigan with the "lead" related problems in their water...here locally we have had an ongoing problem with the old Lockheed Martin Propulsion Company

polluting Bunker Hill Basin and the Mill Creek spreading grounds BUT Tom Barnes did not address the issue in his Draft EIR? If we, as local taxpayers, are going to pay for a new state-of-the-art waste water treatment facility.....the Lead Agency should insist that this ongoing environmental issue is identified and some type of mitigation plan be put in place once and for all to avoid any future problems OR contaminating the new waste water treatment facility?



**2/15/2011 Report**

Attached is a 7-page report dated 2/15/2011 (almost 5 years ago to the date) that was used in a City of Redlands Council Meeting Agenda. Many other documents exist on this issue.....but Tom Barnes failed to address the issue and provide any information as to the status of the old problem? Two key paragraphs listed in the report are restated below:

a) "investigating and remediating a plume of trichloroethylene ("TCE") and a plume of perchlorate in the Bunker Hill Basin (together, the "Plume") pursuant to Cleanup and Abatement Orders Nos. 94-37, 97-58 and 01-56 issued by the Santa Ana Regional Water Quality Control Board (the "Regional Board")," and

b) "observations in monitoring wells located at the former Lockheed Propulsion Company site ("Site"), much of which is currently the San Bernardino Valley Water Conservation District's Mill Creek spreading grounds (used for ground water recharge) in the community of Mentone, suggest that there may be releases of residual perchlorate in soils to groundwater at the Site during periods of high groundwater levels that are caused by high precipitation or recharge operations."

On Tue, Feb 2, 2016 at 10:48 AM, Heather Dyer <[heatherd@sbvmwd.com](mailto:heatherd@sbvmwd.com)> wrote:

Hi Anthony,

Were you still planning to submit a formal comment letter on the project? I just wanted to make sure that I didn't miss it somehow.

Thanks,

*Heather*

~~~~~  
Heather Dyer  
Water Resources Project Manager  
San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way, San Bernardino, CA 92408  
[909-387-9256](tel:909-387-9256)  
[heatherd@sbvmwd.com](mailto:heatherd@sbvmwd.com)



AGREEMENT WITH LOCKHEED MARTIN CORPORATION  
FOR REIMBURSEMENT OF CITY OF REDLANDS COSTS ASSOCIATED  
WITH BLENDING OF AGATE No. 2 WELL.

This agreement for reimbursement of the City of Redlands' costs for blending of the Agate No. 2 well ("Agreement") is made this 15<sup>th</sup> day of February, 2011 ("Effective Date"), by and between Lockheed Martin Corporation ("LMC") and the City of Redlands ("City"). LMC and the City are sometimes individually referred to herein as a "Party" and, together, as the "Parties."

RECITALS

WHEREAS, LMC has been investigating and remediating a plume of trichloroethylene ("TCE") and a plume of perchlorate in the Bunker Hill Basin (together, the "Plume") pursuant to Cleanup and Abatement Orders Nos. 94-37, 97-58 and 01-56 issued by the Santa Ana Regional Water Quality Control Board (the "Regional Board"); and

WHEREAS, consistent with that effort, LMC prepared a Water Supply Contingency Plan (the "Plan") which was approved by the Regional Board in March 1997; and

WHEREAS, LMC has taken several measures, since March 1997, to implement and execute the Plan, including the financing and construction of new potable water supply wells for the City, static mixing systems to improve blending capacity, and perchlorate treatment for the City's Rees well; and

WHEREAS, observations in monitoring wells located at the former Lockheed Propulsion Company site ("Site"), much of which is currently the San Bernardino Valley Water Conservation District's Mill Creek spreading grounds (used for ground water recharge) in the community of Mentone, suggest that there may be releases of residual perchlorate in soils to groundwater at the Site during periods of high groundwater levels that are caused by high precipitation or recharge operations; and

WHEREAS, the release of residual perchlorate in soils has the potential to subsequently cause concentrations exceeding water quality standards at City water supply wells located downgradient of the Site, in particular the Agate No. 2 and possibly the Rees well; and

WHEREAS, pursuant to an agreement between LMC and the City dated November 17, 2009, LMC has retrofitted existing equipment at the Rees well to provide perchlorate treatment, location and is funding operations and maintenance of the treatment plant operations; and

WHEREAS, observations and analyses performed by LMC and shared with the City indicate that impacts at the Agate No. 2 well from such releases are projected to be brief (on the order of a few months), infrequent (not more than every two to three years), and decreasing in magnitude (as a result of decreasing mass of perchlorate in the soil); and

WHEREAS, the City has plans to modify the Agate Reservoir and associated piping to improve blending of the sources of water to this reservoir, which includes the Agate No. 2 well; and while these modifications are designed to address issues minimizing disinfection by-products and contaminants in the Agate No. 1 and Crafton wells, they will also address the projected potential future perchlorate impacts to the Agate No. 2 well to the benefit of LMC;

NOW, THEREFORE, in consideration of the mutual promises contained herein, and for such other good and valuable consideration the receipt of which is hereby acknowledged, the City of Redlands and Lockheed Martin Corporation agree as follows:

### AGREEMENT

Section 1. Recitals. The foregoing recitals are true and correct and are incorporated herein by this reference.

#### Section 2. Purpose and Intent

- 2.1 The purpose of this Agreement is to protect the public health, to fulfill in part the requirements set forth by the Regional Board (correspondence to LMC dated July 31, 1996) and to implement the Water Supply Contingency Plan Requirements in that correspondence.
- 2.2 This Agreement's specific objective is to ensure that the City has use of its Agate No. 2 well, unencumbered by concentrations of perchlorate which have the potential to briefly and occasionally exceed the current Maximum Contaminant Level ("MCL") of 6 µg/L.
- 2.3 This Agreement is not an admission or acknowledgement in fact or law by LMC that it is responsible for the perchlorate contamination, TCE contamination or any other contaminants, or their potential adverse effects on the public health or environment.

Section 3. LMC Responsibilities and Actions. LMC shall have the following responsibilities and actions:

- 3.1 LMC shall review and comment on design plans and specifications developed by the City's contractors who are responsible for designing and constructing the modifications to the Agate Reservoir and associated appurtenances (the "Modification Work"). The Modification Work will be performed on the City's existing reservoir and equipment currently located at 1580 Agate Avenue, San Bernardino County. The objective of the Modification Work is to improve blending performance and capacity for water from sources to the reservoir to assure that the City's water supply complies with California Department of Public Health ("DPH") drinking water requirements.
- 3.2 LMC shall review the scope of work and bid and contract documents prepared by the City for the Modification Work and provide comments to the City for its review and approval prior to construction. The bid and contract documents will be the basis for establishing the amount of the costs for the Modification Work that LMC will fund to the

City. LMC will fully fund the costs for the elements of the Modification Work in the scope of work of the bid and contract documents that are directly related to the blending of water from the Agate No. 2 well. The initial amount to be funded will be established prior to initiating the Modification Work. It is likely that there will be changes to the scope of work and to project costs during the execution of the Modification Work. To address such changes, LMC agrees to add ten percent to the initial amount for costs of the agreed-upon elements of the Modification Work. LMC shall consider, but shall not be obligated to fund, changes to the scope of work. LMC shall also have the opportunity to request changes to the scope of work, and will additionally fund the specific costs for such changes.

- 3.3 LMC will not be responsible for operations or maintenance of the Agate Reservoir, associated appurtenances, or the Agate No. 2 well, nor any other asset of the City unless specified under another agreement between LMC and the City.
- 3.4 LMC is funding the Modification Work in accordance with this Agreement only to address impacts resulting from perchlorate. If additional contaminants or degradation products attributable to past LMC operations at its former Mentone site are identified at concentrations exceeding applicable state and federal water quality standards (i.e., state or federal MCL or state NL), the Parties shall meet and confer to identify and implement a mutually-acceptable solution to the issue.
- 3.5 LMC shall reimburse the City for any necessary analytical testing related to the start up and operation of the blending facilities associated with the Modification Work. LMC shall assist the City with its preparation of blend plans if requested.
- 3.6 LMC's participation in the Modification Work is based on the City's commitment to operate its water supply system in a manner that does not exacerbate or cause perchlorate impacts, and uses best efforts to minimize the need for any additional measures to mitigate perchlorate impacts in the City's water supply system.

Section 4. City Responsibilities and Actions. The City shall have the following responsibilities and actions:

- 4.1 The City shall develop the scope of work, bid and contract documents, and perform the bid and award activities for the Modification Work, in accordance with public procurement regulations applicable to the City. The City shall provide the scope of work and bid and contract documents to LMC prior to initiating the work in order to allow LMC to review and comment on the scope of work and to establish the funding by LMC described in paragraph 3.2 above.
- 4.2 The City shall prepare and submit progress invoices to LMC for the agreed-upon Modification Work. Invoices shall be submitted on not more than a monthly frequency. The invoices shall detail the status of each element and task in the agreed upon work (i.e., the percent complete) and the detail shall be consistent with the bid tab in the bid and

award documents. The invoice shall also detail the progress costs and total costs, and provide sufficient backup information to allow LMC to approve the invoice for payment.

- 4.3 The City shall be responsible for all operations and maintenance of the wells, reservoir and piping and appurtenances, and for blending all constituents in sources of water to the Agate Reservoir to concentrations below their respective MCLs. If additional contaminants or degradation products attributable to past LMC operations at this Site are identified at concentrations exceeding applicable state and federal water quality standards (i.e., state or federal MCL or state NL), the Parties shall meet and confer to identify and implement a mutually-acceptable solution to the issue. If the facilities cannot be operated under normal conditions to reduce the concentration of perchlorate to below the MCL, then the Parties shall meet and confer to identify and implement a mutually-acceptable solution to the issue.
- 4.4 The City shall continue to be the owner of all the existing equipment for the Agate No. 2 well, connecting piping and appurtenances, the Agate Reservoir and all the other sources of water to the reservoir. Further, the City will own all new equipment installed as part of the Modification Work provided for herein.
- 4.5 The City shall be responsible for all normal sampling and testing required by local and state regulatory agencies, while LMC shall be responsible for the incremental cost relating to operational monitoring of the blending systems (i.e., testing of perchlorate to assure compliance with the MCL). The City shall utilize a laboratory that is mutually acceptable to the Parties.
- 4.6 In addition, following construction, the City shall provide LMC with as-built plans, including any changes to the original design plans incorporated therein.
- 4.7 The City shall prepare all documentation required for any modifications to the City's Water Supply System Permit from DPH. The City (and its Contractor) shall be responsible for obtaining all permits and regulatory approvals for construction and operation of the Modification Work.
- 4.8 The City will collect and analyze samples, and provide copies of all periodic reports required by regulatory agencies (not less than monthly well production data, treatment system specific flow rates, system pressure data, and all analytical data) to LMC.
- 4.9 The City shall be responsible for compliance with all other regulatory compliance associated with the subject equipment, including NPDES discharge requirements.
- 4.10 The City shall be responsible for compliance with the California Environmental Quality on all matters covered by this Agreement, where applicable.
- 4.11 The City agrees to take no action against LMC on matters covered by this Agreement so long as LMC is performing of its obligations under this Agreement.

## Section 5. Defense and Indemnity Obligations

- 5.1 LMC shall defend, indemnify, and hold harmless the City and its elected officials, officers, and employees from and against any and all actions, damages, losses, causes of action, and liability imposed or claimed relating to the injury or death of any person, or damage to any property, including attorneys' fees and other legal expenses, arising directly or indirectly from any negligent or intentionally wrongful act or omission of LMC in performing its obligations under this Agreement. This section 5.1 shall survive any termination of this Agreement. This section 5.2 shall survive any termination of this Agreement.
- 5.2 The City shall defend, indemnify, and hold harmless LMC and its officers, employees, and agents from and against any and all actions, damages, losses, causes of action, and liability imposed or claimed relating to the injury or death of any person or damage to any property, including attorneys' fees and other legal expenses, arising directly or indirectly from any negligent or intentionally wrongful act or omission of the City in performing its obligations under this Agreement.
- 5.3 The indemnities set forth in this Section 5 shall not apply to any third party toxic tort claims arising out of the presence of perchlorate or any other contaminant in water purveyed by the City to the City's customers. Nothing in this Agreement shall limit the right of either Party to seek, by an appropriate civil action, indemnity, whether implied or equitable, from the other in the event of a claim by a third party, including but not limited to, a third Party toxic tort claim against either party to this Agreement arising out of or related to perchlorate or any other contaminant from the Bunker Hill Basin.

## Section 6. Procedure for Reimbursement

- 6.1 The City shall utilize the City's purchasing policy to secure the services and materials required to perform the Modification Work.
- 6.2 For those costs that LMC has agreed to pay pursuant to Section 3 above, LMC shall reimburse the City within forty-five (45) days of receipt of complete and detailed invoices from the City. Each invoice shall be broken down into the same cost categories as set forth in the bid documents for the contractor. The statement shall include copies of all relevant documentation, including purchasing documents, backup documentation for all internal costs, and all invoices, including backup documentation to support all invoiced contracted-for costs, and a declaration by an authorized representative of the City that each amount requested in the statement is due and payable to a party who provided materials or services for construction activities with respect to the Modification Work. Invoices should be submitted on not more than monthly basis. The City shall send its invoices to LMC, at the address provided by LMC, as per the terms and conditions of the LMC purchase order to be issued to the City for this the Modification Work. Any invoice seeking payment for an expenditure outside a cost category in the bid documents and any statement which will cause the applicable cost category amount to be exceeded must be accompanied by an explanation of the necessity for that expenditure.

## Section 7. Miscellaneous

- 7.1 This Agreement shall be governed by and construed in accordance with the laws of the state of California.
- 7.2 This Agreement may not be modified except by a written document signed by the Parties.
- 7.3 This Agreement shall be binding upon and inure to the benefit of the Parties' respective representatives, successors and assigns.
- 7.4 Severability. If any provision of this Agreement shall be adjudged invalid by any court, the remaining provisions of this Agreement shall remain valid and enforced to the full extent permitted by law.
- 7.5 No Third Party Beneficiaries. There are no third party beneficiaries of any kind to this Agreement.
- 7.6 Attorneys' Fees. In the event any legal action or proceeding is brought to enforce or interpret any of the terms or conditions of this Agreement, the prevailing party, in addition to any costs and other relief, shall be entitled to recover its reasonable attorneys' fees, including fees for use of in-house counsel by a Party.
- 7.7 Cooperation. The Parties agree to cooperate with each other to accomplish the purposes of this Agreement, including exchanging data and information to assist LMC in completing the work under this Agreement.
- 7.8 Integration. This Agreement fully integrates the Parties' agreement and understanding with respect to all matters covered herein. Each Party agrees that it has not relied on any fact, statement or representation other than as specifically recited herein.
- 7.9 Assignment. This Agreement shall not be assigned without the prior written consent of the City. Any assignment or attempted assignment without such consent shall be null and void and, at the sole option of the City, may result in the immediate termination of this Agreement.

## Section 8. Termination

- 8.1 LMC's obligations under this Agreement with regard to the construction of Modification Work shall terminate upon LMC's issuance of final payment.
- 8.2 LMC's obligations under this Agreement to address perchlorate impacts in the Bunker Hill Basin shall terminate at the time the Santa Ana Regional Water Quality Control Board determines that LMC is no longer required to supply replacement water to water purveyors (which includes the City).

Section 9. Notices. All notices or other communications under or in connection with the Agreement shall be in writing and shall be given by (a) personal delivery, (b) telephone facsimile, (c) overnight courier, or (d) U.S. mail. Such notices shall be addressed to the Parties at the addresses set forth below:

Lockheed Martin Corporation (LMC)  
David Constable, Vice President  
6801 Rockledge Dr., MP CLE610  
Bethesda, Maryland 20817

Municipal Utilities and Engineering Director  
City of Redlands  
P.O. Box 3005  
Redlands, CA 92373

Changes may be made to the names and addresses of the person to whom notices or reports are to be given by giving notice pursuant to this section.

WHEREFORE, this Agreement has been executed by the Parties as of the date first written above in San Bernardino County, California.

CITY OF REDLANDS

LOCKHEED MARTIN CORPORATION

\_\_\_\_\_  
Pete Aguilar, Mayor

\_\_\_\_\_  
David Constable, Vice President

ATTEST:

\_\_\_\_\_  
Sam Irwin, City Clerk

**From:** [Tom Barnes](#)  
**To:** [Heather Dyer](#); [Jane Usher](#); [Elie, Steve](#); [Ash Dhingra](#); [Camille Castillo](#)  
**Subject:** Fwd: Sterling National Resource Center Environmental Impact Report  
**Date:** Tuesday, January 19, 2016 4:02:27 PM

---

Just received this email.

Camille, please save a copy in the comment folder.

Tom  
323-829-1221 cell

----- Original Message -----

**Subject:** Sterling National Resource Center Environmental Impact Report  
**From:** Fred Yauger <[fred@yauger.net](mailto:fred@yauger.net)>  
**To:** Tom Barnes <[TBarnes@ESASSOC.COM](mailto:TBarnes@ESASSOC.COM)>  
**CC:**

I have reviewed your report and do not find any significant impediments to proceeding with this project.

I urge this process move forward as quickly as possible to facilitate the path to construction. This facility is important to the long term benefit of our region and I support it unequivocally.

Fred Yauger  
7123 Amberwood Lane  
Highland, CA 92346

Sent from my iPad



TO: Heather Dyer  
 Water Resources Project Manager  
 San Bernardino Valley Municipal Water District  
 380 East Vanderbilt Way, San Bernardino, CA 92408  
 909-387-9256/ [heatherd@sbtvmd.com](mailto:heatherd@sbtvmd.com)

FROM: Anthony Serrano, Local Taxpayer  
 (909) 496-4733 Cell

DATE: Thursday, February 25, 2016

SUBJECT: Comments Draft Environmental Impact Report (DEIR)  
 Sterling Natural Resource Center

**REQUEST**

I am requesting the Draft Environmental Impact Report (DEIR) be “re-done” and “recirculated” pursuant to:

*“Public Resources Code §15088.5(a)(4) Recirculation of an EIR Prior to Certification: (a) A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term “information” can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not “significant” unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project’s proponents have declined to implement. “Significant new information” requiring recirculation include, for example, a disclosure showing that: (4) **The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (Mountain Lion Coalition v. Fish and Game Com. (1989) 214 Cal.App.3d 1043).**”*

Specific reasons for the request are provided and discussed below.

**BACKGROUND**

The “Background” section of the DEIR identifies the ***“proposed project would be located within three municipalities, including the City of Highland, City of San Bernardino, and City of Redlands, and the unincorporated areas of San Bernardino County.”***

In addition, the “Project Description” section of the DEIR item number “5” states the following: ***“Refurbish and equip the groundwater wells near the Rialto Channel to potentially supply groundwater to the Rialto Channel when supplemental water is needed in the SAR for environment benefits.”***

1. I support the proposed waste water recycling project but given the recent news articles concerning Flint, Michigan and their water contamination with “lead poisoning” we need special consideration given to our immediate situation,
2. Our groundwater has a long history for contamination due to plumes of trichloroethylene, perchlorate, and other types of contamination but this information was not disclosed in the DEIR. My East Valley Water District website reports: ***“The District produces 80% of our water supply from local groundwater wells. These wells are located in the Bunker Hill Groundwater Basin.”*** Based on this information, every effort should be made to identify our



sources of water supply i.e. groundwater, surface water, and State Water Project water, all potential contamination for those sources, identify ways to mitigate the contamination, and

- 3. Now that we have the opportunity to “re-open” the discussion on surface, groundwater, and State Water Project related contamination issues via the DEIR we need to take advantage of the new technologies and solutions to cleanup the contamination issues once and for all! Everyone talks about a “comprehensive” solution...now is the time!

Based on this information we need to update the DEIR to:

- 1. Identify and disclose past efforts to cleanup all types of groundwater contamination in the immediate area,
- 2. Develop a list for the top 10 types of groundwater contaminations in our area i.e. plumes of trichloroethylene, plumes of perchlorate, etc.,
- 3. Identify the types of technology or solutions that were previously used to help mitigate those contaminations,
- 4. Identify the new types of technology or solutions that can now be used to help mitigate those contaminations,
- 5. Identify the types of screening processes to be used at the proposed waste water treatment plant to cleanup those contaminations,
- 6. Make sure the new waste water treatment plant does not become contaminated with the current contaminants, and
- 7. Determine if the “sludge” by product contamination levels are legal to relocate or sell?

1

My comments and concerns for the following are:

- 1. No costs disclosed as required by Public Resources Code §21001(g) and Public Resources Code §15088.5(a)(4),
- 2. No disclosure of the East Valley Water District (EVWD) lawsuits against San Bernardino International Airport (SBIAA),
- 3. No disclosure for the old and ongoing Lockheed Propulsion Co. plumes of trichloroethylene and plumes of perchlorate.
- 4. No disclosure for the old and ongoing Mid-Valley Sanitary landfill plumes of perchlorate located in Rialto,
- 5. No disclosure for Governor Brown signing Senate Bill 88 during year 2015 for the State's new law "Consolidation and Extension of Service"
- 6. No disclosure on EVWD’s decision to close down Plant 150 operations during October 2015,
- 7. Impact, if any, pending legislation AB1666 to help finance project?

**I. No Costs Disclosed as required by Public Resources Code §21001(g) and Public Resources Code §15088.5(a)(4) -**

The DEIR did not include any cost information but either the consultant is required to include the costs or the “Lead Agency” is required. The two laws state the following:

- 1. Public Resources Code § 21001. ADDITIONAL LEGISLATIVE INTENT: The Legislature further finds and declares that it is the policy of the state to: ***“(g) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment,”*** and
- 2. Public Resources Code §15088.5(a)(4) Recirculation of an EIR Prior to Certification: *(a) A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation include, for example, a disclosure showing that: (4) The draft EIR was so fundamentally and basically*

2

*inadequate and conclusory in nature that meaningful public review and comment were precluded. (Mountain Lion Coalition v. Fish and Game Com. (1989) 214 Cal.App.3d 1043).*

Some of the reasons for costs concerns are:

1. **April 28, 2010** - attached is a 2-page Highland Community News article dated April 28, 2010 titled: *“Old pals split over pump tax.”* The article stated in part: *“Water treatment plant - The board approved going out to bid on the district’s planned water treatment plant. The district is getting a \$3 million grant from the state, plus a state loan of \$8 million at no interest for 30 years. In addition the district plans to float a bond for the additional \$5 million needed to cover the cost of construction,”*

Now we have been told via an EVWD Economic Impact Report dated March 2015 the proposed waste water recycling facility may cost as much as \$126M? The water treatment plant cost was approximately \$16M but this project will cost \$126M plus more???

2. **October 19, 2011** - attached is a 1-page Highland Community News article dated October 19, 2011 titled: *“Another piece of the Harmony puzzle told.”* The article stated in part: *“James Campbell of Orange County and Pat Loy of the Lewis Operating Group have provided another bit of information on the Harmony project planned for the vacant land east of Seven Oaks Dam. Meeting with San Bernardino Valley water Conservation District Oct.12, they discussed a possible treatment plant for the project’s sewage. With cooperation with East Valley Water District, the Conservation District and the city of Highland, a plant could be constructed to provide tertiary treatment and then put the treated water into Conservation District percolation ponds.”*

The local taxpayers in the City of Highland and local ratepayers of EVWD have been told via several Highland Community News articles since year 2011 to date that the local ratepayers would not see any rate increase due to the proposed waste water treatment facility but this information was not listed in the DEIR?

3. **April 15, 2015** - attached is a 1-page letter from East Valley water District dated April 15, 2015 subject: “Water and Sewer Will Serve letter for Tentative Tract Map 18871 (Harmony Project)” to Mr. Ben Macaluso, Vice President Lewis Operating Corporation. The letter put Lewis Group on notice they are responsible for the \$126M in costs.

Based on this information, the DEIR needs to include this letter and responsible party for \$126M of the costs?

**II. No disclosure of the East Valley Water District (EVWD) lawsuits against San Bernardino International Airport (SBIAA)**

- attached are copies of the lawsuits and proposed settlement agreement. No disclosure for the EVWD lawsuit filed 10/29/2013 EVWD vs San Bernardino International Airport (SBIAA) and Inland Valley Development Agency (IVDA) case No. CIVDS 1313090 regarding "avigation easement rights" case dismissed 1/9/2014; EVWD filed new case 1/22/2014 with U.S. District Court case No. ED CV 14-00138 GAF SPx and District Court Dismissed case; and EVWD filed a new case 7/15/2014 a Notice of Appeal to U.S. Court of Appeals for the Ninth Circuit, case No. 14-56146 and case is still ongoing. This litigation was not disclosed in the draft EIR in section 3.11 "NOISE" in connection with airport being located within 2 miles (proposed site is less than a mile from SBIAA) and no discussion regarding the pending litigation for "avigation easement rights" or noise impact from SBIAA was included,

**III. No disclosure for the old and ongoing Lockheed Propulsion Co. plumes of trichloroethylene and plumes of perchlorate** - attached are copies for the following information:

1. Santa Ana Regional Water Quality Control Board Cleanup and Abatement Orders for orders 94-37, 97-58, 01-56,
2. July 7, 2008 The Washington Times news article titled: “Lockheed: U.S. must pay for rocket-test cleanup,” and
3. Drinking Water news article titled: “Perchlorate-Rocket Fuel Pollution Strains Water Supply Prompts Health Fears.”

**IV. No disclosure for the old and ongoing Mid-Valley Sanitary landfill plumes of perchlorate located in Rialto**

The DEIR did not disclose the April 29, 2009: “Adoption of (1) Resolution No. R8-2009-0009, Authorizing the Executive Officer to Enter into an Administrative Settlement Agreement with the County of San Bernardino et al, and (2) Cleanup and Abatement Order No. R8-2009-0010, Superseding and Replacing Cleanup and Abatement Order No.



2

3

4

5

R8-2003-0013 and R8-2004-0072 for San Bernardino County, Solid Waste Management Division, Mid-Valley Sanitary Landfill Property.” Attached are copies of:

1. April 29, 2019 Resolution (7-pages), and
2. Settlement Team’s List of Witnesses and Summary of Testimony

↑  
5

**V. No disclosure for Governor Brown signing Senate Bill 88 during year 2015 for the State's new law**

**"Consolidation and Extension of Service"** - to reduce the number of existing water agencies....this will help mitigate redundant executive/administrative staff and reduce costs by consolidating all water agencies under a regional concept i.e. customer service, billing, accounting, and many other industries have merged and consolidated over the years....now is the time for water agencies to consolidate and be more efficient and cost effective. Attached are copies of:

6

1. February 5, 2016 Redlands Daily Facts news article titled: **“How to oppose Redlands’ proposed water and sewer rate increases”** who is seeking a 45% rate increase!
2. 2-page Governor’s FACT SHEET water consolidation, and
3. Can we determine how much money can be saved, on an annual basis, by reducing the number of water agencies under the SBVMWD and allow SBVMWD to provide all of the Executive/Administrative functions. These cost savings can then be passed on to the rate payer by mitigating rate increases?

**VI. No disclosure on EVWD’s decision to close down Plant 150 operations during October 2015** - how will this impact the water supply to the project?

7

**VII. Impact, if any, pending legislation AB1666 to help finance project?** - attached is a copy of AB1666. The City of Highland is proposing a “Mello-Roos” form of financing for the proposed Harmony Project, the project is requiring on site water and sewer services, discussions have been ongoing in the City’s proposed Specific Plan to run a connection line from the proposed Harmony Project site to connect to the proposed Sterling Natural Resource Center, and all of these infrastructure costs are to be included in the proposed “Mello-Roos” financing. “Mello-Roos” financing is a time-bomb in California and AB1666 has been introduced on January 14, 2016 in an effort to gain some oversight and enforce annual reporting. The local taxpayers in the City of Highland oppose any “Mello-Roos” financing because the local taxpayer becomes the guarantor for the bonds required for the “Mello-Roos.”

8

Thank you.

---

**Subject:** FW: Anthony Serrano Inquiry re Lawsuit Settlement EVWD v SBI and SBVMWD: Notice of Availability of the Draft EIR for the Sterling Natural Resource Center  
**Attachments:** 2-9-2016 Dismissal EVWD v SBI Lawsuit Docs.pdf

**From:** Anthony Serrano [mailto:anthonyaserrano@gmail.com]  
**Sent:** Wednesday, February 10, 2016 12:22 PM  
**To:** Jim Harris <jharris@sbdairport.com>  
**Cc:** Larry Mainez <lmainez@cityofhighland.org>; Kim Stater <kstater@cityofhighland.org>; Brandy Littleton <blittleton@cityofhighland.org>; Heather Dyer <heatherd@sbvmwd.com>  
**Subject:** Fwd: Anthony Serrano Inquiry re Lawsuit Settlement EVWD v SBI and SBVMWD: Notice of Availability of the Draft EIR for the Sterling Natural Resource Center

2-10-2016: Jim - Good afternoon and I am following up on my e-mail sent to you dated December 23, 2015 re the Notice Availability of the Draft EIR. As stated in my #3 bullet point to you listed in my e-mail is the EIR provision for the "2-mile issue from an airport" for a proposed waste water treatment plant being constructed? The proposed site for the waste water treatment plant is within 2 miles? Based on this information I thought it would be important for you as the Project Manager for SBI to attend the scheduled meetings for the draft EIR?

Please consider the following:

1. I have cut/pasted the Highland Community News article dated January 28, 2016 and titled: "Settlement announced in the EVWD vs. SBD lawsuit" concerning the "avigation easement rights" since the proposed Sterling Natural Resource Center waste water recycling project is in direct path of the "avigation easement rights" and the "2-mile within an airport" EIR rule is directly affected,
2. I have attached 4 court documents regarding the lawsuit CIVDS1313090 filed October 2013, SBI demurrer filed December 2013, and the Dismissal filed January 9, 2014,
3. The case was dismissed two years ago but is only being announced now?
4. Unfortunately two pending draft environmental impact reports ( City of Highland and EVWD) DID NOT make any disclosures for this pending litigation?

I see you have a schedule Board Meeting today at 3:00pm and this issue is on the agenda.

I am sending this letter to you via e-mail and will call your office at (909) 382-4100 to discuss.

Thank you.

Anthony Serrano  
(909) 496-4733 Cell

## Settlement announced in the EVWD vs. SBD lawsuit

- Story
- Comments (2)

Print

Create a hardcopy of this page

Font Size:

Default font size

Larger font size

1

Posted: Thursday, January 28, 2016 11:28 am | Updated: 2:43 pm, Thu Jan 28, 2016.

2 comments



Posted on Jan 28, 2016 by Charles Roberts

The East Valley Water District had filed suit against San Bernardino International Airport seeking relief from a flight regulation that prevented most construction where the District planned to build a new treatment plant on Sterling Avenue. On Wednesday, Jan. 27, it was announced at the EVWD Board meeting that an agreement had been reached and the suit was being dropped.

The EVWD had ultimately decided on an alternate location for the plant, called the Sterling Natural Resource Center, choosing a Del Rosa site, but keeping the name.

However the suit was allowed to remain to make the land more attractive to potential buyers.

Details of the settlement were not released.

At the same time, the San Bernardino International Airport Authority Board also met on Jan. 27 and had a closed door session with the lawsuit as one of the topics to be discussed. However, when the Board emerged from the session, there was no announcement concerning the EVWD suit.

The court website shows that a request for dismissal was filed on Jan. 6. On Jan. 9, there is a recorded notice of withdrawal of the lawsuit.

----- Forwarded message -----

From: Anthony Serrano <[anthonyaserrano@gmail.com](mailto:anthonyaserrano@gmail.com)>

Date: Wed, Dec 23, 2015 at 1:46 PM

Subject: Fwd: Anthony Serrano Inquiry re San Bernardino International Airport and SBVMWD: Notice of Availability of the Draft EIR for the Sterling Natural Resource Center

To: [jharris@sbdairport.com](mailto:jharris@sbdairport.com)

12-23-2015: Jim - Good afternoon. The receptionist provided me with your e-mail address and advised me that you are the project manager for projects involving the San Bernardino International Airport.

1. The reason for my e-mail is I wanted to make sure you received a copy of the December 20, 2015 "Notice of Availability of the Draft EIR for the Sterling Natural Resource Center" see below,
2. The proposed \$126M waste water treatment facility called the Sterling Natural Resource Center could be built near your San Bernardino International Airport,
3. I am sure that you are familiar with California Environmental Quality Act, Cal. Pub. Res. Code § 21000, et seq. ("CEQA") and EIR item "#9 HAZARDS and HAZARDOUS MATERIALS. How will the new facility impact: e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area? † f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?"
4. The San Bernardino International Airport represents a potential and ongoing growth vehicle for the community. I would hate to see any project have an adverse affect on the airport and future growth for the community,

- 5. The Notice information is listed below including the two planned community meeting dates January 14 and 19, 2016. Final questions are due by February 1, 2016, and
- 6. I simply wanted to bring this important issue to your attention?



1

I am sending this information to you via e-mail and will call your office to followup.

Thank you.

Anthony Serrano  
 7517 Mr. McDuff's Way  
 Highland, CA 92346  
 (909) 496-4733 Cell

----- Forwarded message -----

From: **San Bernardino Valley MWD** <[webmaster@sbumwd.com](mailto:webmaster@sbumwd.com)>  
 Date: Mon, Dec 21, 2015 at 8:31 AM  
 Subject: SBVMWD: Notice of Availability of the Draft EIR for the Sterling Natural Resource Center  
 To: [anthonyaserrano@gmail.com](mailto:anthonyaserrano@gmail.com)

**Notice of Availability of the Draft EIR for the Sterling Natural Resource Center**

The San Bernardino Valley Municipal Water District (Valley District) as the Lead Agency has prepared a Draft Environmental Impact Report (Draft EIR) pursuant to the California Environmental Quality Act (CEQA) for construction of the Sterling Natural Resource Center (SNRC).

Post Date: 12/20/2015 9:02 AM

**NOTICE OF AVAILABILITY OF THE  
 DRAFT ENVIRONMENTAL IMPACT REPORT FOR  
 THE STERLING NATURAL RESOURCE CENTER**

**Date:** December 17, 2015  
**To:** Responsible and Trustee Agencies and Interested Parties  
**Subject:** Notice of Availability of the Draft Environmental Impact Report  
**Project:** Sterling Natural Resource Center  
**Lead Agency:** San Bernardino Valley Municipal Water District  
**Review Period:** December 17, 2015, through February 1, 2016  
**Project Location:** The Sterling Natural Resource Center is proposed to be located in the City of Highland between East 5th and East 6th Streets at North Del Rosa Drive

**Project Description:** The San Bernardino Valley Municipal Water District (Valley District) as the Lead Agency has prepared a Draft Environmental Impact Report (Draft EIR) pursuant to the California Environmental Quality Act (CEQA) for construction of the Sterling Natural Resource Center (SNRC). The proposed project would construct a wastewater treatment plant and related administration facilities in the City of Highland to treat wastewater generated within the East Valley Water District (EVWD) service area, which is entirely within the Valley District service area. Currently, pursuant to an agreement, EVWD conveys that wastewater to the City of San Bernardino for secondary treatment at the San Bernardino Water Reclamation

---

**Subject:** FW: Anthony Serrano Inquiry to Kamron Saremi re Lockheed Propulsion Co. Pollution in San Bernardino County, CA  
**Attachments:** GeoTracker.website

**From:** Anthony Serrano [<mailto:anthonyaserrano@gmail.com>]  
**Sent:** Monday, February 22, 2016 2:57 PM  
**To:** Saremi, Kamron@Waterboards  
**Cc:** Heather Dyer  
**Subject:** Fwd: Anthony Serrano Inquiry to Kamron Saremi re Lockheed Propulsion Co. Pollution in San Bernardino County, CA

2-22-2016: Kamron - thank you for taking my telephone call and I appreciate your explaining your 30 year history of managing the Lockheed Propulsion Co. contamination issues for the: 1) plume of trichloroethylene, and 2) plume of perchlorate.

1. I have forwarded you a copy of my e-mail dated February 9, 2016, sent to Ms. Duarte in the US EPA's office in Los Angeles with the three attached articles,
2. Ms. Duarte forwarded my e-mail to Kevin (415) 972-3176 in the EPA's Region 9 Office in San Francisco,
3. Kevin called me, explained that he had worked with you on this project for many years, your office has taken the lead, and he provided me with your name and office telephone number, and
4. As I explained we have two separate draft Environmental Impact Reports: a) City of Highland, and b) San Bernardino Valley Municipal Water District (SBVMWD); but neither consultant on the EIR's disclosed the "Lockheed" history, how our community is impacted, and what steps need to be taken to avoid any future problems as in Flint, Michigan with "lead poisoning in the water?" We do not want any trichloroethylene and/or perchlorate poisoning!

My four concerns are:

1. How many more years will the "Lockheed" contamination issues affect our water resources in the City of Highland, Mill Creek Spreading Grounds, City of Mentone, etc.? What methods are being used to maintain the contamination? What happens if the contamination levels exceed safe levels? Who is responsible to manage/monitor/correct the contamination levels?
2. SBVMWD is the lead agency on the EIR, we need a new waste water treatment facility for our local use.....what types of screening processes are used for trichloroethylene and perchlorate? Do those screenings work? What about the "sludge" created from the trichloroethylene and perchlorate? What are the problems with this "sludge" by product?
3. Is Lockheed mandated to cover any portion of our future costs to protect our local water resources or build-out a new waste water treatment facility? The new facility will continue to screen out the trichloroethylene and perchlorate.....so I would think that a portion of the cost for this new waste water treatment facility by SBVMWD should be paid by Lockheed?
4. We just need good planning to avoid the new \$126M facility from being contaminated by any trichloroethylene and perchlorate. Since our EIR consultant did not cover this issue....I have raised it.

I have copied Ms. Heather Dyer, Project Manager at SBVMWD, on this e-mail.



Thank you.

Anthony Serrano  
(909) 496-4733 Cell

----- Forwarded message -----

From: **Anthony Serrano** <[anthonyaserrano@gmail.com](mailto:anthonyaserrano@gmail.com)>

Date: Tue, Feb 9, 2016 at 4:38 PM

Subject: Anthony Serrano Inquiry re Lockheed Propulsion Co. Pollution in San Bernardino County, CA

To: [duarte.romie@epa.gov](mailto:duarte.romie@epa.gov)

2-9-2016: Ms. Duarte - thank you for returning my telephone call. Attached are three short articles regarding the Lockheed pollution issue and specific legal references that should help you locate someone who can provide some up to date info?

Anthony Serrano  
(909) 496-4733 Cell



2

---

**Subject:** FW: Anthony Serrano Inquiry to SBVMWD and Feb 17, 2016 1% Finance Funding Expansion Announcement but EVWD and SBVMWD Project Not On List?  
**Attachments:** 2-17-2016 pr21716\_cwsrf\_finance.pdf; 021616\_3\_attachment\_a.pdf

---

From: Anthony Serrano [anthonyaserrano@gmail.com]  
Sent: Monday, February 29, 2016 8:54 AM  
To: Heather Dyer  
Cc: Kim Stater; Larry Mainez; Brandy Littleton  
Subject: Anthony Serrano Inquiry to SBVMWD and Feb 17, 2016 1% Finance Funding Expansion Announcement but EVWD and SBVMWD Project Not On List?

2-29-2016: Heather - Good morning! See following:

1. 1-page Notice dated 2-17-2016 and titled: "State Water Board Authorizes \$960 Million in 1% Financing For Recycled Water Projects," and
2. The list of the 36 eligible projects and titled: "ATTACHMENT A - Division of Financial Assistance Water Recycling Funding Program Applications Submitted in Response to Resolution 2014-0015 Projects Recommended for Receiving 1% Financing."

The Notice also states: "The new resolution allows the Division of Financial Assistance to approve 1 percent financing for all eligible recycling projects that have filed a complete application by the Dec. 2, 2015, deadline."

Guess what? No listing for EVWD or SBVMWD as part of the 36 eligible projects are listed?

Did you decide NOT to pursue the 1% financing opportunity?

Please advise.

Thank you.

Anthony Serrano  
(909) 496-4733

3

# CHAPTER 11

## Responses to Comments

---

As stated in *CEQA Guidelines*, Sections 15132 and 15362, the Final EIR must contain information summarizing the comments received on the Draft EIR, either verbatim or in summary; a list of persons commenting; and the response of the Lead Agency to the comments received. Twenty-two comment letters or emails were received by the Valley District in response to the Draft EIR. This chapter provides the Valley District's responses to these comments..

These responses do not significantly alter the proposed project, change the Draft EIR's significance conclusions, or result in a conclusion such that would result in significantly more severe environmental impacts. Instead, the information presented in the responses to comments "merely clarifies or amplifies or makes insignificant modifications" in the Draft EIR, as is permitted by CEQA Guidelines Section 15088.5(b).

Regarding recirculation of the Draft EIR, *CEQA Guidelines* Section 15088.5, requires the Lead Agency to recirculate an EIR only when significant new information is added to the EIR after public notice is given of the availability of the Draft EIR for public review. New information added to an EIR is not significant unless the EIR has changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse, environmental effect of the project or a feasible way to mitigate or avoid such an effect that the project's proponents have declined to implement (*CEQA Guidelines*, Section 15088.5). In summary, significant new information consists of: (1) disclosure of a new significant impact; (2) disclosure of a substantial increase in the severity of an environmental impact; (3) disclosure of a feasible project alternative or mitigation measure considerably different from the others previously analyzed that would clearly lessen environmental impacts of the project but the project proponent declines to adopt it; and/or (4) the Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded (*CEQA Guidelines*, Section 15088.5). Recirculation is not required where, as stated above, the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR (*CEQA Guidelines*, Section 15088.5).

Some of the responses below refer to and impose further mitigation measures, as described in Chapter 12, *Clarifications and Modifications*, of this Final EIR. These mitigation measures were proposed by commenters and, pursuant to CEQA, the Valley District imposed those measures to further mitigate for potentially significant impacts wherever feasible or imposed the measures to further reduce already less-than-significant impacts. Ultimately, the significance conclusions presented in the Draft EIR do not change even with the imposition of these new mitigation measures. Moreover, because these mitigation measures address ways to implement the proposed project and do not propose the construction of new facilities, none of these new mitigation measures would result in any potentially significant impacts of their own.

## Comment Letter – U.S. Fish and Wildlife Service (USFWS)

### Comment USFWS-1

The comment describes the project and contents of the DEIR.

### Response to USFWS-1

Valley District appreciates the comment’s summary of the status of the Santa Ana sucker and the strategy Valley District has adopted to mitigate the project’s impacts to the species. The comment accurately captures the complex nature of the threats to the SAS and its habitat and the challenges faced by agencies that endeavor to mitigate the effects of projects that impact the Santa Ana River watershed.

Valley District agrees with the observation that the volume of perennial low flow in the Santa Ana River is not the only factor affecting the long-term viability of the SAS. Mitigation measures that address a variety of those factors stand the best chance of ameliorating impacts to and facilitating recovery of the species.

As noted by the comment, Valley District has proposed a comprehensive approach to mitigation of impacts to the sucker that will serve to reduce the risk to the species in the Santa Ana River watershed and provide significant conservation benefit to the species. The HCP or the HMMP will address specific degraded conditions in the river and provide a buffer against catastrophic events that result in death of multiple individual members of the species, before the project reduces flows in the river. The USFWS’ expertise will inform the development and implementation of the HCP or the HMMP and contribute to a robust plan for conserving the SAS and putting it on the path to recovery. This mitigation strategy will enable Valley District to take advantage of the locally-produced water the project will make available, thereby reducing reliance on imported water and the areas of imported water origin.

Valley District appreciates the USFWS’s regard for the water supply needs of the San Bernardino Valley and the efforts of Valley District and other local agencies, especially those that will partner in the HCP, to address the myriad factors affecting SAS mortality and fitness. Valley District also appreciates the recognition by the USFWS that through implementation of this project we seek to “chart a course towards the recovery of the species” (USFWS p. 3). It is the goal of Valley District that the SNRC HMMP lay the foundation for the larger, more comprehensive conservation strategy of the HCP. Additionally, Valley District concurs with the USFWS stated hope that this mitigation strategy “will be emulated by other water projects in the San Bernardino Valley” in order to harness the collective power of partnerships and economies of scale to make real progress towards recovering this species. Valley District looks forward to working with the Service during the consultation process and in finalizing and implementing the HCP and HMMP.

## Comment USFWS-2

The comment provides description of the SAS, states that the project would divert water from the SAR which supports the listed SAS, and notes critical habitat for the SAS and other species in the vicinity of the project.

## Response to USFWS-2

Valley District agrees with the comment's identification of critical habitat and the project's reduction of flows in the SAR. The DEIR acknowledges that the project would divert water from the SAR, and evaluates impacts to SAS beginning on 3.4-48. Mitigation Measure BIO-3 outlines several conservation measures to improve habitat conditions within the segment of the SAR directly below the RIX discharge, and describes the project's participation in the Upper Santa Ana River HCP. Valley District believes the efforts that will be pursued under Mitigation Measure BIO-3 will contribute greatly to the conservation and recovery of the SAS over the long term.

Please see Responses to Comments CBD-7, CBD-8, and CBD-11.

## Comment USFWS-3

The comment states sediment transport in the SAR must be considered when managing SAS habitat.

## Response to USFWS-3

Valley District agrees that sediment transport in the SAR is a factor that must be considered in managing SAS habitat. Accordingly, Mitigation Measure BIO-3 includes conservation measure SAS-4 that would introduce high pulse flows periodically to the SAR to move sand deposited by storm events off the cobble substrate. Existing conditions are such that during storm events, sand is deposited in depths ranging from inches to several feet over a base of gravel and cobble. This effectively reduces the availability of appropriate spawning and foraging substrate for weeks or even months while the continuous discharge of clean water from the wastewater treatment plants transports the sand off the gravel bed. Mitigation Measure BIO-3 proposes to speed up this process through artificial creation of high-flow pulse events which have been modeled by the USGS on Valley District's behalf, thus increasing the *temporal* availability of suitable habitat for SAS. Habitat condition triggers and success criteria for this Mitigation Measure will be developed in coordination with the USFWS, with technical support by USGS, such that maximum benefit can be provided to the SAS habitat to increase spawning and foraging habitat availability, specifically during key times of the year when exposed gravel and cobble is crucial to successful reproduction and recruitment of the species. The ultimate goal of this Mitigation Measure is to increase the temporal availability of gravel/cobble substrate despite a reduction in continuous discharge.

## Comment USFWS-4

The comment suggests that the Reduced Discharge Study be updated to reflect a more conservative methodology.

## Response to USFWS-4

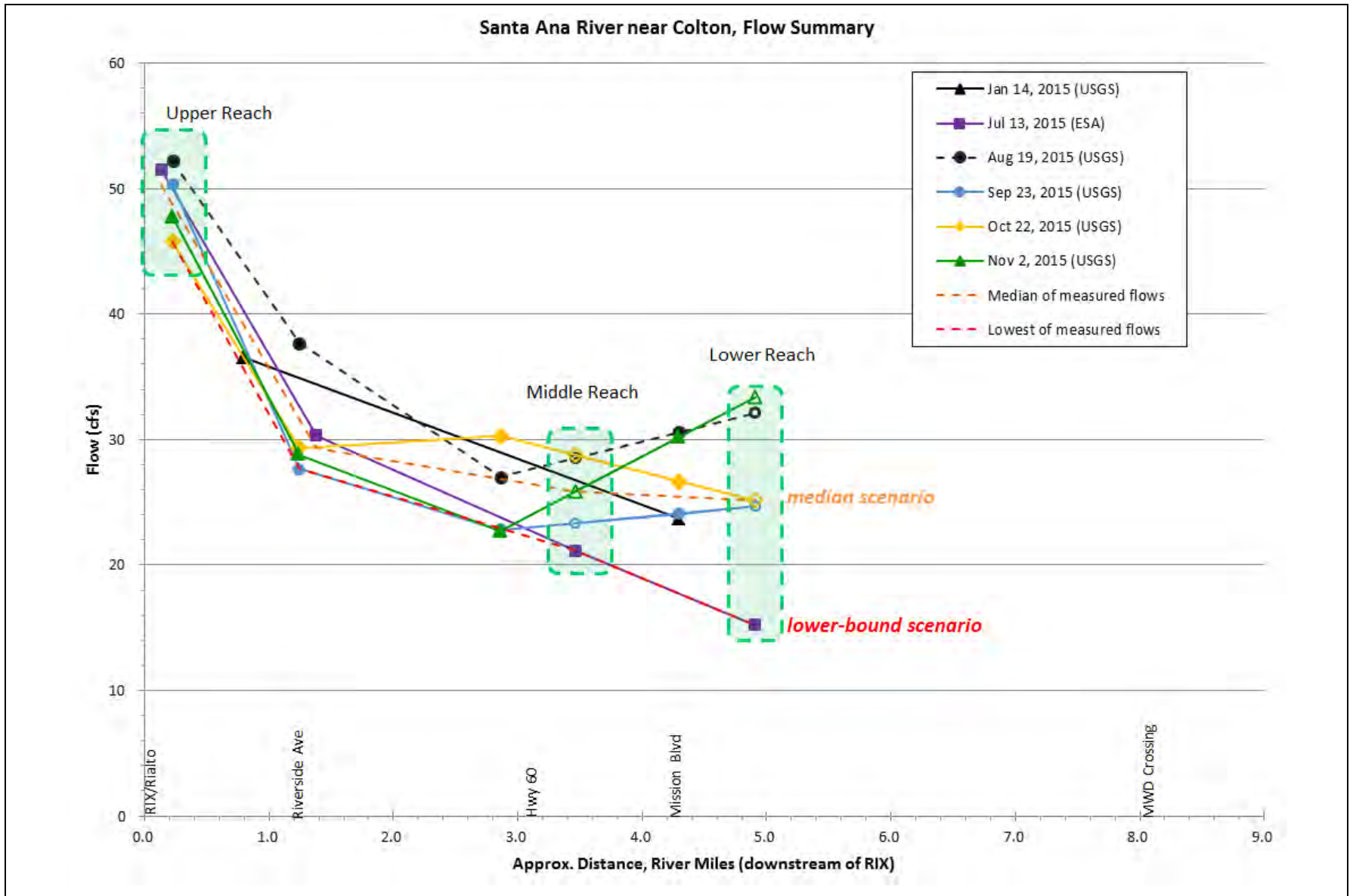
Valley District has included an Update to the Reduced Discharge Study in the Final EIR in Appendix H that modifies the methodology consistent with the suggestion made by the USFWS. The results show a slightly greater impact to wetted area and average velocity area but are not to a level that would preclude occupancy of the impacted reach by the SAS or Arroyo chub.

As shown in Figure A1 of the Study Update (see below), USGS data collected on a monthly basis in 2015 show a wide variety of water depth in the lower study area reach. The USGS data show that the data provided in the DEIR for the lower reach on Figure 3.4-3 are conservatively low.

In recognition that the relationship of the surface water flow and groundwater contribution in the SAR is complex, and to ensure a conservative analysis, the updated Reduced Discharge Study provides results of the hydrology model assuming zero contribution from groundwater. The results are summarized in the Table 3 below (from Appendix H). The results show slightly greater impacts compared to the earlier analysis assuming groundwater contribution. The revised analysis shows a 7 percent average decrease in wetted area as opposed to 6 percent in the initial model results. Also, maximum change in velocity and depth are similar to the initial model results.

**TABLE 3  
MAXIMUM AND MEAN CHANGE IN AREA WITHIN A VELOCITY OR DEPTH ZONE, AND CHANGE IN WETTED CHANNEL AREA UNDER A LOWER BOUND AND MEDIAN FLOW SCENARIO, FOR A 6 MGD REDUCTION AT RIX**

Flow scenario	Reach	Max. change ( $\pm$ ) in area of a velocity or depth zone	Mean change in area of a velocity or depth zone	Change in wetted area over existing condition	Average change in wetted area over existing condition
Lower Bound flow scenario	Upper	8%	2%	-5%	
	Middle	7%	2%	-12%	-7%
	Lower	11%	3%	-4%	
Median flow scenario	Upper	7%	2%	-3%	
	Middle	8%	2%	-7%	-4%
	Lower	10%	3%	-3%	



SOURCE: ESA and USGS

Note: solid markers denote measured data points;  
hollow markers denote interpolated or extrapolated data

Santa Ana River Low Flow Study, D150005

**Figure A1**

Revised flow data used for existing and proposed conditions

The conclusions of the Study Update are that the contribution of groundwater in the lower study area reach is complex and variable. However, the data do show that the river becomes a gaining stream to some varying degree as it slows and enters the lower study area reach above the MWD crossing. The updated study conducts the analysis assuming zero contribution from groundwater and finds similarly minimal impacts.

Mitigation Measure BIO-3 has been modified to include SAS-7 as shown below to include hydrologic monitoring of the SAR below RIX to better understand the seasonal and diurnal fluctuations in river flow.

BIO-3: Disturbance to Santa Ana sucker

- **SAS-7: Monitoring.** The HMMP will outline a monitoring program to collect hydrology data in the segment of river between the RIX discharge and Mission Boulevard. The data will include flow velocity and depth.

### **Comment USFWS-5**

The comment states that SAS prefer (and that the invasive red alga apparently does not prefer) higher velocity water which is not common in the SAR under existing conditions.

### **Response to USFWS-5**

The comment accurately notes that under existing conditions higher velocity water is not common in the SAR. To improve upon the existing habitat conditions, Mitigation Measure BIO-3 includes conservation measure SAS-1 that would introduce microhabitat enhancements within the SAR below the RIX discharge to increase the prevalence of high velocity river segments around habitat features, such as large woody debris and boulders followed by slower-moving pools and riffles. Mitigation Measure BIO-3 aims to create a series of high-velocity scour areas and subsequent pools and riffles throughout the reach impacted by this project thus creating linked microhabitat within the mainstem that will provide refugia, foraging, and spawning habitat for SAS while reducing suitable flow conditions for the red alga.

### **Comment USFWS-6**

The comment states that the RIX discharges are trending downward over the last decade and that groundwater conditions influence SAR flows and requests that the DEIR evaluate potential impacts to the SAR from future groundwater fluctuations.

### **Response to USFWS-6**

As suggested by the comment, the Reduced Discharge Study has been updated to reflect a more conservative contribution to the SAR from groundwater based on the recognition that groundwater management in the future may affect SAR flows. The Study Update is included in Appendix H. However, the future condition and impact to the river from groundwater



management actions is speculative. The Study Update revises the analysis to include river depth data collected by USGS in 2014 and 2015. The USGS data shows high variability in depth in the lower reach of the study area but generally support the observation that groundwater and/or underflow contributes to the surface flows in this reach. The USGS data were uniformly greater than the measured observations in the Reduced Discharge Study, suggesting that the Reduced Discharge Study's conclusions were conservatively low. Valley District has included a groundwater infiltration monitoring component to its ongoing research with the USGS. Beginning in July 2015, the USGS began collecting monthly data to assess the surface flow and groundwater infiltration interaction between the Rialto Channel and Mission Blvd. Preliminary results of this study are expected by the end of 2016 and will inform decisions by the HCP and others as to the priority conservation activities to benefit the species in this reach.

### **Comment USFWS-7**

The comment requests that the DEIR evaluate impacts of diurnal fluctuations in RIX discharges.

### **Response to USFWS-7**

The Reduced Discharge Study Update describes SAR depth data collected during day time hours. Recognizing that river flows react to diurnal flow patterns, daily low flow periods create substantially lower depths than reflected in the Study. Valley District does not have authority over the operation of the RIX discharges. Although flow equalization may improve habitat conditions for the SAS, implementation of this operational modification is not within the authority of Valley District at this time.

However, USGS is conducting an evaluation of flows that is expected to be completed in late 2016. The study is expected to include an examination of diurnal fluctuations in RIX discharges. Once complete, that study can be used by Valley District, the USFWS, CDFW, and the other partners in the HCP to refine operations and implementation of the components of the HCP so as to address diurnal fluctuations in RIX discharges in a manner that will benefit the SAS.

### **Comment USFWS-8**

The comment states that microhabitat improvements will need to consider each life stage to develop measureable, achievable habitat enhancement goals.

### **Response to USFWS-8**

Valley District agrees that each life stage of the SAS must be considered in order to achieve habitat enhancement goals. The mitigation measure commits Valley District to the preparation of an HMMP that will outline implementation methodology and success criteria for each life stage habitat requirements. The microhabitat enhancements would be one component in a broader mitigation strategy in consultation with the wildlife agencies. The DEIR concludes that as one component of a broad mitigation strategy, any microhabitat enhancement implemented in coordination with the wildlife agencies provide benefits compared to existing conditions. Valley

District is working with several agencies to perform statistical analysis of existing datasets for the Big Tujunga and San Gabriel River populations as well as with the USGS who conducted the Santa Ana River baseline survey in September 2015. The focus of this analysis will be on utilization of key habitat features such as pools and riffles and specific variables related to those features such as size, depth, and distance to riparian cover. This analysis will be performed for all larval, juvenile, and adult life stages. In addition, the USGS is in the process of developing a Habitat Suitability Model based on the 2015 Santa Ana River data which will be completed in summer 2016. The results of these analyses will be used during the development of the HMMP to make informed decisions about success criteria for mitigation measures. Valley District appreciates and acknowledges USFWS' offer to assist in this process.

### **Comment USFWS-9**

The comment asks how the flushing flow events would be coordinated with the City of San Bernardino and requests that a hydrologic model be prepared that estimates the effects and trigger conditions of the flushing flows.

### **Response to USFWS-9**

Flushing flows proposed under conservation measure SAS-4 would be implemented by the City of San Bernardino in coordination with Valley District as agreed upon in a Memorandum of Agreement between the two parties. Valley District will negotiate the arrangement with the City to support mutually beneficial regional objectives. Table 2-9 of the DEIR recognizes that an agreement with the City of San Bernardino is necessary to implement some of the measures. Valley District may also utilize groundwater wells to implement SAS-4.

The Reduced Discharge Study describes the relationship between velocities and sediment transport. The cobble substrate in the 6,000 feet below RIX occurs due to the higher velocities caused by the gradient. Currently, as noted in the comment, storm flows bring sediment-laden water through the river corridor and deposit sand on the river bed in depths ranging from inches to several feet over a base of gravel and cobble. This effectively reduces the availability of appropriate spawning and foraging substrate for weeks or even months while the continuous discharge of clean water from the wastewater treatment plants transports the sand off the gravel bed. Mitigation Measure BIO-3 proposes to speed up this process through artificial creation of high-flow pulse events which have been modeled by the USGS on Valley District's behalf, thus increasing the temporal availability of suitable habitat for SAS. Habitat condition triggers and success criteria for this Mitigation Measure will be developed in coordination with the USFWS, with technical support by USGS, such that maximum benefit can be provided to the SAS habitat to increase spawning and foraging habitat availability, specifically during key times of the year when exposed gravel and cobble is crucial to successful reproduction and recruitment of the species. The ultimate goal of this Mitigation Measure is to increase the temporal availability of gravel/cobble substrate despite a reduction in continuous discharge. The DEIR concludes that as one component of a broad mitigation strategy, providing the ability to introduce periodic flushing flows, implemented in coordination with the wildlife agencies, provides benefits compared to existing conditions, while not fully offsetting the adverse effects of a reduction in flows.

### **Comment USFWS-10**

The comment suggests that the use of supplemental cool water supplied by one or more wells along the Rialto Channel should be done during a longer portion of the year.

### **Response to USFWS-10**

Mitigation Measure BIO-3 provides the mechanism to introduce groundwater into the Rialto Channel to benefit habitat. The goal of this measure is to increase the temporal availability of suitable habitat by reducing water temperatures in the summer to a level below the tolerance threshold of the species. The use of this measure would be on an appropriate scale related to the level of project impact and refined in coordination with the wildlife agencies through the permitting process and development of the HMMP. Success criteria and a monitoring plan for this mitigation measure will be included in the HMMP. The DEIR concludes that as one component of a broad mitigation strategy, providing supplemental water during the summer months in coordination with the wildlife agencies provides benefits compared to existing conditions and is commensurate with the scale of project-level effects. If appropriate, Valley District will take advantage of future opportunities to consider supplementing existing flows with cool groundwater during a larger portion of the year, likely through implementation of the HCP conservation strategy.

### **Comment USFWS-11**

The comment states that the use of cooler water may decrease the abundance of invasive non-native alga, which would benefit the sucker.

### **Response to USFWS-11**

The DEIR concludes that as one component of a broad mitigation strategy, providing supplemental water during the summer months in coordination with the wildlife agencies provides benefits compared to existing conditions. Although red alga is a concern in the areas downstream of the RIX discharge, the intent is that introduction of colder water in the Rialto Channel will have temperature-reducing effects downstream, which could help hinder growth of red alga. Based on coordination with the USFWS and other experts, Valley District also believes that high flow pulse events, as proposed in Mitigation Measure BIO-3, may also be used as a tool to control the growth of the red alga. Precise formulation strategies to control factors that adversely affect the SAS and its habitat, like red alga, will also be a key component of the HCP and the HMMP.

### **Comment USFWS-12**

The comment states that it is important that any project impacts to SBKR and its designated critical habitat be considered in the context of the long-term persistence of the SBKR population as necessary to the survival and recovery of the sub-species.

## Response to USFWS-12

Valley District appreciates and shares the concern for the SBKR – although there has been significant focus on efforts to protect and conserve the SAS, it is also important that impacts to the SKBR, including impacts that may result from efforts to benefit the SAS, be addressed. To address potential significant impacts to the SBKR, the DEIR includes Mitigation Measure BIO-2 which commits Valley District to direct consultation with CDFW and USFWS for potential impacts to SBKR and other listed species impacted in City Creek. This consultation would be conducted directly and not through the Upper SAR HCP. Valley District is committed to conduct additional future site-specific surveys and appropriate consultation with CDFW and/or USFWS, the results of which will be used to determine proper mitigation for impacted species. Valley District is also committed to a 1:1 mitigation ratio for temporary habitat impacts resulting from construction, and a 3:1 ratio for permanent impacts to species associated with affected alluvial fan habitat, including the SBKR. It is Valley District's goal to provide enhancement of SBKR habitat near the area if appropriate to achieve maximum ecological value to the species, in coordination with the Wildlife Agencies. However, if onsite enhancement is not possible, Valley District will seek to obtain and manage high-quality habitat or an area with the potential to become high-quality habitat through additional management adjacent to the impact area and within designated critical habitat. Additionally, Valley District will add a subsection to Mitigation Measure BIO-2 requiring pre-construction trapping and relocation of the San Bernardino kangaroo rat in accordance with accepted protocol, if determined necessary by the USFWS during the Section 7 consultation process.

Please see Responses to Comments CDFW-1, CBD-5, CBD-9, CBD-10, and CBD-12.

## Comment USFWS-13

The comment suggests the FEIR include a regional groundwater basin assessment for City Creek and Santa Ana River in the assessment of potential changes to the riparian plant community and how those changes will affect flycatcher, vireo and their critical habitats.

## Response to USFWS-13

It is also important to note that part of the HMMP proposed for this project is a commitment for non-native vegetation management within the area of project impacts, in perpetuity. The purpose of this measure is to decrease the competitive stress experienced by native vegetation in the presence of non-native vegetation as a means to offset potential stress from the proposed reduced water supply, making it likely that the riparian vegetation community will remain healthy and robust. Because the mitigation measure proposes to manage for native regrowth in areas of non-native removal, it is unlikely there will be a significant decrease in the amount of native vegetation within the project impact area even taking into account a reduction in water supply since natives use less water than non-native species. In other words, Valley District is committed to acre for acre replacement (i.e. replacing each acre of non-native riparian vegetation that will be removed with an acre of native riparian vegetation) within a geographic area to be determined during the permitting processes with the Wildlife agencies. Valley District also offers the

financial commitment to maintain these acres in perpetuity once established. Additionally, there will likely be an increase in native riparian vegetation in Rialto Channel and City Creek. Therefore, the potential impact to riparian vegetation can be expected to be minimal.

The addition of water to Rialto Channel during summer months as proposed in Mitigation Measure BIO-3, and perennial water to City Creek, will increase the amount and/or quality of riparian habitat within these two tributaries to the Santa Ana River. Appropriate riparian habitat in these geographical locations will augment the geographic distribution and availability of suitable habitat for vireo and increase the amount of habitat located in the existing vicinity of known flycatcher occupancy at the base of the San Bernardino Mountains. Valley District believes these potential benefits to the species and their critical habitats offset the small loss or degradation to riparian habitat that may result from reduced discharge.

Please see Response to Comment OCWD-1 and OCWD-2.

### **Comment USFWS-14**

The comment suggests that an assessment of impacts to woolly-star habitat and other special status plants, and an appropriate strategy to offset them be included in the FEIR.

### **Response to USFWS-14**

The DEIR includes strategies to offset impacts to special status plants, in recognition that installation of a discharge structure within City Creek could affect plant species. Mitigation Measure BIO-1 commits Valley District to conducting a focused botanical survey prior to any construction in City Creek, Redlands Basins, and/or the East Twin Creek Spreading Grounds. Based on the results of that survey and in consultation with USFWS and/or CDFW, Valley District will develop and implement an impact minimization and compensation strategy to ensure that impacts to special status plants are less than significant.

## Comment Letter - California Department of Fish and Wildlife (CDFW)

### Comment CDFW-1

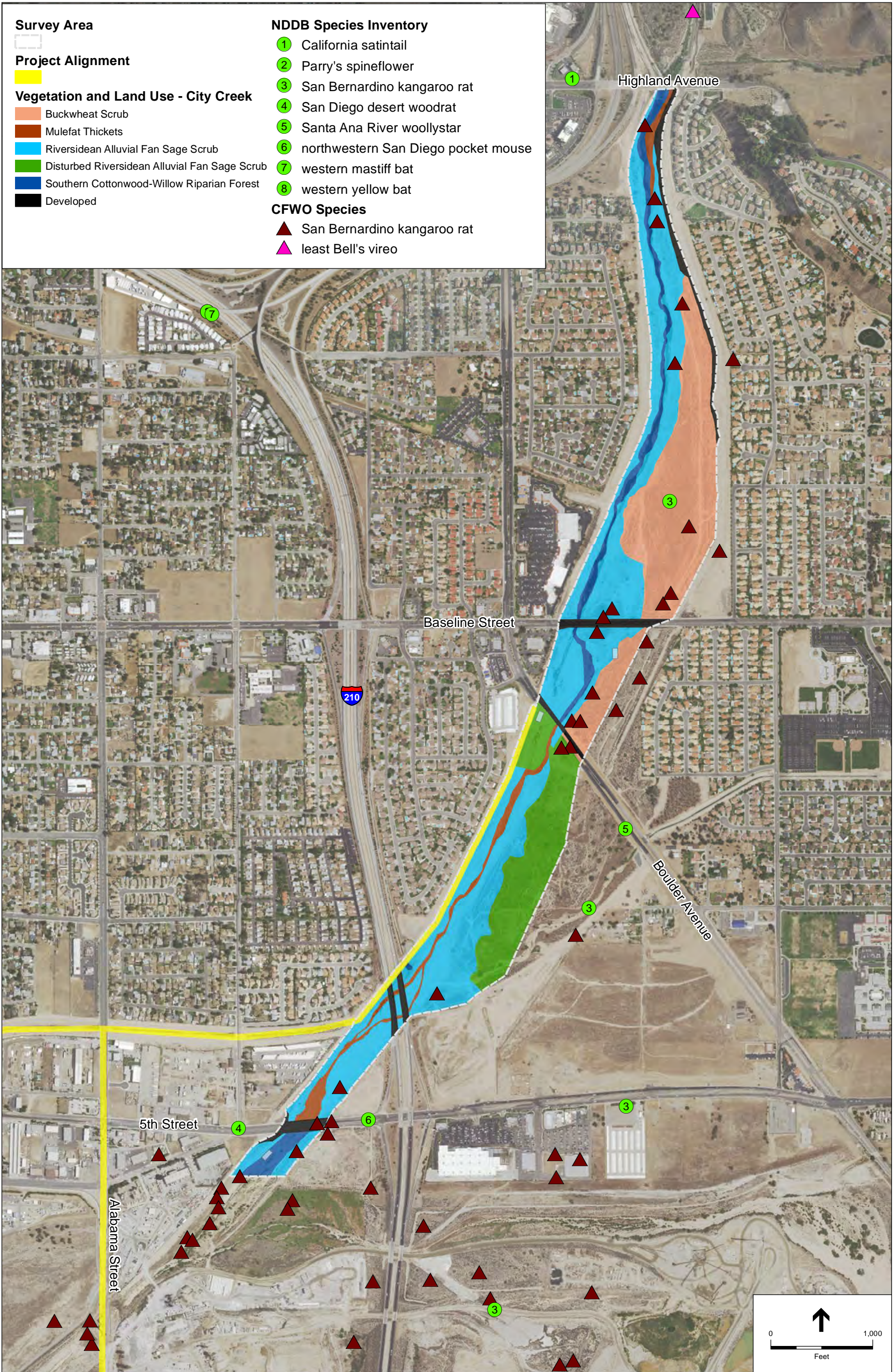
The comment suggests that the mitigation inappropriately defers data collection efforts and recommends that Valley District conduct focused surveys for the sensitive species identified as having the potential to occur onsite in order to adequately describe impacts and propose specific and enforceable compensatory mitigation. CDFW further recommends that once surveys are complete and specific and enforceable mitigation is formulated, the District recirculate the DEIR for public review.

### Response to CDFW-1

Valley District shares the commenter's concern regarding the potential impacts construction and operation of the project may have on sensitive species. That concern, however, is precisely why Valley District has chosen an approach to mitigation of those impacts that ensures the formulation of specific mitigation measures is based on the most up-to-date information possible, which will increase the effectiveness of the final mitigation strategy.

A biological resources site survey (summarized in Appendix C of the DEIR) was prepared for the DEIR, which assessed all potential impact locations described in the Project Description, and the DEIR appropriately inventories all potentially impacted species in Tables 3.4-2 and 3.4-3. A habitat assessment and vegetation map was prepared for the entire area of impact in City Creek and East Twin Creek Spreading Grounds (Figure 3.4-1b and 3.4-1c ). The DEIR acknowledges the potential presence of SBKR and avian species in City Creek and East Twin Creek Spreading Grounds based on the site visits and from occurrence data provided in the California Natural Diversity Data Base (CNDDDB). In response to comments received on the DEIR, additional species occurrence data in City Creek has been included. As shown in Figure 11-1, SBKR and rare plants have been found on the upper ledges of the river channel, mostly in areas where channel maintenance has not been conducted recently by the SBCFCD. However, near the confluence of City Creek and the SAR, SBKR have been identified near the low flow channel that may be affected by the project.





SOURCE: ESRI, 2015

Sterling Natural Resource Center . 150005

**Figure 11-1**  
 Species Occurrence Data



This page left intentionally blank



The DEIR defines the project discharge structures in Figures 2-7a through 2-7d, which are also attached to this response for ease of review. The discharge structure in City Creek would occur in a previously disturbed side of the channel. Figure 11-2 shows a recent Google Earth image of the location as completely devoid of vegetation. In the same image as supported by the vegetation map in the DEIR (Figure 3.4-1b), the center of City Creek is populated with mulefat thickets. This same area is included as an aerial photograph in Figure 2-7a. The vegetation visible in Figure 2-7a is significantly different than the more recent aerial image from Google Earth. Similarly, the low flow channel is in a different location. This emphasizes the need to conduct surveys as close to the time of impact as possible to get an accurate assessment of project impacts within the dynamic and ever-changing creek channel.



SOURCE: Google Earth, 2016

Sterling Natural Resource Center . 150005

**Figure 11-2**  
City Creek Aerial Image

The DEIR recognizes that within the impacted areas within City Creek there is the potential for sensitive plant and animal species to occur. For example, construction of the discharge facility within either City Creek and/or East Twin Creek Spreading Grounds would result in approximately 2,000 square feet of temporary disturbance to RAFSS and approximately 1,000 square feet of permanent disturbance. Once discharged into City Creek, the perennial flow would convert a corridor of the existing mulefat and RAFSS habitat into riparian vegetation. This could impact approximately 1.5 acres of RAFSS in the center of the creek channel. (calculated with GIS as a 50-foot wide corridor overlying the current low-flow channel, impacting mulefat scrub as well as RAFSS). This habitat conversion could affect areas currently occupied by SBKR and rare plants.

In recognition of this potential impact, Mitigation Measures BIO-1 and BIO-2 commit Valley District to replacing impacted sensitive habitat that supports sensitive species in consultation with CDFW and USFWS. In response to comments received on the DEIR, the Mitigation Measures have been refined to expressly require replacement of permanently impacted RAFSS habitat at a ratio no less than 3:1 in consultation with CDFW and USFWS. Valley District is committed to and looks forward to working with the wildlife agencies to develop appropriate compensation for the replacement of RAFSS habitat in City Creek with riparian vegetation.

As summarized below, Mitigation Measures BIO-1 and BIO-2 commit Valley District to avoiding these species where possible and compensating where avoidance is not feasible through consultation and development of appropriate strategies with the wildlife agencies. Deferring specific formulation of mitigation of potential impacts to sensitive species is appropriate here because while the types of plant and animal species that could be encountered during the time of the impact are well understood and identified in the DEIR, their distribution may change over time. This is particularly true in City Creek, where conditions can change due to intermittent flood events. Further, the need to relocate individual plants or animals or provide compensation will depend on how effectively the discharge structures can be located to avoid plants identified during pre-construction surveys, as directed by CDFW and USFWS. Surveys done prior to project approval would not best reflect the impacts that will occur at the time of construction of the project, because there will be lag time between approval and construction as the regulatory process continues. Valley District has concluded that conducting focused surveys closer to the time of construction and basing specific mitigation measures on the results of those surveys is the approach that will best protect the affected biological resources. In sum, formulation of specific mitigation measures to address potential impacts to plant and animal species due to construction and operation of the project must be based on the most current information in order for the measures to be meaningful and effective. A mitigation strategy based on studies conducted now could be entirely ineffective by the time the actual impacts occur, because the conditions of the potentially-impacted area are expected to change over time. Valley District has accordingly concluded that in general, studies that are used to develop specific mitigation strategies should be conducted as close to the time of the potential impact as possible.

Mitigation Measures BIO-1 and BIO-2 properly commit Valley District to conducting surveys closer to the time of the impact in order to better understand the actual on-the-ground conditions

of the areas that will be impacted so that Valley District can work together with CDFW and/or USFWS to determine how impacts to species can be best minimized, avoided, or rectified. In response to comments and to provide further assurances that any impacts will be properly mitigated, and as noted above, Valley District is committed to a 1:1 mitigation ratio for temporary habitat impacts resulting from construction, and a 3:1 ratio for permanent impacts to RAFSS and associated species. The precise details of how necessary mitigation measures will be carried out, however, will still be formulated closer to the time of the actual impacts, when surveys providing up-to-date information regarding the affected species will be formulated. This is not an improper deferral of data collection, but creation of an obligation to conduct additional focused surveys to provide precise data on sensitive plant and animal locations that will allow Valley District, in consultation with CDFW and /or USFWS, to ensure that the mitigation strategy adopted reflects actual conditions.

Mitigation Measures BIO-1 and BIO-2 have been refined as follows:

**BIO-1: Disturbance to Special-Status Plants.** The following measures will reduce potential project-related impacts to special-status plant species that may occur adjacent to the project site within City Creek to a less than significant level. Potential project-related impacts may result from the construction of the pipeline extension and discharge structure within City Creek, Redlands Basins, and/or the East Twin Creek Spreading Grounds.

- a. Prior to the start of construction within City Creek, Redlands Basins, and/or the East Twin Creek Spreading Grounds, a focused botanical survey will be conducted to determine the presence/absence of any of the special-status species with a moderate or high potential to occur. The focused botanical survey will be conducted by a botanist or qualified biologist knowledgeable in the identification of local special-status plant species, and according to accepted protocol outlined by the CNPS and/or CDFW.
- b. If a ~~special status state or federally listed~~ plant species is discovered in a project impact area, informal consultation with CDFW and/or USFWS will be required prior to the impact occurring to develop an appropriate avoidance strategy. Depending on the sensitivity of the species, relocation, site restoration, or other habitat improvement actions may be an acceptable option to avoid significant impacts, as determined through consultation with the resource agencies.
- c. If impact avoidance of a state or federally-listed species is not feasible, Valley District shall quantify the impacted acreage supporting state or federally-listed plant species within the construction area and estimated perennial flow area and prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected plants species. Valley District shall implement the conservation measures and compensation requirements identified through consultation by USACE with both CDFW and USFWS.



- d. Permanent impacts to RAFSS habitat from construction and operation of the discharge including within the City Creek channel resulting from perennial flow shall require on-site replacement or off-site compensation at a ratio of at least 3:1 in consultation with CDFW and USFWS. Temporary impacts to RAFSS habitat would be mitigated at a ratio of at least 1:1 in consultation with CDFW and USFWS.

**BIO-2: Disturbance to Special-Status Wildlife.** The following measures will reduce potential project-related impacts to special-status wildlife species that may occur within disturbed and native habitats, to a less than significant level. Potential project-related impacts may result from construction of the SNRC, construction of the discharge structures within City Creek and other discharge locations, and perennial discharges to City Creek or other discharge locations.

- a. Prior to the start of construction within City Creek or other discharge locations, Valley District shall conduct focused surveys within the project impact areas to determine if any state or federally-listed wildlife species (southwestern willow flycatcher, coastal California gnatcatcher, San Bernardino kangaroo rat, and least Bell's vireo) are located within project impact areas. Focused surveys will be conducted by a qualified and/or permitted biologist, following approved survey protocol. Survey results will be forwarded to CDFW and USFWS. If state or federally-listed species are determined to occur on the project site with the potential to be impacted by the project, consultation with CDFW and/or USFWS will be required.
- b. If impact avoidance is not feasible, Valley District shall quantify the impacted acreage supporting state or federally-listed wildlife species within the construction area and estimated perennial flow area and prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected wildlife species. Valley District shall implement the conservation measures and compensation requirements identified through consultation by USACE with both CDFW and USFWS.
- c. Prior to the start of construction of the SNRC building and the recycled water pipeline along 6th Street, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the CDFW Staff Report on Burrowing Owl Mitigation (2012). If burrowing owl is observed within undeveloped habitat within or immediately adjacent to the project impact area, avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance

with the *Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans* of the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW, 2012).

- d. Prior to the start of construction within City Creek, pre-construction site clearing surveys will be conducted of the project impact area within natural habitats. Any special status ground-dwelling wildlife will be removed from the immediate impact area and released in the nearby area.
- e. Permanent impacts to RAFSS habitat from construction and operation of the discharge including within City Creek channel resulting from perennial flow shall require on-site replacement or off-site compensation at a ratio of at least 3:1 in consultation with CDFW and USFWS. Temporary impacts to RAFSS habitat would be mitigated at a ratio of at least 1:1 in consultation with CDFW and USFWS.

#### *Deferred Mitigation*

The comment also states that permit negotiations conducted outside of the CEQA process are not CEQA compliant. The DEIR recognizes that within the impacted areas within City Creek there is the potential for sensitive plants to occur. Mitigation Measure BIO-1 commits Valley District to avoiding these plants where possible and compensating where avoidance is not feasible through consultation with the wildlife agencies. Valley District is conducting protocol level surveys in the spring of 2016 within the impact zones to support the Endangered Species Act consultation under Section 7. This is an appropriate mitigation strategy and does not require recirculation of the DEIR. Since conditions within City Creek change over time due to flood events, Mitigation Measure BIO-1 rightfully commits Valley District to conducting surveys closer to the time of the impact in order to implement the project's impact minimization action requirements as outlined in the Mitigation Measure. Valley District is committed to and looks forward to working with the wildlife agencies to develop appropriate compensation for the replacement of RAFSS habitat in City Creek with riparian vegetation.

The types of plant and animal species that could be encountered during the time of the impact are well understood and identified in the DEIR. However, their distribution may change over time, so surveys need to be conducted close to the time of impact. The need to relocate individual plants or provide compensation will depend on how effectively the discharge structures can be located to avoid plants identified during pre-construction surveys, as directed by CDFW and USFWS. The requirement to conduct additional focused surveys to provide precise data on sensitive plant and animal locations close to when the impact will occur is not a deferral of data collection and the DEIR does not need to be recirculated.

With respect to the comment that requiring additional surveys is a deferred mitigation, CEQA does not categorically prohibit deferred formulation of the specific details of mitigation measures. To the contrary, when the Lead Agency commits itself to mitigation that will satisfy performance standards articulated at the time of project approval, deferred development of the specifics of mitigation is permissible. (*Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208

Cal.App.4th 899, 944-945.) In other words, while section 15126.4(a)(1)(B) of the CEQA Guidelines states that formulation of mitigation measures should not be deferred, it also provides that mitigation measures may specify performance standards which would mitigate the significant effects of the project and which can be accomplished in more than one way. This does not preclude the later formulation of specific mitigation measures, but instead means that when specific mitigation measures will be formulated later, the performance criteria for such mitigation measures must not be loose or open-ended. Measures that require future formal consultation and determination of measures to mitigate impacts or compensate for loss are sufficiently definite to ensure that impacts will in fact be mitigated. (*Rialto Citizens*, 208 Cal.App.4th at 944-945.)

Deferred formulation of the details of mitigation is particularly proper when another regulatory agency must issue a permit for the project and is expected to impose specific mitigation requirements through that permitting process, as long as the EIR for the project includes performance criteria and the Lead Agency has committed itself to mitigation. In the *Rialto Citizens* case, which involved a large retail development project, several special status plant and animal species (including the San Bernardino kangaroo rat and the western burrowing owl) had the potential to occur on the project site. To mitigate the potential impacts to those species, the EIR proposed mitigation measures involving future site surveys and habitat assessments, the results of which would guide further efforts to mitigate potential significant impacts. For example, if a SBKR habitat assessment was positive, trapping efforts would be undertaken. If the trapping efforts found members of the species, the project proponent would be required to consult with USFWS or the Lead Agency to determine the appropriate off-site mitigation, which would require approval under section 10(a) of the Federal Endangered Species Act. The Court of Appeal found that these types of measures were sufficiently definite to mitigate potential impacts to the species, and did represent proper deferral of mitigation. In short, when a Lead Agency has committed to conduct future surveys, requires future regulatory review based on the results of those surveys, and identifies methods that will be considered for mitigating potential impacts, no improper deferral of mitigation has occurred.

In addition, courts have made clear that regulations designed to protect environmental resources provide sufficient performance standards to satisfy CEQA, and that an agency does not improperly defer mitigation when it commits to complying with such regulations. The court in *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 234 Cal.App.4th 214, 246 noted that that “[A] condition requiring compliance with regulations is a common and reasonable mitigation measure, and may be proper where it is reasonable to expect compliance.” Similarly, best management practices can also serve as the standards that make deferral of mitigation appropriate. (*Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App. 4th 777, 796.)

Here, Valley District has adopted a mitigation strategy very similar to that approved by the court in the *Rialto Citizens* and the *Center for Biological Diversity* cases. Valley District has identified general performance criteria and potential mitigation measures that can be implemented to meet those criteria and committed to developing specific mitigation measures through the formal consultation process. Valley District has determined that basing specific mitigation measures on

information acquired closer to the time of the expected impacts is the best way to ensure that impacts are in fact ameliorated or rectified. Discussions of the mitigation measures set forth in the EIR should be read with this overarching strategy in mind. For example, the project will not divert water from the Santa Ana River until the HCP or HMMP has been finalized and, with respect to habitat impacts related to construction and operation of the project, will also meet at least a 1:1 mitigation ratio for temporary habitat impacts and a 3:1 ratio for permanent habitat impacts. Future permitting processes will serve to better refine and further develop appropriate mitigation and, importantly, will give CDFW and other agencies further opportunities to suggest how mitigation strategies can be best adapted to respond to the actual conditions of the impacted areas. Valley District is eager to develop mitigation measures that have the best chance of benefitting the affected species, and looks forward to collaborating with CDFW and USFWS to develop both an effective plan for mitigating the project's impacts, and a regional, long term strategy for improving the system in City Creek for both RAFSS and riparian dependent species.

### **Comment CDFW-2**

The commenter agrees with the DEIR's finding of significant impact on the Santa Ana sucker and recommends that the mitigation strategy include a manipulation of water temperature to aid in the reduction of the red alga growth downstream of the RIX outflow.

### **Response to CDFW-2**

Mitigation Measure BIO-3 outlines conservation measures to improve habitat conditions within the segment of the SAR directly below the RIX discharge. In particular, and consistent with this comment, SAS Measure SAS-5 includes providing supplemental water to lower water temperatures during the summer months in the Rialto Channel to improve habitat conditions. The DEIR concludes that the ability to introduce colder water into the Rialto Channel would improve habitat conditions compared with the existing condition. Although red alga is a concern in the areas downstream of the RIX discharge, the intent is that introduction of colder water in the Rialto Channel will have temperature-reducing effects downstream, which could help hinder growth of red alga. As part of the HCP, measures to decrease the prevalence of red alga will be evaluated. One potential action would be to introduce cooler groundwater and institute high flow pulse event flows as outlined in Mitigation Measure BIO-3. Precise formulation of strategies to control factors that adversely affect the SAS and its habitat, like red alga, will be a key component of the HCP and the HMMP.

### **Comment CDFW-3**

The comment recommends that the DEIR should identify the minimum flows necessary to maintain the health and persistence of aquatic resources in Rialto Channel and the Santa Ana River downstream, and to identify groundwater resources within the Upper Santa Ana River Basin.



## Response to CDFW-3

### *Minimum Flow Study*

The DEIR describes the existing condition of the SAR and RIX discharges on page 3.4-48. The Reduced Discharge Study estimates the impact to depth and velocity that may occur if discharges were reduced. Determining low flow requirements is complex since depth and velocity can vary substantially depending on the channel geometry and flow obstructions. In addition, preferred depth and velocity may be different for younger stage juveniles than for adults, recommending a variety of conditions within a targeted river segment. For these reasons, the scientific community has not established a widely accepted minimum flow volume although the USGS is in the process of developing a Habitat Suitability Model for the Santa Ana sucker as part of the HCP planning process. The model, which is expected to be completed and tested in the summer of 2016, will be used by this project and others to determine the most effective conservation activities for the species.

However, establishment of a fixed minimum flow volume is not necessary in order to accurately assess the impacts of flow reduction or identify measures that will mitigate those impacts. In general, the project proposes to reduce the constant flow of water by 20% in a system that is already experiencing a multitude of stressors. Due to the currently degraded condition of the SAR habitat and a proposed reduction of constant flow, the DEIR concluded that the impact to the Santa Ana sucker in particular is properly deemed “significant and unavoidable.”

Even without reference to a definitive low flow “basement,” Valley District has been able to identify potential impacts and develop appropriate mitigation measures. Measure BIO-3 outlines conservation commitments to be included in a Habitat Management and Monitoring Plan (HMMP) to specifically address the direct, indirect, and cumulative impacts of the proposed project. Notably, the volume of flow in the Santa Ana River is not the only factor affecting SAS survival. While the project will reduce river flows, the matrix on page 3.4-52 of the DEIR sets forth measures that address numerous other factors that affect the long-term viability of the SAS. Improving those factors compared to existing conditions will help ameliorate the impacts of the project resulting from reduced flows, in part by creating a buffer against catastrophic events, including periodic dewatering events, which could otherwise result in virtual extirpation of the species.

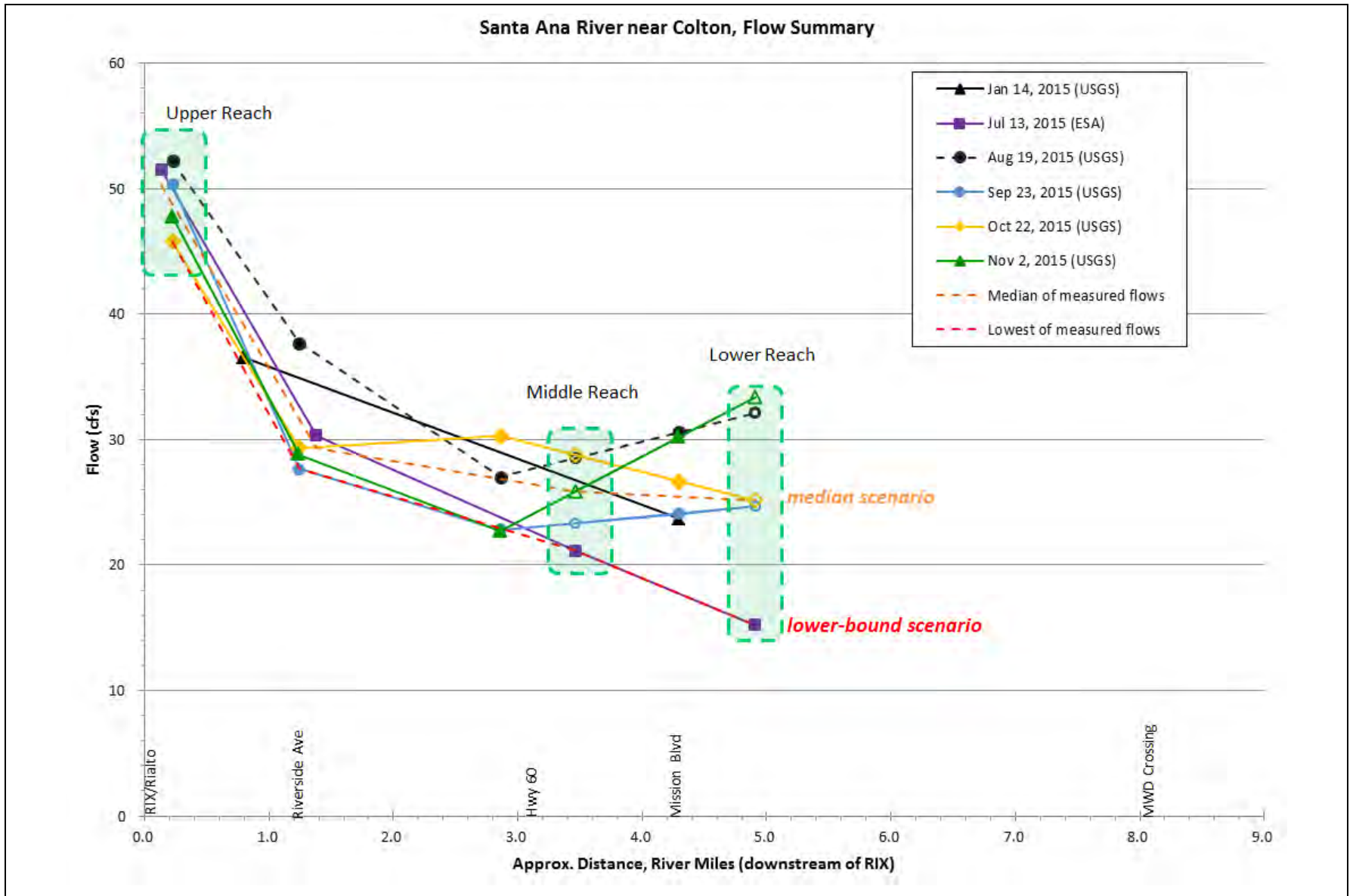
In other words, the HMMP is designed to not simply rectify the impacts of the project in a way that will maintain the current status quo – which has not been beneficial to species like the SAS, to say the least – but to address, in a long-term, comprehensive manner, a variety of existing conditions that adversely affect the SAS and other species, like the Arroyo chub. Valley District has concluded that the project’s reduction of river flows is properly deemed a significant and unavoidable impact to the SAS, but in an effort to rectify that impact as CEQA requires, is committed to addressing numerous other undesirable conditions that interfere with the long-term survival of the species. Furthermore, through this project Valley District proposes to begin implementing the first phase of a long-term, regional conservation strategy that will provide the framework for recovery of the species.

### *Groundwater Contributions to SAR Flow*

The Reduced Discharge Study incorporates USGS data of river flows that suggest groundwater contributions starting to appear in the lower study area. In response to concerns provided by the USFWS, the Reduced Discharge Study has been updated with more conservative assumptions on contributions of groundwater at the lower study area reach. Appendix H of the FEIR includes this update to the Study. As shown in Figure A1 of the Study Update (see below), USGS data collected on a monthly basis in 2015 show a wide variety of water depth in the lower study area reach. The USGS data show that the data provided in the DEIR for the lower reach on Figure 3.4-3 are conservatively low. In recognition that the relationship of the surface water flow and groundwater contribution in the SAR is complex, and to ensure a conservative analysis, the updated Reduced Discharge Study provides results of the hydrology model assuming zero contribution from groundwater. The results are summarized in the Table 3 from the Reduced Discharge Study below. The results show slightly greater impacts compared to the analysis assuming groundwater contribution. The revised analysis shows a 7 percent average decrease in wetted area as opposed to 6 percent in the initial model results. Similarly, maximum change in velocity and depth are similar to and slightly greater than the initial model results.

**TABLE 3**  
**MAXIMUM AND MEAN CHANGE IN AREA WITHIN A VELOCITY OR DEPTH ZONE, AND CHANGE IN WETTED CHANNEL AREA UNDER A LOWER BOUND AND MEDIAN FLOW SCENARIO, FOR A 6 MGD REDUCTION AT RIX**

Flow scenario	Reach	Max. change ( $\pm$ ) in area of a velocity or depth zone	Mean change in area of a velocity or depth zone	Change in wetted area over existing condition	Average change in wetted area over existing condition
Lower Bound flow scenario	Upper	8%	2%	-5%	
	Middle	7%	2%	-12%	-7%
	Lower	11%	3%	-4%	
Median flow scenario	Upper	7%	2%	-3%	
	Middle	8%	2%	-7%	-4%
	Lower	10%	3%	-3%	



SOURCE: ESA and USGS

Note: solid markers denote measured data points;  
hollow markers denote interpolated or extrapolated data

Santa Ana River Low Flow Study, D150005

**Figure A1**

Revised flow data used for existing and proposed conditions

The conclusions of the Study Update are that the contribution of groundwater in the lower study area reach is complex and variable. However, the data do show that the river becomes a gaining stream to some varying degree as it slows and enters the lower study area reach above the MWD crossing. The updated study conducts the analysis assuming zero contribution from groundwater and finds similarly minimal impacts.

Mitigation Measure BIO-3 has been modified to include SAS-7 as shown below to include hydrologic monitoring of the SAR below RIX to better understand the seasonal and diurnal fluctuations in river flow.

BIO-3: Disturbance to Santa Ana sucker. ...

- **SAS-7: Monitoring.** The HMMP will outline a monitoring program to collect hydrology data in the segment of river between the RIX discharge and Mission Boulevard. The data will include flow velocity and depth.

Beginning in July 2015, the USGS began collecting monthly data to assess the surface flow and groundwater infiltration interaction between the Rialto Channel and Mission Blvd. Preliminary results of this study are expected by the end of 2016 and will inform decisions by the HCP and others as to the priority conservation activities to benefit the species in this reach.

#### **Comment CDFW-4**

The comment notes that protection of nesting birds is the responsibility of the project proponent and that pre-construction surveys should be conducted within 30 days prior to the start of construction and no more than three days prior to vegetation clearing.

#### **Response to CDFW-4**

Mitigation Measure BIO-5 outlines protocols for ensuring that the project would not impact nesting birds. The mitigation measure requires pre-construction surveys to be conducted 30 days prior to commencement of construction activities and again within 3 days of construction.

Mitigation Measure BIO-5 has been modified to clarify this requirement:

**BIO-5: Disturbance to Nesting Birds.** To minimize potential construction-related project impacts to avian species that may be nesting on or immediately adjacent to the project area, the following measures will reduce any potential impact to a less than significant level.

- a. To avoid potential impacts to birds that may be nesting on or immediately adjacent to the project area, construction of the project should avoid the general avian breeding season of February through August.
- b. If construction must occur during the general avian breeding season, a pre-construction clearance survey shall be conducted within 30 days prior to the start of construction, to determine if any active nests or sign of nesting activity is

located on or immediately adjacent to the project area, specifically at the proposed SNRC location. An additional survey shall be conducted within 3 days prior to the commencement of construction activities. If no nesting activity is observed during the pre-construction survey, construction may commence without potential impacts to nesting birds.

- c. If an active nest is observed a suitable buffer will be placed around the nest, depending on sensitivity of the nesting species, and onsite monitoring may be required during construction to ensure no disturbance or take of the nest occurs. Construction may continue in other areas of the project and construction activities may only encroach within the buffer at the discretion of the monitoring biologist. The buffer will remain in place until the nestlings have fledged and the nest is no longer considered active.

## Comment CDFW-5

The comment states that Mitigation Measure BIO-2 should include specific, enforceable, and feasible actions to mitigate impacts to burrowing owl.

## Response to CDFW-5

### *Burrowing Owl Impact Survey and Mitigation*

The deferred formulation of mitigation measures to address impacts to the burrowing owl is due to the fact that biological surveys of the SNRC site and discharge locations turned up no sign of burrowing owl. However, the DEIR notes on page 3.4-26 that burrowing owl have been observed within ½ mile of the site, and so they may later be encountered at either the SNRC site or discharge locations. In addition, as required in the Burrowing Owl Survey Protocol, the field biologists noted suitable habitat within the project impact areas. However, the requirements for suitability are broad, including any open area with exposed dirt. Conducting additional surveys closer to the time of impact is appropriate to ensure that nesting owls are not impacted. Mitigation Measure BIO-2 specifically commits Valley District to implement CDFW-recommended burrowing owl survey protocols prior to construction that would include providing compensatory habitat replacement if occupied habitat is developed. However, no burrowing owls have been observed using the potentially affected project areas. Therefore, providing compensatory mitigation at this time is unwarranted.

Thus, based on current knowledge no burrowing owls are present within the impact areas, but this could change by the time construction begins. It will be necessary to conduct surveys closer to the time of impact to better understand whether the burrowing owl has moved into the impact areas or will otherwise be affected by the project. The surveys will be conducted in accordance with CDFW-recommended protocols. The results of those future surveys will inform the selection of mitigation measures that will avoid or rectify any impacts to the burrowing owl, potentially including compensation for loss of occupied habitat, establishment of a suitable buffer (typically 500 feet) around nests, monitoring during construction or delaying construction, and, if necessary, passive relocation in accordance with CDFW's 2012 Staff Report on Burrowing Owl Mitigation.

(See Mitigation Measures BIO-2, which commits Valley District to conducting future surveys and development of appropriate mitigation, and lists potential mitigation strategies.) The ultimate goal of the selected mitigation measures will be to ensure that any impact to the burrowing owl is rendered insignificant.

Valley District has concluded that this is the best approach to mitigation of potential impacts to the burrowing owl. If mitigation measures were formulated at this time, they would rely on a certain degree of guesswork and speculation because no owls were found in the impact areas. By conducting additional focused, site-specific surveys closer to the beginning of construction, Valley District can develop a mitigation strategy that makes use of the best available information and thus will more effectively address the project's actual potential impacts to the owl.

## Comment Letter – City of Colton (Colton)

### Colton-1

The comment requests information regarding the impact of the project to the operation of the RIX plant, and notes potential impacts to Santa Ana sucker habitat.

### Response to Colton-1

The proposed project would not significantly affect the operations of the RIX facility, but would reduce influent volume. As explained in the Draft EIR on page 1-2, the proposed project would divert all EVWD effluent, which is 6 MGD, from RIX. The project does not impact remaining operations of the RIX facility, including its service to the Cities of San Bernardino and Colton. To address potential impacts to the SAS, the DEIR includes Mitigation Measure BIO-3, which incorporates an extensive array of activities that will be undertaken to improve SAS habitat and long-term viability of the species.

## Comment Letter – City of Highland (Highland)

### Comment Highland-1

The comment states that any land use not specifically authorized or identified in the zoning code is prohibited. The comment states that the DEIR incorrectly interpreted the Sterling Natural Resource Center (with all its components) to be compatible with the City’s Business Park Zoning District. The comment suggests that the DEIR be modified to reflect that the existing Business Park Zoning District only permits the office component of the Sterling Natural Resource Center project.

### Response to Highland-1

Valley District agrees with the City of Highland comment that the existing Business Park Zoning District permits the Administration Center component of the Natural Resource Center project. As noted in the DEIR, the administrative office uses are a permitted use in the Business Park designation and are listed as such in Table 16.24.030.A of the City of Highland Municipal Code (HMC). The Administration Center of the SNRC will be located to the West of Del Rosa Drive. Valley District also recognizes that this use will be subject to a departmental review permit application pursuant to Chapter 16.08 HMC.

The Wastewater Treatment Facility of the SNRC is not a use expressly permitted within the Business Park Zoning District nor does it expressly comport with the land use designation established by the City of Highland General Plan. However, the Government Code expressly exempts wastewater and water treatment facilities from local zoning regulations, including general plan land use designations, and building regulations. Like the DEIR, the City’s comment letter correctly cites to the applicable statutes, Government Code Sections 53091 and 53095.

Government Code section 53091(e) provides, in pertinent part: “Zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water...” The courts have held that this exemption extends to facilities directly and immediately used to generate, transmit or store water. As stated in *City of Lafayette v. East Bay Municipal Water District*:

“We think the absolute exemption of section 53091 was intended to be limited to facilities directly and immediately used to produce, generate, store or transmit water. Only those indispensable facilities must be located at the unfettered discretion of a water district – that is, without the burden of city and county zoning regulations – in order to assure the imperative of efficient and economical delivery of water to customers.”

*City of Lafayette v. East Bay Municipal Water District* (1993) 16 Cal. App. 4<sup>th</sup> 1005, at 1014. In 2002, the absolute exemption passage discussed in the *City of Lafayette* case was amended to add water “treatment” to the scope of its exemption. 2002 Cal. Legis. Serv. Ch. 267 (S.B. 1711). Moreover, *Government Code* Section 53095 provides that the exemption of Section 53901 also



extends to a city's General Plan land use designations. Because of these exemptions, the water production, generation, treatment and transmission aspects of the SNRC can be built and cannot be evaluated as inconsistent with the local land use designation of the site.

The City has requested that Valley District collaborate in the review and approval of street improvement plans, construction plans and to amend the City's general plan to the Public/Quasi Public zoning designation. While Valley District does not waive the applicable governmental immunities discussed above, it will cooperate with the City regarding street improvement plans, construction plans and any City-initiated General Plan amendment so long as the approval process does not adversely impact or delay construction or operation of the SNRC.

## Comment Letter - City of Rialto (Rialto)

### Comment Rialto-1

The comment concurs with the analysis in the DEIR and states that the reduction of 6 MGD would not cause harm to biological resources in the Santa Ana River. The comment requests that the DEIR evaluate use of the supplemental water wells on local groundwater and SAR base flow.

### Response to Rialto-1

The Updated Reduced Discharge Study estimates that impacts to the depth and velocity of the SAR from the proposed project would be minor. The Updated Study supports this conclusion using a more conservative assessment of the groundwater contribution to the river in the lower study area. The results of the Updated Study are provided in Appendix H and explained in Response to Comment CDFW-3. The Updated Study provides data that suggest that groundwater interaction with surface water in this portion of the watershed is complex. The Updated Study includes water depth data collected by USGS that show wide variety in depths in the lower reach each time it is measured. The data suggest that groundwater inflow fluctuates, possibly indicating that local extraction rates from nearby wells are similarly variable. Due to the distance from the proposed supplemental Rialto wells to the lower study area (over one mile), the potential for these supplemental water wells to affect groundwater contributions into the SAR is low. The wells are over a mile from the point in the river within the lower study area reach where groundwater first contributes to the SAR. Furthermore, this contribution exhibited in the data may be mostly underflow from surface water percolating up stream. The zone of influence from the Rialto wells is not expected to extend over a mile down river. Groundwater levels near the SAR are influenced by the cumulative pumping activities in the entire region. The DEIR concludes on page 3.9-24 that the potential impact to the cumulative groundwater condition from the proposed Rialto wells would be minor compared to other pumping activities.

Please see Responses to Comments CDFW-3, OCWD-1, OCWD-2 and SEJA-51.

## Comment Letter – City of Riverside Public Utilities Department (RPU)

### Comment RPU-1

The comment suggests that a study be completed to demonstrate no adverse impacts will occur to certain RPU wells.

### Response to RPU-1

The DEIR evaluates potential impacts to neighboring municipal production wells on page 3.9-22. The DEIR imposes Mitigation Measure HYDRO-2 that requires that Valley District install a monitoring well network to evaluate potential water quality impacts associated with the project. The mitigation measure provides performance standards if monitoring finds that impacts are occurring. The performance standards include providing replacement water if the effects are not otherwise mitigated. The DEIR concludes that with implementation of Mitigation Measure HYDRO-2, impacts to neighboring wells would be less than significant.

The DEIR acknowledges in Table 2-9 that the project would be required to obtain a discharge permit from the RWQCB. Valley Water has been engaged in discussions with the Santa Ana RWQCB and the State Water Resources Control Board, Division of Drinking Water (DDW) regarding permit requirements for discharge from the Sterling Natural Resource Center (SNRC). Numerous technical analyses have been and are being undertaken to evaluate the transport of the recycled water upon discharge from the SNRC, whether into City Creek or one of the other identified recharge locations. Appendix I of the FEIR includes full reports of the groundwater modeling conducted for each of the recharge locations.

The modeling results prepared by Geoscience Support Services Inc. (GSSI) (Appendix I) show there is no impact to the Gage wells from a discharge into City Creek, as shown in Figure 11-3 below. The blue lines are “particle tracks” that represent recycled water flows in the groundwater system that would result from a 10-MGD discharge to City Creek. The figure shows that after 12 months, recycled water particles have traveled less than 2,000 feet west within the groundwater basin. DDW approval of the proposed groundwater recharge activities will require that no adverse impacts occur to any nearby drinking water wells.

Similar work evaluating discharge to the Redlands Basins has also been conducted. The results of those analyses indicate a 10 MGD discharge at Redlands Basins would not reach any drinking water wells after 6 months, and it would take more than 20 years for the recycled water contribution to reach 20 percent at the Gage Wells as shown in Figure 11-4. The regulatory requirement is the recycled water contribution (RWC) to be less than 20 percent after 10 years of residence/travel time.

These and similar analyses of a potential discharge to the East Twin Creek Spreading Grounds (Appendix I) will be utilized in working with the RWQCB and DDW to refine the locations and

requirements of the proposed discharges. Any discharges to the East Twin Creek Spreading Grounds will not impact any Riverside wells.

Furthermore, water quality testing will occur on any potential well that would be used to supply supplemental water to the Rialto Channel. Supplemental water would meet all water quality standards defined by the RWQCB and as required by a NPDES discharge permit.

### **Comment RPU-2**

The comment states there should be a study to determine if any adverse impacts will occur to RPU's groundwater wells. The comment states that in the event the analysis is flawed and an impact was to occur, RPU would expect Valley District to discontinue discharging until the problem was resolved.

### **Response to RPU-2**

As stated in Response to Comment RPU-1, the requested studies are underway as a part of the ongoing process of developing discharge requirements through consultation with the Regional Board and DDW. DDW approval of the proposed groundwater recharge activities will require that no adverse impacts occur to any nearby drinking water wells.

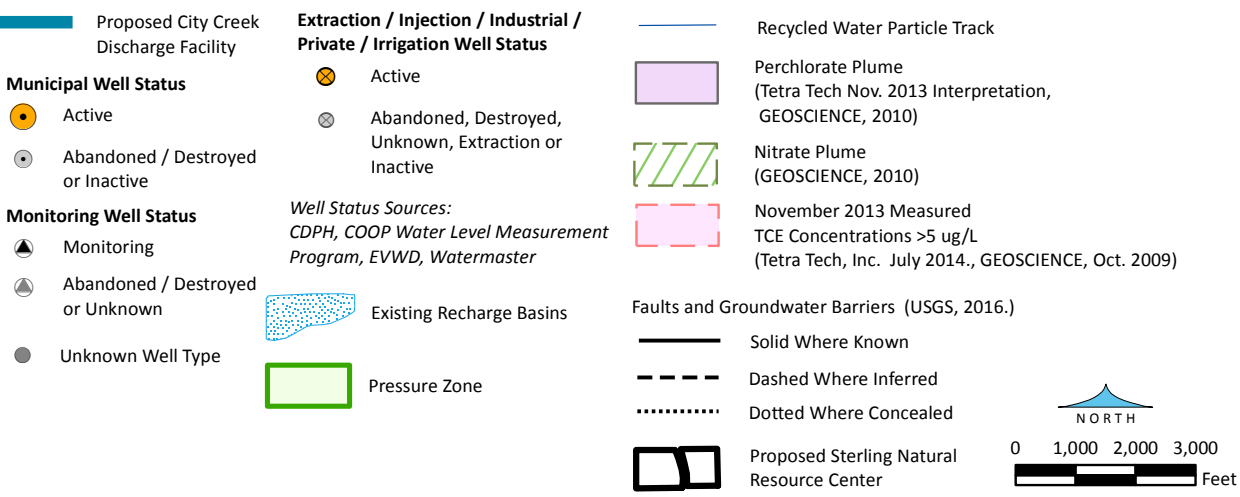
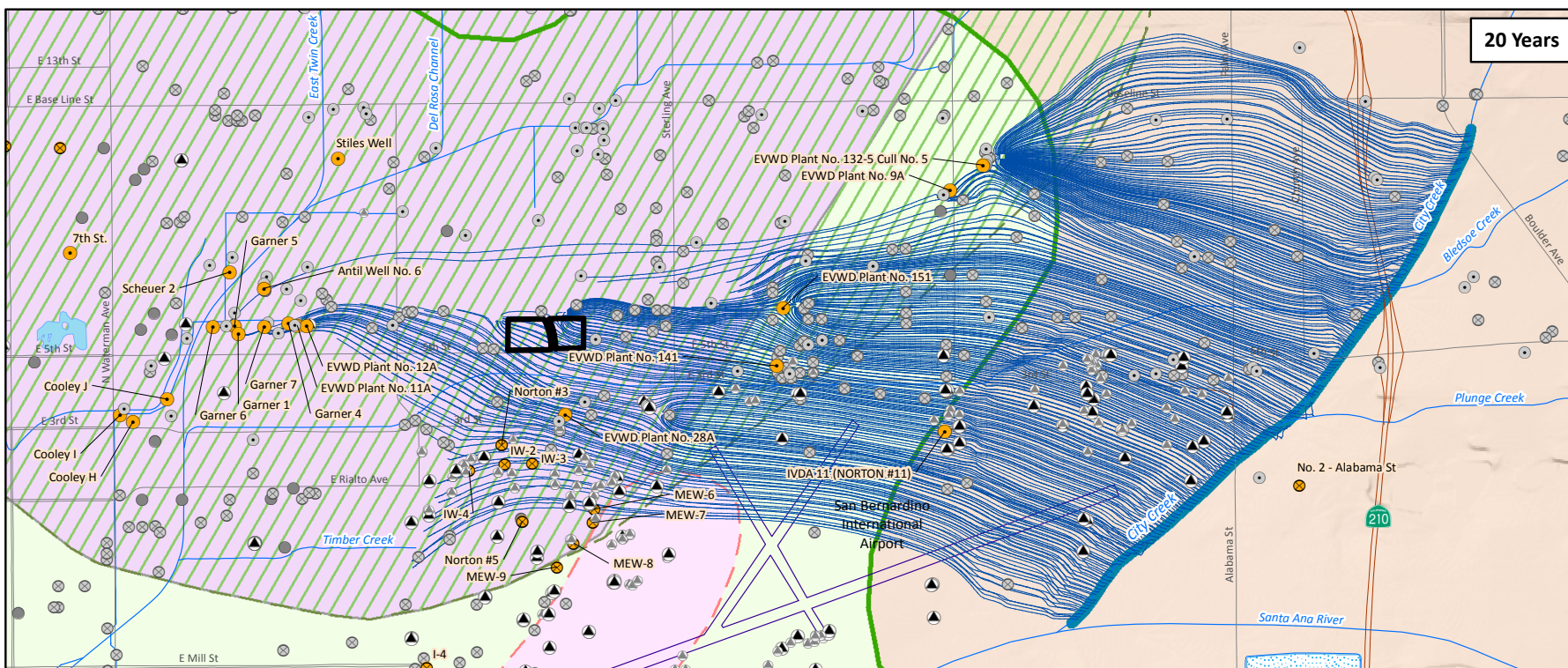
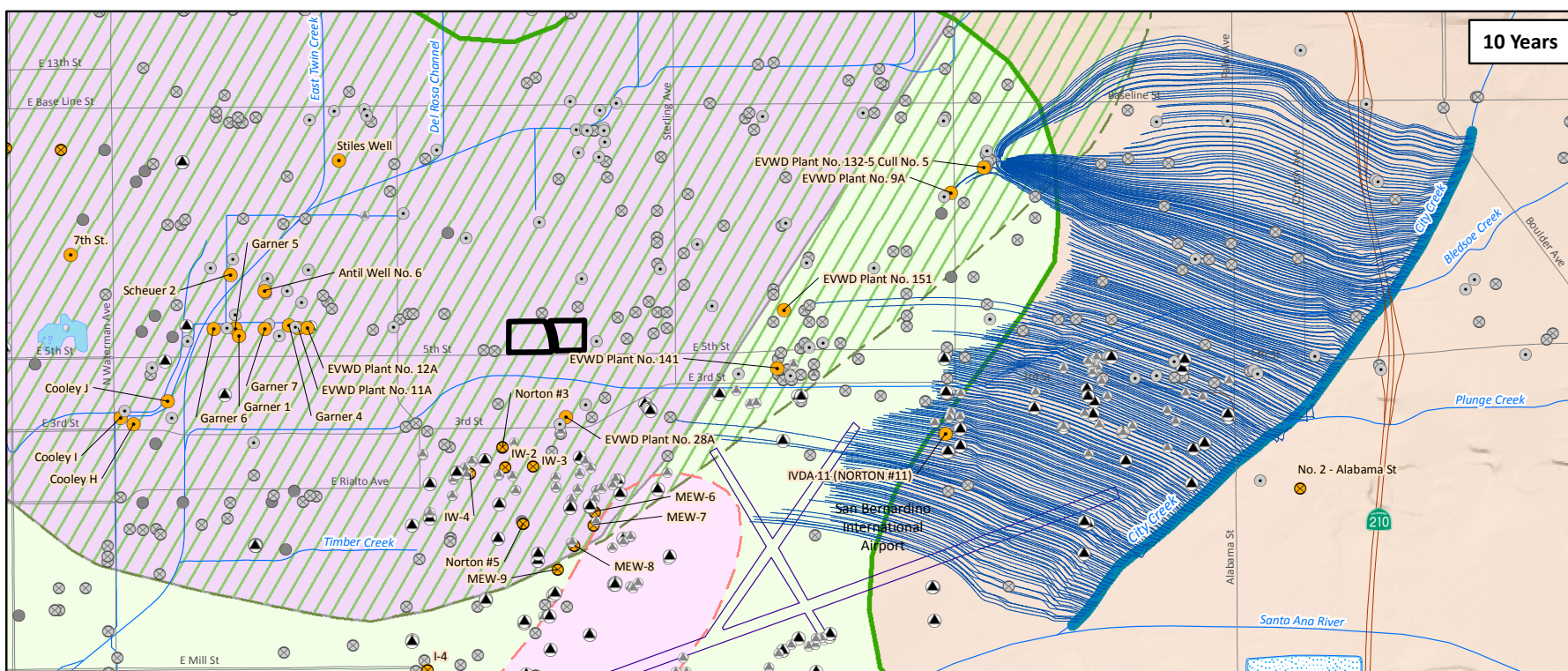
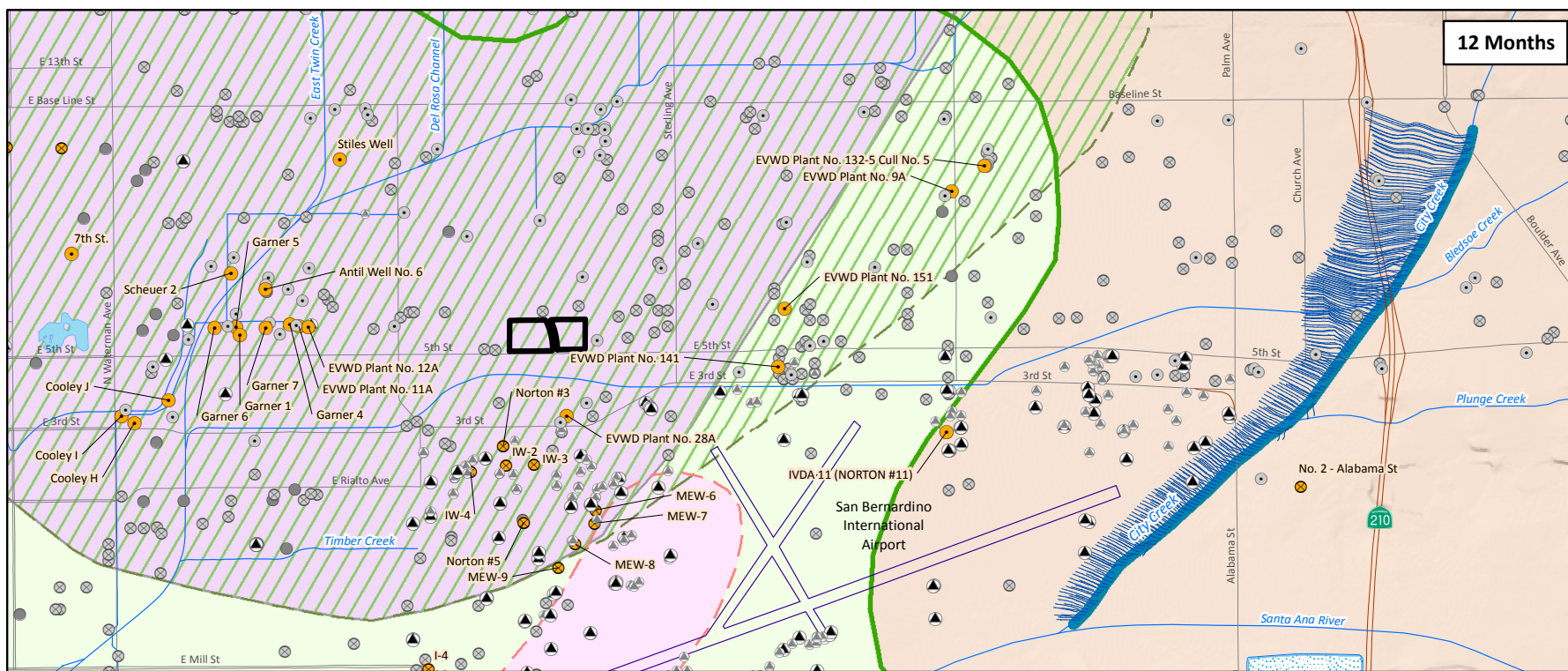
### **Comment RPU-3**

The comment suggests a study be completed to inform RPU if the groundwater beneath their currently unused property will be adversely impacted. The comment suggests that an MOU be created that describes appropriate solutions to remedy any potential impact.

### **Response to RPU-3**

The State of California, Title 22, has been amended on numerous occasions to reflect greater control over discharge of recycled water/treated wastewater to groundwater basins. Current regulations require establishment of an area of restricted pumping for domestic use in the downstream gradient of recycled water/treated wastewater discharge locations, and it is anticipated that such a zone of restricted pumping will be required downstream of the permitted discharge locations for the SNRC. The analyses to establish the extent of any required zone of restricted pumping is underway and is a part of the analyses required by the Regional Board and DDW prior to their consideration of issuance of a permit for discharge. Valley District appreciates the opportunity to work on developing an MOU with RPU.



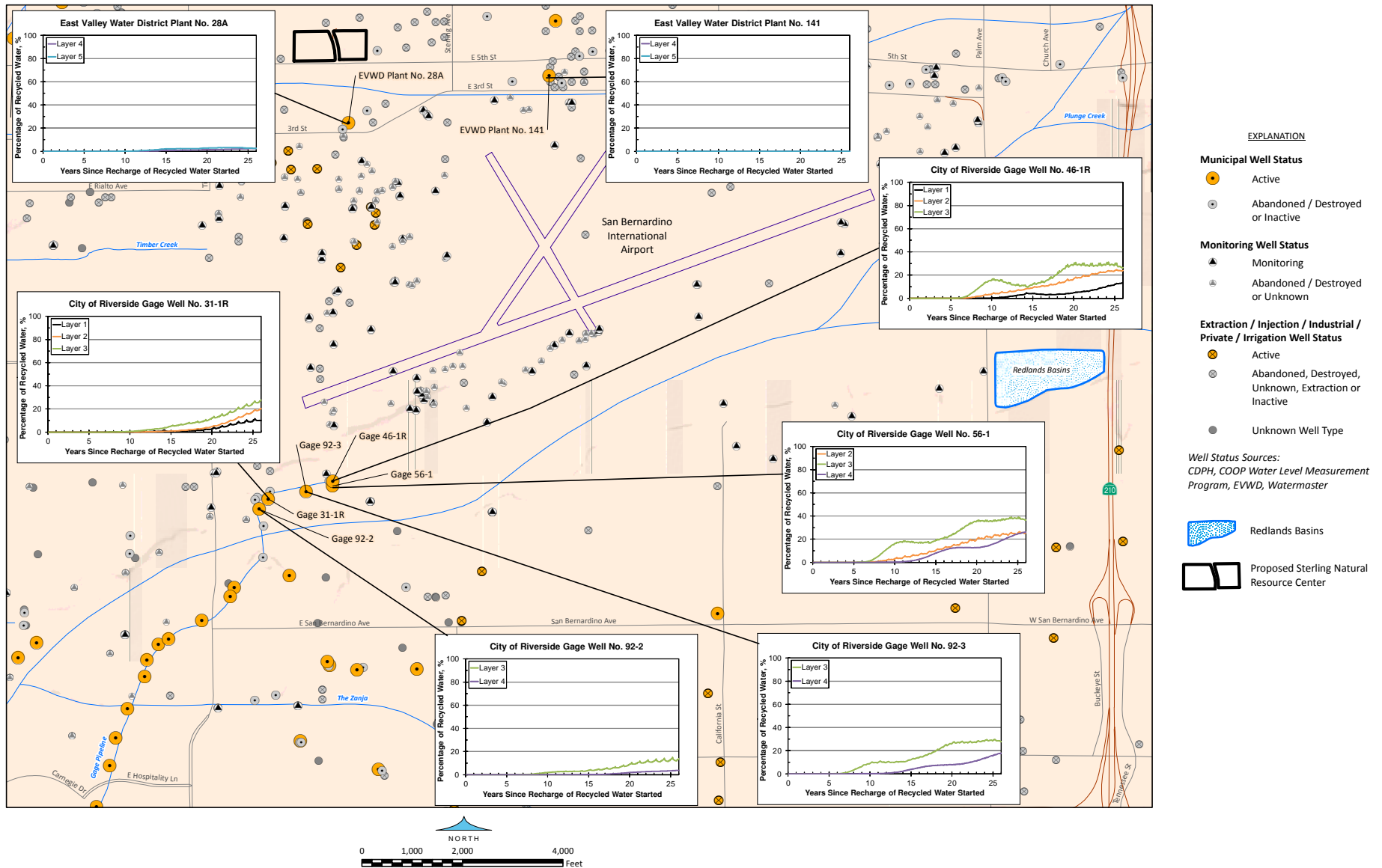


SOURCE: Geoscience Support Services Inc, 2016

Sterling Natural Resource Center . 150005  
**Figure 11-3**  
 City Creek Proposed Discharge



This page left intentionally blank



SOURCE: Geoscience Support Services Inc, 2016

Sterling Natural Resource Center . 150005  
**Figure 11-4**  
 Redlands Basins Proposed Discharge

## **Comment RPU-4**

The comment states that it should be confirmed that the Operational Manual for City Creek Discharges will ensure that under all conditions the proposed City Creek effluent discharges will always remain above the confluence with the Santa Ana River. The comment states that the Operational Manual should include a Contingency Plan should the effluent reach beyond the confluence with the Santa Ana River.

## **Response to RPU-4**

The intent of the SNRC is to provide treatment to wastewater flows from the East Valley Water District and to recharge those treated flows into the Bunker Hill Basin for future use. As such, the proposed discharge to City Creek is being formulated to achieve essentially full recharge of the treated flows prior to the confluence of City Creek with the Santa Ana River. The objective would be to maintain a wetted stream to the confluence while not “losing” any of the flow into the Santa Ana River from recharging into the Bunker Hill Basin.

The Operation Manual for City Creek Discharges will address the dry and wet weather flow periods and will provide a basis for diverting discharges from City Creek to either the East Twin Creek Spreading Grounds or the Redlands Basins during wet weather flow conditions, so that the recycled water would continue to be recharged into the Bunker Hill Basin. Regional Board approval of the proposed City Creek discharge will ensure that surface water quality is protected during all conditions.

## **Comment RPU-5**

The comment requests that groundwater modeling results be provided.

## **Response to RPU-5**

The Regional Board/DDW permitting process requires analyses that provide a clear demonstration that the proposed discharge will not harm the Bunker Hill groundwater basin or the identified beneficial uses within the basin. As stated in Response to Comment RPU-1, groundwater modeling to support Regional Board/DDW permitting is currently underway. A part of that analysis requires that the initial 10-year average recycled water contribution at the nearest well not exceed 20 percent of the water pumped from that well.

Valley District has conducted groundwater modeling of the proposed recharge that is included in Appendix I of the FEIR. Although some of the basin’s assimilative capacity would be utilized by the proposed SNRC discharge, the minor increase in TDS concentration basin-wide is not considered significant. It is not believed that this minor increase in TDS in the nearest well, and less increases in TDS in the overall groundwater basin and therefore other wells, would result in adverse impact on the RPU’s overall water quality or its ability to meet discharge requirements from its Regional Water Quality Control Plan.



## Comment RPU-6

The comment states that Valley District is expected to adhere to all stipulations within the Western-San Bernardino Judgment. The comment states that RPU expects that the 16,000 acre-foot effluent commitment will not consist of over-extracted Riverside North groundwater generated from the RIX extraction wells, treated effluent generated from Colton's discharge, or mitigation groundwater produced by Valley for use in Rialto Channel.

## Response to RPU-6

Valley District will continue to adhere to all of the provisions of the *Orange County* and *Western* Judgments. Neither of those Judgments limits the sources of water that can be used to meet Valley District's obligations. Valley District trusts that the comment does not suggest that RPU wishes to alter the terms of those Judgments.

The DEIR concludes that even with the reduction of 6 MGD from the RIX discharge, Valley District's water delivery obligation under the 1969 Judgment would be maintained through the remaining RIX discharges. The DEIR further concludes that the water delivery obligation is Valley District's as the regional water agency, though, as discussed below, the City of San Bernardino has agreed to discharge sufficient water to meet Valley District's obligation under the *Orange County* Judgment.

At present, under the terms of the *Orange County* Judgment, Valley District is entitled to reduce actual flows at Riverside Narrows to 12,420 afy of base flow due to the credits that Valley District has accrued since 1969. Valley District is prepared to enter into a memorandum of understanding with the City of San Bernardino that would: (i) allow for flow reductions from RIX or other sources so as only to provide 12,420 afy at Riverside Narrows rather than discharging the full 16,000 afy as required by the agreement between the City of San Bernardino and Valley District; (ii) allow the City of San Bernardino to use up to 3,580 afy that would have been discharged for the purpose of replenishing the San Bernardino Basin Area, replacing the 3,580 afy with credits previously accrued by Valley District under the terms of the *Orange County* Judgment; and (iii) prevent the City of San Bernardino from selling, leasing, or otherwise conveying or transferring the 3,580 afy, directly or indirectly, outside the boundaries of Valley District.

Please see Response to Comment OCWD-1.

## Comment Letter – Inland Valley Development Agency (IVDA)

### Comment IVDA-1

The comment states that more detail and analysis should be included and that mitigation measures defer information collection.

### Response to IVDA-1

Chapter 2 of DEIR includes a project-level description of the proposed project that includes maps of project components. For each impacted resource, mitigation measures are listed throughout the DEIR. A list of those mitigation measures can be found in Table ES-1 on pages ES-7 to ES-23. Mitigation of the project's impacts is not improperly deferred; instead the DEIR properly commits Valley District to specific mitigation measures, regulatory approvals with adherence to their and other identified performance standards, and timely focused additional studies that will be used to develop the precise mitigation strategies that will be most effective in avoiding or rectifying the impacts of the project.

For more information on proper deferral of mitigation, please see Responses to Comments CDFW-1, CBD-3, and CBD-6

### Comment IVDA-2

The comment states that there should be specific information on project construction, maintenance, operational and mitigation measure costs in the DEIR.

### Response to IVDA-2

The DEIR does not evaluate the cost of the project since cost is not an environmental impact. Project costs are included in the Update of the Recycled Water Feasibility Study 2015. As the responsible decision makers, the Valley District Board of Directors will consider project costs when considering approval of the project, which will occur as a separate action from the certification of the Final EIR.

### Comment IVDA-3

The comment states that more detail should be included regarding what odor control systems will be implemented and the expected efficiency of those systems. The comment states an assessment of potential residual odors should be provided.

### Response to IVDA-3

The Draft EIR identifies the odor control systems that would be implemented to capture and treat foul smells (page 2-12). The DEIR explains the effect of the odors that would be produced by the proposed project and the mitigations that would be implemented to reduce those impacts. As stated in 3.3-5, "To minimize detectable odors outside the project site boundaries, all the

proposed treatment processes would be enclosed and subject to a facility-wide odor control system. The collected air would be treated through bio-scrubbers, using best available odor control technologies.” Mitigation Measure AIR-2 would be implemented to provide further assessments of the odors produced by the proposed project, including potential residual odors. Additional details of the system will be established during development of final designs.

### **Comment IVDA-4**

The comment requests information on project wells sites designed to capture percolated water and states that the supplemental wells were not addressed in the DEIR.

### **Response to IVDA-4**

The project does not propose to use extraction wells to capture recharged water. Rather, the project would recharge the Bunker Hill Basin to benefit regional water supplies and more effectively manage the groundwater basin. The Draft EIR describes the refurbishment of supplemental water wells on page 2-27. The DEIR acknowledges on page 2-34 that approval is needed by the City of Rialto before refurbishment can be implemented. The refurbishment of the groundwater wells would involve minor construction activities and would not result in significant impacts. The wells are existing wells and the refurbishment refers to replacing the motors and pumps. The DEIR evaluates potential impacts to groundwater from the use of the supplemental wells on page 3.9-24, concluding that much of the water discharged into the stream would be recharged into the groundwater basin through the river bed.

Please see Response to Comment Rialto-1.

### **Comment IVDA-5**

The comment states that information on background noise measurements as well as information on construction and operational noise levels and mitigation should be included. The comment states that construction traffic trips should be considered in the traffic analyses.

### **Response to IVDA-5**

The DEIR evaluates construction and operational noise in Chapter 3.11. Ambient noise measurements were not collected at the site. However, the analysis describes that existing ambient noise is affected by traffic and other activities common in residential and commercial neighborhoods. The analysis estimates future noise from construction and concludes that construction noise could result in temporary significant increases to ambient noise. Once construction is completed, the SNRC would comply with the City’s noise ordinance. Mitigation Measures NOISE-2 and NOISE-3 would assist in minimizing noise from the SNRC operations. Construction traffic trips were considered in the traffic analysis in Chapter 3.15, specifically Impact 3.15-1 on pages 3.15-5 to 3.15-6. The DEIR concludes that the additional commuter and truck delivery trips would be minor compared with existing traffic and roadway capacities.

### **Comment IVDA-6**

The comment suggests coordination to avoid any potential utility conflicts. The comment states that IVDA has developed design and engineering plans that will be provided for coordination.

### **Response to IVDA-6**

The DEIR evaluates potential impacts to utilities in Section 3.13. The comment does not question the accuracy or adequacy of the environmental analysis within the DEIR. Valley District appreciates the provision of information from IVDA to supplement its utility infrastructure files.

## **Comment Letter – Metropolitan Water District of Southern California (MWD)**

### **Comment MWD-1**

The comment indicates that the proposed project could potentially impact Metropolitan Water District's facilities including the Inland Feeder near the City Creek extension. The comment further expresses that any design plans for any activity in the area of MWD's facilities or pipelines be submitted for their review and written approval.

### **Response to MWD-1**

The introduction of perennial flow to the lower segment of the City Creek is not expected to modify channel geometry or promote channel cutting that could affect the Inland Feeder crossing which is far upstream. Valley District recognizes the vital importance of maintaining the Inland Feeder crossing and will coordinate any activities that could affect the pipeline.

## Comment Letter - Orange County Water District (OCWD)

### Comment OCWD-1

The comment expresses concern that the Project would reduce the amount of water flowing in the Santa Ana River to the Prado Basin and the associated riparian and wetlands habitat. Specifically, the concern is that the Project would remove water from the Santa Ana River at a rate that would leave insufficient water in the river to support riparian habitat and beneficial uses in Prado Basin and other portions of the water bodies upstream of Prado Basin.

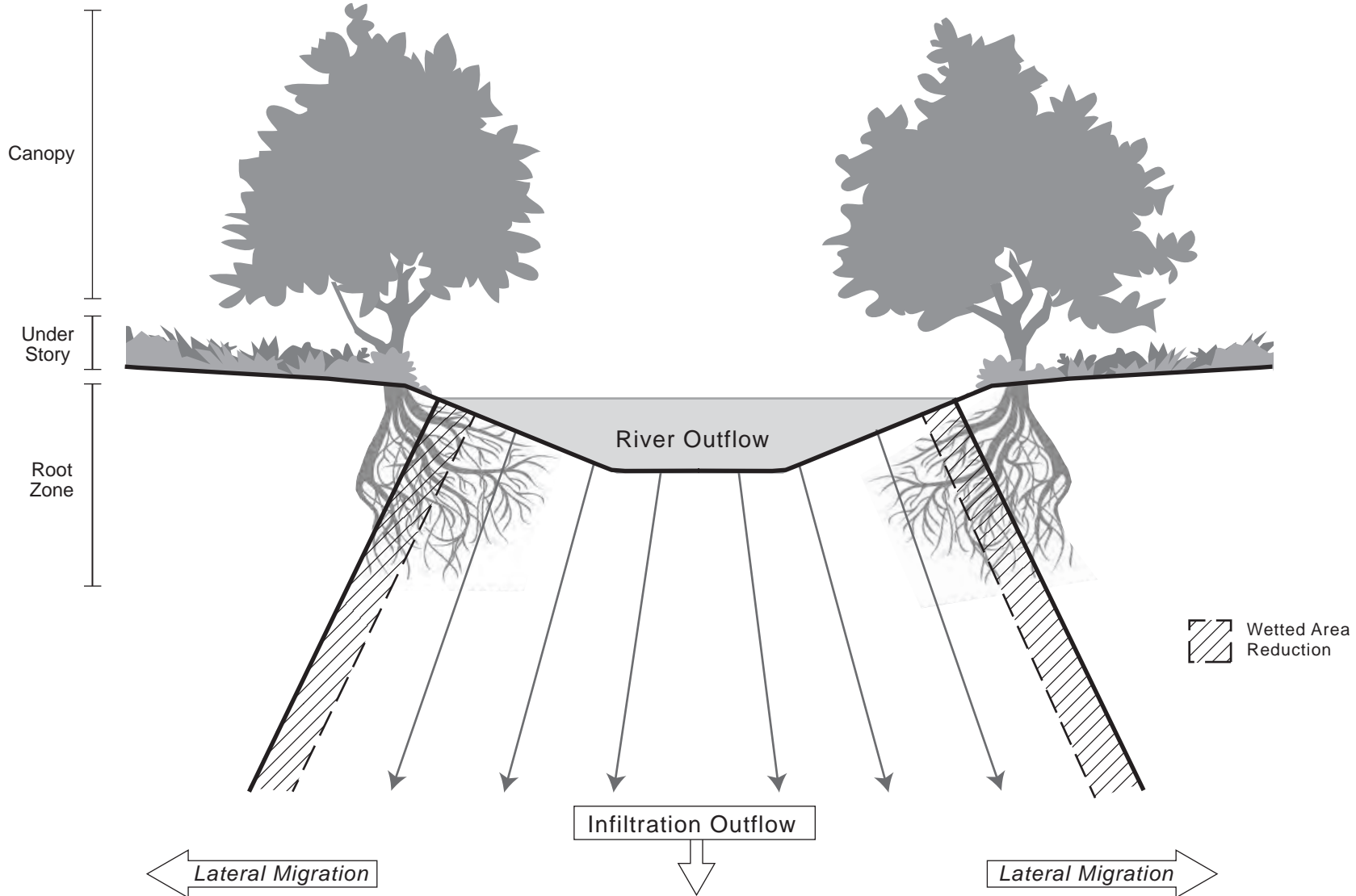
### Response to OCWD-1

#### *SAR Riparian Vegetation Upstream of Prado Basin*

As discussed in the DEIR Section 3.4, Biological Resources, the reduced discharge study (Appendix F in the DEIR) determined that the 6 MGD reduction of water to the Santa Ana River would not significantly change the existing conditions for riparian vegetation within the first few miles of the river corridor downstream of the RIX discharge to approximately Mission Boulevard. The reduction of 6 MGD would reduce total flow by 18-21 percent, lower water depth in the channel by a maximum of approximately 1.1 inches, reduce the wetted area by 6 percent, and result in an average change in a velocity class of 2 percent (not exceeding 6 percent) of the total channel area. The DEIR concludes on page 3.4-58 that this modification to the hydrology would not substantially reduce riparian cover within the segment of the SAR immediately downstream of the RIX discharge since the reduction in wetted area and water depth would be minimal.

The relationship between surface water flows and riparian vegetation is controlled by the volume of perennial flow, geomorphology, hydrogeology, and flood flows. As described in the literature (Hupp, 1994), streams in arid climates of the southwestern US tend to support linear corridors of vegetation that thrive at the edge of flowing water. This reflects that the surface water is the only water available to vegetation. Generally, the distance from the river's edge where riparian vegetation can survive depends on the steepness of the adjoining slopes, the velocity of the water and the permeability of the underlying soils, and the proximity of groundwater. In areas where surface water flows quickly through highly permeable substrate, vegetation can thrive only close to the stream edge. This is the case immediately downstream of the RIX discharge. In places where surface water slows down and spreads out and groundwater is close to the surface such as within Prado Basin, dense forests of riparian habitat emerge.

In the segment of the SAR immediately downstream of RIX to Riverside Avenue, riparian vegetation survives close to the river's edge in a linear corridor, leaving the floodplain and broad river corridor mostly unvegetated. This reflects a fast moving stream with rapid infiltration and minimal lateral seepage from the main flowing corridor. Riparian vegetation acreage and vitality is limited by the availability and accessibility of water. In a stream that exhibits high infiltration, surface flows and infiltration represent excess water that is unavailable to the vegetation corridor. Similarly, access to wetted soils is limited by lateral migration that is dependent on soil type. Well drained soils show little lateral migration, limiting accessibility of water to the root zones of the riparian corridor. Figure 11-5 illustrates this condition.



SOURCE: ESA

Sterling Natural Resource Center . 150005

**Figure 11-5**  
Conceptual Stream Infiltration

Downstream of Riverside Avenue, the river channel becomes more densely vegetated responding to slower moving water and introduction of the influence of groundwater. This condition is visible in aerial photographs where vegetation at the river's edge for the first 6,000 feet below the RIX discharge is currently tightly confined to the river's edge. This is the segment of river that exhibits the highest velocities and the highest infiltration rates. Downstream of Riverside Avenue, aerial photographs show an increase in verdure in the whole river channel, suggesting that groundwater or reduced infiltration begins to broaden opportunities for riparian habitat in the channel to thrive.

As described in the Updated Reduced Discharge Study (Appendix H), the reduction of 7 percent of the wetted area in this river segment would narrow the 20-35 feet wide river by approximately 6-18 inches on each side of the flowing channel. The riparian corridor would respond by encroaching toward the water's edge, but would not otherwise change. The upper canopy and understory habitats would vary according to the age of the willows rather than the volume of flowing water. Further downstream by the Santa Ana River Regional Park just upstream of the Riverside Narrows, the discharge reduction would result in an even smaller water depth reduction of a maximum of approximately 0.4 inch with negligible changes to flow velocities, wetted areas, and stream width.

Ultimately the age and density of the vegetation depends on the frequency of periodic flood flows that clear vegetation and modify the river channel. Following large flood flows, riparian vegetation rejuvenates quickly, steadily increasing canopy cover over time. The small reduction in wetted area in the river channel would not significantly affect the vitality of the riparian corridor currently supported by the perennial surface water discharge. Once the flow reaches the Prado Basin and is spread over its much larger surface area, the change in surface water level would approach zero.

Although the DEIR concludes that reducing river flow by 20 percent would not appreciably reduce riparian habitat acreage or vitality, some reduction may occur as the river channel narrows. To mitigate for this potential effect, the DEIR includes Mitigation Measure BIO-3 that commits Valley District to the removal of exotic weeds such as *arundo donax* in the segment of river just downstream of the RIX discharge. The removal of *arundo donax* has been employed for years by the Santa Ana Watershed Project Authority, Santa Ana Watershed Association (SAWA), and the Orange County Water District to enhance native habitats along the SAR. The reduction of invasive vegetation allows for native species to emerge in its place, increasing the acreage of native riparian vegetation. This objective and desired outcome of *arundo* removal is described in detail in the SAWA Annual Report (SAWA, 2012). Mitigation Measure BIO-3 would ensure that the river segment downstream of the RIX discharge is managed for the benefit and protection of native habitats. This management would benefit the entire ecosystem compared with the existing condition where no habitat management or consistent monitoring is occurring. Implementation of Mitigation Measure BIO-3 would commit Valley District to managing riparian habitat in the river segment immediately below the RIX discharge in a manner similar to how OCWD manages riparian habitat in Prado Basin as mitigation for impacts from habitat inundation.



### *Prado Basin Riparian Vegetation*

Riparian habitat further downstream within the wide river channel and Prado Basin is supported by groundwater in addition to surface water. This is evidenced by riparian density within the river channel that increases with distance from the RIX discharge location, until Prado Basin which is vegetated with a dense willow forest. OCWD's comment letter included an Attachment 1 prepared by Stetson Engineers, Inc., titled "Preliminary Assessment of Hydrologic Conditions Related to Riparian Habitat Health and Vigor in the Prado Basin Management Zone," dated October 26, 2015. This study evaluated the connection between surface water and groundwater, noting reaches of the river that were gaining or losing stream reaches. The study noted that between the two surface water measurement locations named SAR #1 and SAR #2 located on the portion of the Santa Ana River in the upstream portions of the Prado Basin, this reach was a gaining stream even during the drier October monitoring time period. This indicates that groundwater is sufficiently high so as to enter into the stream channel within this reach of the river to support surface water flow, even during the dry season.

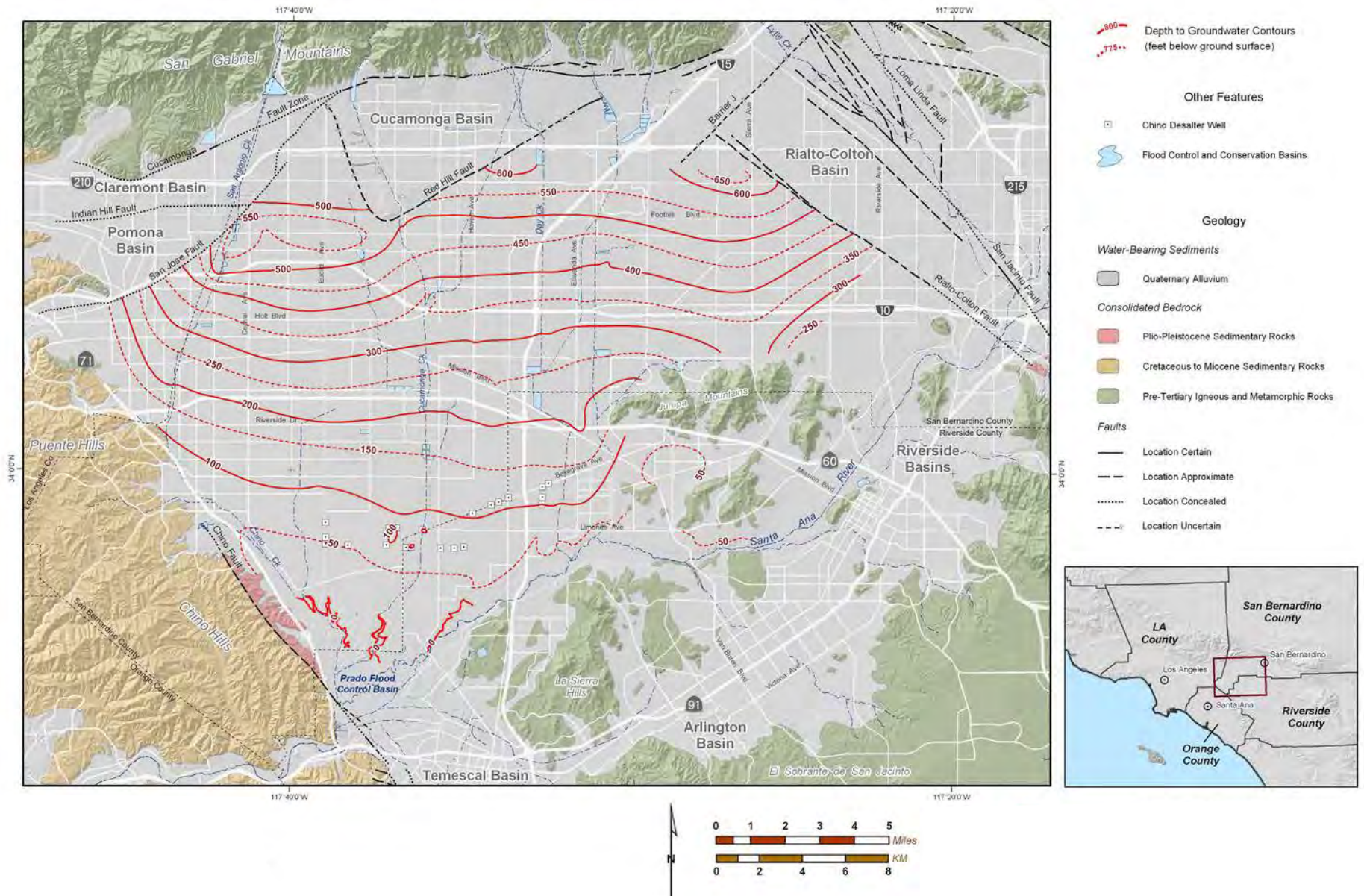
The Stetson report also discussed observations of degradation of riparian habitat over the recent years. Several areas were observed to show signs of distress, such as leaf senescence, branch sacrifice, crown dieback, and some dead trees, along with the conversion of some areas of riparian habitat to riparian scrub. Stetson concluded that surface water flow and depressed groundwater levels appeared to be insufficient to support riparian habitat in some areas. However, Stetson also noted that the information developed in their assessment is suggestive but not conclusive. Given the continuing drought, it appears that, as a general matter, groundwater and surface water flows are sufficient to support most of the riparian forest and many of the observations in the Stetson report seem linked to drought.

OCWD also provided an Attachment 2, which contained modeled hydrograph results for 2021 and 2071, titled "*Prado Basin Daily Discharge Estimates for 2021 and 2071 Using the Wasteload Allocation Model*," prepared by Wildermuth Environmental, Inc. (WEI), and dated January 24, 2014. The WEI report's modeled hydrographs uniformly predict decreasing wastewater volumes, decreasing groundwater levels, and increasing stormwater runoff due to the predicted increase in impervious surfaces. It should be noted that the WEI report aggregates all sources of wastewater discharge and causes of groundwater level decreases and does not assign relative or individual causes. However, the input WEI used for the RIX WWTP, assumed to be the "San Bernardino/Colton" input lines on WEI's Tables 1 and 2, underestimate the actual discharge volumes. In their Table 1, WEI assumes the RIX discharge at 20.8 MGD or 23,313 AFY, whereas the actual volume for the past 4 years ranges from 33,271 AFY to 39,333 AFY, as documented in the previously discussed Santa Ana Watermaster report. In the Table 2, WEI assumes the 2071 discharge from RIX to range from 8 MGD to 16 MGD or 8,967 AFY to 17,933 AFY. The project would actually reduce the discharge volume to a range between 26,546 AFY and 32,608 AFY (based on the last 4 years), still well above the WEI assumptions. This means that the WEI modeling efforts underestimated the RIX discharge after the project is implemented and therefore overestimated the decrease in surface water flow to the Prado Basin, as well as groundwater level declines. OCWD uses the comparison of the 2021 and 2071 hydrographs to point out that that dry season low flows will increase in severity due to reduced WWTP

discharges. Based on the underestimated discharge volumes discussed above, the WEI reductions have been overestimated.

Numerous other discharges occur downstream of the RIX discharge point, including the Riverside Regional Water Quality Control Plant, which discharges approximately 30 MGD upstream of the Prado Basin. In addition, the groundwater contribution to the riparian corridor from the Prado Basin is substantial. Currently, water is conserved by the USACE behind Prado Dam for use by OCWD downstream. The project would not alter the allowed conservation elevation behind Prado Dam. Surface water could continue to be stored during dry weather according to the Prado Dam Operations Manual. Furthermore, the proposed project would not measurably affect groundwater levels within the Prado Basin, which are managed by the Chino Basin Watermaster. To further illustrate the proximity of groundwater to the Prado Basin riparian forest, Figure 11-6 prepared by the Chino Basin Watermaster shows that groundwater reaches the surface within the most densely wooded portion of the Prado Basin. The shallow groundwater, in combination with surface water, supports the willow forest.

Changes in groundwater level fluctuations are controlled by extraction activities within the Chino Basin and Prado Basin. The reduction of 6 MGD of surface flows would result in insignificant impacts to groundwater elevation within Prado Basin compared with the effects of the managed fluctuation of groundwater levels. As a result, impacts to sensitive plants and riparian habitat from the reduction of 6 MGD of surface flows upstream at RIX would be less than significant to habitat within Prado Basin.



SOURCE: Chino Basin Watermaster, 2006

Sterling Natural Resource Center . 150005

**Figure 11-6**  
Chino Basin Depth to Groundwater Contours

Finally, the surface water inundation levels within the Prado Basin are managed by OCWD. In addition to considering the input of water to the basin by precipitation, runoff, wastewater treatment plant discharges, and upwelling groundwater, surface water and groundwater levels within the Prado Basin are also controlled by OCWD management choices regarding the volume and timing of releases through the Prado Dam into Orange County. Sustainable management of the Prado Basin is a combination of managing both the inflow and outflow.

#### *Stipulated Judgment*

As discussed in Impact 3.9-9 in Section 3.9, Hydrology and Water Quality, of the DEIR, the Stipulated Judgment of 1969 requires agencies in the upper watershed to deliver a total of 42,000 acre-feet/year of Adjusted Base Flow to OCWD at specified locations. Valley District's minimum obligation is 12,420 acre-feet/year of Adjusted Base Flows, delivered to OCWD at Riverside Narrows.

As detailed in the 2013-2014 Santa Ana River Watermaster Report (*Forty-Fourth Annual Report of the Santa Ana River Watermaster for Water Year October 1, 2013 - September 30, 2014*, dated April 30, 2015), the RIX WWTP contributed the following recent annual discharge volumes:

- 2010-2011: 39,333 AF
- 2011-2012: 37,966 AF
- 2012-2013: 35,390 AF
- 2013-2014: 33,271 AF

The Project would reduce the discharge to the river by 6 MGD or 6,725 AFY. Based on the 2013-2014 annual discharge of 33,271 AFY, the Project would reduce the discharge to 26,546 AFY, still more than twice the required minimum discharge of 12,420 AFY at the Riverside Narrows. Therefore, the project would not deprive lower watershed water rights holders of their entitlements since the required contribution would be achievable with the remaining water. In addition, as other recycled water projects are implemented, Valley District would still be required to maintain a minimum flow to meet the obligations of the Stipulated Judgment.

## **Comment OCWD-2**

The OCWD letter provides a list of cumulative projects that it states should have been included in the cumulative projects list.

## **Response to OCWD-2**

### *Cumulative Prado Basin Vegetation Reduction*

The projects list provided in the comment letter is largely generic in that it names various cities and agencies but mostly not specific projects. The cumulative analysis in the DEIR can only consider projects relevant to the Project and known at the time of its circulation, and cannot speculate on unknown, remote, or speculative future projects (*Pala Band of Mission Indians v. County of San Diego*, 68 Cal. App. 4th 556, 576–577 (4th Dist. 1998); *Newberry Springs Water Assn. v. County of San Bernardino*, 150 Cal. App. 3d 740, 750 (4th Dist. 1984)). The DEIR's

consideration of probable future projects may properly be limited to those for which applications have been filed when the notice of preparation of the DEIR was released or when the completed project application is filed. (*Gray v. County of Madera*, 167 Cal. App. 4th 1099 (5th Dist. 2008)). The OCWD letter does identify the Clean Water Factory; however, this cumulative project, for which its own notice of preparation was filed in November 2014, was included in the DEIR Table 4-1, Cumulative Project List, along with a number of other specific recycled water projects.

The DEIR concludes on page 4-13 that cumulative reductions of surface flow into Prado Basin would result in the gradual reduction of either quantity or health of the riparian vegetation. As evaluated in the WEI and Stetson reports provided with the comment letter, the future cumulative impact may significantly reduce vegetation cover compared with existing conditions. The DEIR recognizes this future potentially significant cumulative impact. However, Mitigation Measure BIO-3 includes commitments to remove invasive species within the river segment most affected by the reduced discharge. The removal of invasive species such as *arundo donax* creates space for native vegetation to emerge, thereby increasing native riparian vegetation compared to existing conditions. Pursuant to CEQA Guidelines Section 15130(a)(3), the DEIR concludes that the proposed project's contribution to the future cumulative condition would be less than considerable based on the implementation of Mitigation Measure BIO-3.

Please see Response to Comment USFWS-13 and CBD-8.

## Comment Letter – San Bernardino County Department of Public Works (SBCDPW)

### Comment SBCDPW-1

The comment states that page 2-15 should include more detail on how the water is to be discharged into City Creek. The comment states that there is no information regarding how the new vegetation will be managed so that the hydraulic capacity of the system is maintained.

### Response to SBCDPW-1

The DEIR identifies the proposed discharge locations into City Creek in Figures 2-7a through 2-7b. The DEIR describes the size and components of the discharge structures on page 2-15. The discharge structures will be made of reinforced concrete and include a velocity dissipation component. Mitigation Measure HYDRO-3 requires velocity dissipation features to be approved by the SBCFCD and the USACE. Additionally, the DEIR recognizes that the new riparian vegetation would influence flood flows. The DEIR concludes on page 3.9-25 that the City Creek channel width provides for ample flood flow. Mitigation Measure HYDRO-4 requires that Valley District prepare and implement a vegetation management plan in coordination with SBCFCD and CDFW that accounts for periodic vegetation trimming as needed to ensure that the vital flood functions of the channel are not compromised.

### Comment SBCDPW-2

The comment states that a 408 permit from the USACE is required and that more information is needed on the anticipated improvements within the basins on how the imported water will be stored for percolation. The comment states that cross dikes will need to be repaired and should be outlined in the document along with more information on maintenance in the system for both the recharge and the flood control capacity.

### Response to SBCDPW-2

The DEIR recognizes in Table 2-9 that a permit would be required pursuant to Section 408 of the Rivers and Harbors Act for impacts to USACE flood control infrastructure. The DEIR assumes that since the function of East Twin Creek Spreading Grounds is currently to detain water for percolation, major modifications would not be necessary and that the proposed project's contribution of water would be compatible and complementary to the SBCFCD's stated mission of water conservation. The DEIR recognizes in Mitigation Measures HYDRO-3 and HYDRO-4 that coordination with the SBCFCD would be required to ensure compatibility.

### Comment SBCDPW-3

The comment states that there is not a planned facility in a San Bernardino County Flood Control District basin for potential project drainage within Plunge Creek. The comment states that there should be more information on where the basin is and what the impacts are.

### **Response to SBCEPW-3**

The DEIR describes a potential alternative recharge site near the confluence of Plunge Creek and the SAR. Table 6-2 of the DEIR compares the alternative with the other project alternatives and concludes that impacts to land use and biological resources would be greater than the preferred alternative.

### **Comment SBCEPW-4**

The comment states that the proposal to “increase habitat availability” in Rialto Channel by furnishing cool freshwater into the system is not a natural condition for this channel. The comment states that this may increase vegetation and decrease channel capacity, which will decrease the District’s ability to construct future improvements.

### **Response to SBCEPW-4**

The DEIR identifies the introduction of supplemental water into Rialto Channel as an opportunity to improve water quality to benefit aquatic habitat during summer months when water temperatures are very high. The goal of this measure is to increase the temporal availability of suitable habitat by reducing water temperatures in the summer to a level below the tolerance threshold of the species. Since this is a measure primarily designed to be used in the summer months when storms are infrequent and since the water augmentation would be managed in coordination with SBCEP, the measure would not affect flood capacity in the channel. In addition, the DEIR concludes that the introduction of cooler water would not substantially increase vegetation cover that could impede flood functions, but rather may reduce or prevent some invasive plant species’ colonization such as red alga in Rialto Channel. The use of the channel for this purpose would require coordination with the SBCEP.

Please see Responses to Comments USFWS-10 and USFWS-11.

### **Comment SBCEPW-5**

The comment states that the proposed project should ensure that the flood protection of the District’s facilities is not compromised.

### **Response to SBCEPW-5**

The DEIR identifies that discharge to City Creek and the introduction of supplemental water into Rialto Channel are opportunities to benefit aquatic and riparian habitat in a manner that benefits regional stakeholders and helps achieve co-equal goals of flood control and water conservation. The DEIR recognizes in Mitigation Measures HYDRO-3 and HYDRO-4 that coordination with the SBCEP would be required to ensure compatibility.

### **Comment SBCEPW-6**

The comment states that any work within the District right-of-way will require a permit.



**Response to SBCEPW-6**

The DEIR recognizes in Table 2-9 that encroachment permits from SBCEFD would be required to implement project components within SBCEFD-owned facilities.

**Comment SBCEPW-7**

The comment states that SBVMWD will be responsible for any vector control and vegetative management issues caused by the discharge.

**Response to SBCEPW-7**

The proposed project would be operated by Valley District and management of the percolation sites including the need for vector control would be Valley District's responsibility as the project owner and operator.

**Comment SBCEPW-8**

The comment states that any proposed connections to, or work on, District land, will require a permit.

**Response to SBCEPW-8**

The DEIR recognizes in Table 2-9 that encroachment permits from SBCEFD would be required to implement project components within SBCEFD-owned facilities.

**Comment SBCEPW-9**

The comment states that District land is not to be offered/used as mitigation for any agency other than the District unless specifically authorized by the District and the County of San Bernardino Board of Supervisors.

**Response to SBCEPW-9**

The proposed discharge to City Creek would provide ancillary benefit to biological resources since riparian and aquatic habitat would emerge in the creek bed, but the project does not identify this benefit as mitigation for any project impact. Rather, Mitigation Measure BIO-3 lists six distinct actions that would mitigate for impacts of reduced flow in the SAR. They include managing the river segment below the RIX discharge in such a way as to improve habitat quantity and quality. The DEIR recognizes in Table 2-9 that encroachment permits from SBCEFD would be required to implement project components within SBCEFD-owned facilities.

Valley District, as one of the regional agencies responsible for managing water supplies in San Bernardino County, looks forward to collaborating with the County on projects that benefit the entire region. In many cases, such regional collaboration along with CDFW and USFWS will enable the County and Valley District to accomplish needed projects more quickly and more



economically, thereby benefitting the public that we all serve. In many cases, public agencies will need to use each other's property to accomplish mutually beneficial purposes; Valley District anticipates that the County will work cooperatively with Valley District and others to promote the expedited permitting of projects to achieve the shared public benefit and mission.

### **Comment SBCEPW-10**

The comment states that the introduction of trees and the establishment of riparian vegetation may impede the ability of the system to convey the gravels downstream and will have an impact on the overall geomorphology of the system.

### **Response to SBCEPW-10**

The DEIR recognizes that the new riparian vegetation would influence flood flows. The DEIR concludes on page 3.9-25 that the City Creek channel width provides for ample flood flow. Mitigation Measure HYDRO-4 requires that Valley District prepare and implement a vegetation management plan in coordination with SBCEFD and CDFW that accounts for periodic vegetation trimming as needed to ensure that the vital flood functions of the channel are not compromised. The new riparian vegetation in City Creek would assist in stabilizing the center of the channel, but the addition of riparian vegetation would not substantially impede sediment transport in the system which is largely influenced by major storm flows.

### **Comment SBCEPW-11**

The comment states that page ES-10 BIO-3 Disturbance to SAS discusses measures to reduce potential project related impacts. The comment states that the proposed mitigation measures in no way allows for other agencies to utilize District land for mitigation.

### **Response to SBCEPW-11**

The proposed discharge to City Creek would provide ancillary benefit to biological resources since riparian and aquatic habitat would emerge in the creek bed, but the project does not identify this benefit as mitigation for any project impact. Rather, Mitigation Measure BIO-3 lists six distinct actions that would mitigate for impacts of reduced flow in the SAR. They include managing the river segment below the RIX discharge in such a way as to improve habitat quantity and quality. The DEIR recognizes in Table 2-9 that encroachment permits from SBCEFD would be required to implement the project components on land owned by the County or within SBCEFD facilities.

Valley District, as one of the regional agencies responsible for managing water supplies in San Bernardino County, looks forward to collaborating with the County on projects that benefit the entire region. In many cases, such regional collaboration along with CDFW and USFWS will enable the County and Valley District to accomplish needed projects more quickly and more economically, thereby benefitting the public that we all serve. In many cases, public agencies will need to use each other's property to accomplish mutually beneficial purposes; Valley District

anticipates that the County will work cooperatively with Valley District and others to promote the expedited permitting of projects to achieve the shared public benefit and mission.

### **Comment SBBDPW-12**

The comment states that the proposed discharge locations identified by Figure 2-7 are concerning due to the fact that these locations are vegetated with RAFSS and known to be occupied by San Bernardino kangaroo rat (SBKR), Santa Ana River woolly star (SAWS) and many other sensitive species.

### **Response to SBBDPW-12**

The DEIR recognizes on page 3.4-44 through 3.4-47 that the discharge locations would be located in areas of natural habitats such as RAFSS that support special status plants and wildlife such as SBKR and SAWS. Mitigation Measures BIO-1 and BIO-2 outline impact minimization and compensation strategies to ensure that impacts to these species are not significant. To provide further assurances that any impacts will be properly mitigated, Valley District is committed to a 1:1 mitigation ratio for temporary habitat impacts resulting from construction, and a 3:1 ratio for permanent impacts to RAFSS and associated species.

Please see Response to Comments USFWS-12, CBD-3, CBD-6, CBD-11 and CDFW-1.

### **Comment SBBDPW-13**

The comment states that the document is not clear how the project proponent proposes to significantly impact an existing habitat occupied by multiple listed species to the benefit of another.

### **Response to SBBDPW-13**

The DEIR recognizes that introduction of perennial flow within City Creek will modify the condition of the creek bed. Riparian habitat will emerge, replacing existing RAFSS scrub within the center of the creek, leaving the wide creek flood plain unaffected. The DEIR concludes that the addition of perennial flows within the creek would contribute to a native ecosystem within an area of overlapping habitat values. The proposed project would not create a new creek where one did not previously exist. The addition of water in a creek bed that is surrounded by RAFSS will enhance the integration and preservation of native species in this watershed subject to conditions of approval by the wildlife management agencies, including the USFWS. The DEIR concludes that this conversion does not require compensation of RAFSS habitat elsewhere. However, as noted in response to SBBDPW-12, Valley District has nevertheless committed to a 1:1 mitigation ratio for temporary habitat impacts resulting from construction, and a 3:1 ratio for permanent impacts to RAFSS and associated species.

Please see Responses to Comments CDFW-1, CBD-7, CBD-8, CBD-9, CBD-11 and OCWD-1.

### **Comment SBCEPW-14**

The comment states that the District will require long term maintenance permits to maintain the riparian vegetation ensuring Flood Control requirements are met.

### **Response to SBCEPW-14**

Mitigation Measure HYDRO-4 requires that Valley District prepare a vegetation management plan within City Creek, in coordination with the Flood Control District. Implementation of this plan would be included in the Streambed Alteration Agreement and Endangered Species Act conditions of approval.

### **Comment SBCEPW-15**

The comment states that there is no information regarding the impacts of species within the San Bernardino International Airport Authority property or proposed mitigation measures.

### **Response to SBCEPW-15**

Mitigation Measures BIO-1 and BIO-2 cover impacts to any construction zone that may support special status plants or animals including on the SBIAA property.

### **Comment SBCEPW-16**

The comment states that the proposed drainages and the habitat enhancement offered as mitigation must be authorized by the District due to the fact that District land is not to be utilized as mitigation for any agency other than the District.

### **Response to SBCEPW-16**

The proposed discharge to City Creek would provide ancillary benefit to biological resources since riparian and aquatic habitat would emerge in the creek bed, but the project does not identify this benefit as mitigation for any project impact.

Valley District, as one of the regional agencies responsible for managing water supplies in San Bernardino County, looks forward to collaborating with the County on projects that benefit the entire region. In many cases, such regional collaboration along with CDFW and USFWS will enable the County and Valley District to accomplish needed projects more quickly and more economically, thereby benefitting the public that we all serve. In many cases, public agencies will need to use each other's property to accomplish mutually beneficial purposes; Valley District anticipates that the County will work cooperatively with Valley District and others to promote the expedited permitting of projects to achieve the shared public benefit and mission.

### **Comment SBCEPW-17**

The comment suggests that the DEIR should address species other than SAS and proposes to obtain approval from United States Fish and Wildlife Services (USFWS) and California Department of Fish and Wildlife (CDFW).

### **Response to SBCEPW-17**

Mitigation Measure BIO-3 is focused on mitigating impacts to SAS. The DEIR concludes based on the Reduced Discharge Study that the reduced flow would not have significant adverse impacts to any other special status species. However, the project proposes to offset impacts to habitat and species as appropriate based on the project-level direct, indirect, and cumulative impacts.

Please see Responses to Comments CDFW-1, CDFW-4, CDFW-5, CBD-3, CBD-5, CBD-6, CBD-7, USFWS-12, USFWS-13, and USFWS-14.

### **Comment SBCEPW-18**

The comment states that the HMMP mitigation measures proposed on Page 3.4-57 to address impacts to SAS would all occur on District property. The comment states that this in no way allows for other agencies to utilize District land for mitigation.

### **Response to SBCEPW-18**

Valley District, as one of the regional agencies responsible for managing water supplies in San Bernardino County, looks forward to collaborating with the County on projects that benefit the entire region. In many cases, such regional collaboration along with CDFW and USFWS will enable the County and Valley District to accomplish needed projects more quickly and more economically, thereby benefitting the public that we all serve. In many cases, public agencies will need to use each other's property to accomplish mutually beneficial purposes; Valley District anticipates that the County will work cooperatively with Valley District and others to promote the expedited permitting of projects to achieve the shared public benefit and mission.

### **Comment SBCEPW-19**

The comment states the mitigation measure discussed in the Implementation of Mitigation Measure BIO-1 needs to include permanent impacts to plants such as slender-horned spineflower and Santa Ana River Woolly-Star as the habitat would be left unsuitable. The comment states that this mitigation measure needs to address temporary and permanent impacts to SBKR.

### **Response to SBCEPW-19**

The DEIR recognizes on page 3.4-44 through 3.4-47 that the discharge locations would be located in areas of natural habitats such as RAFSS that support special status plants and wildlife such as SBKR, SAWS and slender-horned spineflower. Mitigation Measures

BIO-1 and BIO-2 outline impact minimization and compensation strategies to ensure that impacts to these species are not significant.

Please see Responses to Comments CDFW-1, CBD-5, CBD-9, CBD-11 and OCWD-1.

### **Comment SBCEPW-20**

The comment states that the District was led to believe that the HCP was for multiple species, not just the SAS. The comment suggests that this should be clearer.

### **Response to SBCEPW-20**

Mitigation Measure BIO-3 commits Valley District to participating in the Upper SAR HCP as a means of mitigating the project's contribution to effects on SAS. The SNRC DEIR focuses on project-related direct, indirect, and cumulative impacts. The full content and purposes of the HCP are not considered in the DEIR. However, as noted on the HCP website [www.sarhcp.com](http://www.sarhcp.com) a total of 22 special status species are proposed for coverage by the HCP. The HCP fully plans to implement a comprehensive conservation strategy that will secure, enhance, and manage habitat for all covered species in perpetuity.

### **Comment SBCEPW-21**

The comment states that there is concern for relocating the animals discussed in Mitigation Measure BIO-2. The comment states that the relocation may not be feasible and the disturbance to adjacent habitat would be a further impact.

### **Response to SBCEPW-21**

Mitigation Measure BIO-2 commits Valley District to a mitigation strategy that includes performance standards to mitigate for the project's impacts to special-status species. The mitigation would be conducted in consultation with the wildlife agencies. Implementation of the mitigation would follow best practices outlined in conservation measures imposed by agency approval.

### **Comment SBCEPW-22**

The comment states that Mitigation Measure BIO-3 includes measures to reduce invasive vegetation in the river corridor and that this mitigation may not occur within District lands.

### **Response to SBCEPW-22**

Mitigation Measure BIO-3 lists six distinct actions that would mitigate for impacts of reduced flow in the SAR. They include managing the river segment below the RIX discharge in such a way as to improve habitat quantity and quality. The DEIR recognizes in Table 2-9 that encroachment permits from SBCFCD would be required to implement project components within SBCFCD-owned facilities.

Valley District, as one of the regional agencies responsible for managing water supplies in San Bernardino County, looks forward to collaborating with the County on projects that benefit the entire region. In many cases, such regional collaboration along with CDFW and USFWS will enable the County and Valley District to accomplish needed projects more quickly and more economically, thereby benefitting the public that we all serve. In many cases, public agencies will need to use each other's property to accomplish mutually beneficial purposes; Valley District anticipates that the County will work cooperatively with Valley District and others to promote the expedited permitting of projects to achieve the shared public benefit and mission.

### **Comment SBCDPW-23**

The comment states that any potential significant impacts resulting from implementation of a mitigation measure must be fully discussed, disclosed and minimized.

### **Response to SBCDPW-23**

Valley District does not believe there will be significant adverse impacts resulting from any proposed mitigation measure. Development of the HMMP will occur in coordination with the Wildlife Agencies to ensure that all mitigation related impacts are reduced to the maximum extent possible and the net value of each measure provides long-term benefit to the species and their habitats.

### **Comment SBCDPW-24**

The comment states the proposed project would need to be reviewed and addressed by both the District's and Transportations Operations Divisions to ensure public facilities are not compromised, impeded, or disrupted.

### **Response to SBCDPW-24**

Valley District looks forward to discussing potential mutual benefits of the project with SBCFCD at its earliest convenience.

## **Comment Letter – San Bernardino County Regional Parks (SBCRP)**

San Bernardino County Regional Parks has no comment regarding the Sterling Natural Resource Center Draft EIR.

### **Response to SBCRP**

The comment is noted for the record and no response to comment is necessary.

## Comment Letter – San Bernardino Municipal Water District (SBMWD)

### Comment SBMWD-1

The comment states that SBMWD supports the goal of increasing recycled water use but has questions about the project and its potential impacts. SBMWD states that the project as proposed requires SBMWD approvals and cooperation to implement the project. The comment expresses concern that the project could adversely affect the SBMWD proposed Clean Water Factory and downstream water delivery obligations while duplicating services. SBMWD requests more information and clarification as set forth in the comment letter.

### Response to SBMWD-1

Valley District recognizes the importance of coordination with SBMWD and proposes the SNRC to be complementary to the Clean Water Factory, achieving several aligned goals. Valley District and East Valley Water District have met with SBMWD on numerous occasions to evaluate opportunities to combine resources and cooperate on a regional basis. The SNRC is intended to provide substantial benefit to the City of San Bernardino and SBMWD through construction of a treatment facility in the upper watershed that would recharge the groundwater basin in a manner that serves the entire region, including the City. Rather than adversely impacting the SBMWD's recycled water goals, Valley District, as the regional water wholesale agency, proposes the project to further advance many of the goals of the Clean Water Factory and to assist the City with an expedited recycled water project for the benefit of the entire region.

### Comment SBMWD-2

The comment states that the cost for wastewater treatment will be significantly higher for EVWD customers due to technologies proposed and economies of scale. The comment states that rates will likely increase but City of San Bernardino residents will receive no benefit.

### Response to SBMWD-2

An Update of the Recycled Water Feasibility Study was prepared in 2015 that evaluated the cost of treatment with and without the project. The Feasibility Study concluded that implementation of the project would result in lower rate increases in the future compared with the No Project condition (Feasibility Study, Table 12-7). The estimated capital and O & M costs were developed based on a survey of similar facilities that utilize Membrane Bioreactor (MBR) technology to achieve tertiary/Title 22 treated water quality standards. A data base of approximately 25 recent treatment plants utilizing MBR technology was compiled, with the capital cost for each facility adjusted to the local/current Engineering News Record Construction Cost Index. The EVWD ratepayers, including the 8,350 connections located in the City of San Bernardino, can expect project benefits from reduced future costs as a result of the project. In addition, the reuse of recycled water would present a substantial regional water supply benefit to all water customers of the region through groundwater recharge in the Bunker Hill Groundwater Basin.



Please see Response to Comment LAFCO-4.

### **Comment SBMWD-3**

The comment states that there is insufficient information on the proposed SNRC design flow and diversion of treatment.

### **Response to SBMWD-3**

As noted on page 2-6 of the DEIR, the project would divert all of the existing EVWD flow, identified as 6 MGD, and future flow from the EVWD service area to the new SNRC Treatment Facility.

### **Comment SBMWD-4**

The comment asks for more information about the design of the proposed lift station, including such information as the peaking factor and the type of daily flow the 5.4 MGD represents.

### **Response to SBMWD-4**

The proposed lift station would be designed to accommodate existing and future (year 2035) flows as projected in EVWD's 2013 Wastewater Collection System Master Plan. The design flow parameters are shown in the following table.

	<b>Existing Flow (MGD)</b>	<b>2035 Projected Flow (MGD)</b>
Average Dry Weather Flow	1.92	2.29
Peak Wet Weather Flow	4.85	5.36
Design Capacity		5.4

### **Comment SBMWD-5**

The comment states that during shutdowns of the RIX facility, discharge to the Santa Ana River from the RIX does not occur.

### **Response to SBMWD-5**

Under current conditions, the RIX facility periodically shuts down for maintenance purposes, which eliminates discharges. The proposed project would not modify this existing operation and maintenance function of RIX or its associated impacts, which will remain the responsibility of the facility operator. However, the proposed project provides the ability to temporarily discharge supplemental water into the SAR from local groundwater wells via the Rialto Channel if necessary for environmental needs that may include supplementing river flows during planned RIX shut downs. Valley District and EVWD propose to enter into a cooperative agreement with the City of San Bernardino and the SBMWD to develop and construct appropriate bypass

arrangements to allow for the discharge of flows from the proposed project (including discharges from wells) during periods when RIX discharges are eliminated for purpose of maintenance. Such an agreement would have a beneficial effect on listed aquatic species in the SAR and would not disturb habitat for listed terrestrial species in areas adjacent to the RIX facility.

### **Comment SBMWD-6**

The comment states that biosolids are not disposed or generated at the RIX facility but at the SBWRP.

### **Response to SBMWD-6**

This corrective comment is noted for inclusion in the record. In response to this comment, the following changes have been made on page 2-11 of the DEIR.

#### ***Biosolids Dewatering and Offloading***

Screw presses would be employed for biosolids dewatering. Biosolids, would be hauled offsite either to soil augmentation reuse facilities or to a landfill such as the San Timoteo Landfill for disposal. An offloading facility would be constructed that would convey treated biosolids onto haul trucks. The facility would generate less than five biosolids haul trucks per day on average. The San Timoteo landfill is located approximately 7 miles from the SNRC. Biosolids reuse opportunities such as land application may be utilized in the San Joaquin Valley or Arizona. Truck trips up to 250 miles to Kings County or 300 miles to Arizona may be necessary. Biosolids are currently processed at the SBWRP and reused for composting. ~~This is consistent with current biosolids reuse and disposal activities from the RIX facility.~~

### **Comment SBMWD-7**

The comment expresses concern that not enough information is presented in the DEIR about the supplemental water wells or the water that would be distributed from them to the SAR. In addition, the comment states the DEIR does not identify that these wells would require a NPDES permit.

### **Response to SBMWD-7**

The DEIR notes on page 3.9-24 that groundwater levels may be lowered during use of the supplemental water wells. The DEIR concludes that the reduction in groundwater levels would be offset by the infiltration of the discharge in the SAR, which exhibits high infiltration rates below the RIX discharge.

Mitigation Measure BIO-3 provides the mechanism to introduce groundwater into the Rialto Channel to benefit habitat by reducing water temperatures in the Rialto Channel or providing supplemental flows during RIX shutdowns. The goal of this measure is to increase the temporal availability of suitable habitat by reducing water temperatures in the summer to a level below the

tolerance threshold of the species. Based on analysis conducted by the USGS, it appears possible to reduce the water temperature from the current 89 degrees Fahrenheit to below 85 degrees Fahrenheit (the maximum tolerance of SAS) with approximately 2 cfs of groundwater, for a total of about 365 acre feet per year if introduced from July to September. The use of this measure would be on an appropriate scale related to the level of project impact and refined in coordination with the wildlife agencies through the permitting processes and development of the HMMP. Success criteria and a monitoring plan for this mitigation measure will be included in the HMMP. The DEIR concludes that, as one component of a broad mitigation strategy, providing supplemental water during the summer months in coordination with the wildlife agencies provides benefits compared to existing conditions and is commensurate with the scale of project-level effects. The habitat condition triggers and success criteria will be developed in coordination with the Wildlife Agencies and USGS for inclusion in the HMMP.

In response to the comment, Table 2-9 has been modified to include that the use of the supplemental water wells would require a low-threat discharge permit from the RWQCB. Valley District would be subject to groundwater quality monitoring imposed by the permit.

### **Comment SBMWD-8**

The comment states that the proposed use of the SAR pipeline interferes with planned use by SBMWD to implement the proposed Clean Water Factory. The comment states that the SAR pipeline is not available for SNRC. If it were available, it would affect SBMWD's NPDES permit 20:1 dilution ratio, require additional pipeline in the WRP, and potentially cause liability for discharging commingled effluent.

### **Response to SBMWD-8**

The DEIR notes on page 2-34 that an agreement with the City of San Bernardino would be required to re-purpose the SAR Pipeline for the proposed project. This component of the proposed project, as noted above, presents opportunities for both the City and Valley District to effectively manage SAR discharges, and provides for the assurance that flows to the SAR from RIX could be maintained if necessary until the proposed project is fully permitted. However, if the SAR Pipeline were not made available to Valley District, the proposed project still could be implemented without this discharge option, recognizing that no diversion of existing wastewater flow to RIX would be allowable until either the HCP or HMMP were approved by the USFWS under Section 7 or 10 of the Endangered Species Act.

The DEIR concludes that since the wastewater is already a component of the RIX discharge, a source control assessment would not be required, nor would the introduction of tertiary-treated effluent to RIX via the SAR Pipeline require any modifications to the existing RIX NPDES discharge permit. The Santa Ana RWQCB has informally suggested that permit modifications would not likely be necessary. The additional treatment would benefit the RIX system and may improve the quality of the discharge to the SAR. Furthermore, the comingled effluent would not increase any liability for the City since a cooperative agreement that addresses any such liability would be required.

The NPDES permit for the RIX facility provides for two sets of discharge requirements for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), and Coliform, depending on whether the discharge is below or above a 20:1 dilution ratio to flow in the Santa Ana River. The two sets of discharge requirements for these parameters are shown in the table below.

**TABLE 2-9  
DISCRETIONARY PERMITS POTENTIALLY REQUIRED**

Agency	Permits and Authorizations Potentially Required
Regional Water Quality Control Board (RWQCB)	<ul style="list-style-type: none"> <li>• National Pollutant Discharge Elimination System (NPDES) for discharge to City Creek</li> <li>• Waste Discharge Requirements (WDR) for groundwater replenishment reuse projects under California Title 22</li> <li>• SWPPP for inclusion in General Stormwater NPDES Permit for Construction Activities</li> <li>• General Stormwater NPDES for Industrial Facilities</li> <li>• <u>Low Threat Discharge NPDES for supplemental water discharges</u></li> <li>• 401 Water Quality Certification;</li> </ul>
State Water Resources Control Board	<ul style="list-style-type: none"> <li>• California Water Code Section 1211 Change in Point of Discharge</li> </ul>
SBCFCD	<ul style="list-style-type: none"> <li>• Encroachment permit for discharge facilities</li> <li>• Easement, and/or license agreement for use of recharge facilities</li> </ul>
South Coast Air Quality Management District (SCAQMD)	<ul style="list-style-type: none"> <li>• Permit to operate treatment facility</li> <li>• Permits to operate cogeneration facility and emergency generators</li> </ul>
East Valley Water District	<ul style="list-style-type: none"> <li>• Approval to modify collection system</li> </ul>
City of Highland	<ul style="list-style-type: none"> <li>• Encroachment permit for construction in roadways</li> <li>• Department review permit for Administration Center</li> </ul>
City of Redlands	<ul style="list-style-type: none"> <li>• Encroachment permit for construction in roadways</li> <li>• Approval for use of Redlands Basins</li> </ul>
City of San Bernardino	<ul style="list-style-type: none"> <li>• Encroachment permit for construction in roadways</li> <li>• Approval to re-purpose SAR Pipeline</li> </ul>
City of Rialto	<ul style="list-style-type: none"> <li>• Approval for use of groundwater wells.</li> </ul>
Caltrans	<ul style="list-style-type: none"> <li>• Encroachment permit for construction in roadways and undercrossings</li> </ul>
U.S. Army Corps of Engineers	<ul style="list-style-type: none"> <li>• Clean Water Act Section 404 Permit</li> <li>• 408 Permit (if necessary)</li> </ul>
California Department of Fish and Wildlife	<ul style="list-style-type: none"> <li>• Lake or Streambed Alteration Agreement</li> <li>• Endangered Species Act compliance 2081</li> </ul>
US Fish and Wildlife Service	<ul style="list-style-type: none"> <li>• Endangered Species Act compliance Section 7/Section 10</li> </ul>
Federal Aviation Administration	<ul style="list-style-type: none"> <li>• Notice of Proposed Construction or Alteration</li> </ul>

Parameter	Units	Without 20:1 Dilution		With 20:1 Dilution	
		Avg. Monthly	Avg. Weekly	Avg. Monthly	Avg. Weekly
BOD	mg/l	20	30	30	45
TSS	mg/l	20	30	30	45
		Avg. Weekly	Max/30 Days	Avg. Weekly	Max/7 Days
Coliform	MPN	2.2 (Cannot exceed 2.2 on any day during a calendar week.)	23 (Cannot exceed 23 in more than one sample in any 30-day period.)	23 (Cannot exceed 23 on any day during a calendar week.)	23 (Cannot exceed 23 in more than one sample in any 7-day period.)

These discharge requirements would not be affected by the alternative where SNRC tertiary treated wastewater is discharged to the SAR via the RIX facility, since the discharge from RIX would be nearly identical with or without the SNRC facility. Further, the ability of the RIX facility to meet its discharge requirements may be enhanced and treatment costs could be reduced due to the higher quality influent into RIX that would result from an initial 6 MGD of tertiary treated effluent from the SNRC replacing a similar flow of secondary treated effluent from the SBMWD Water Reclamation Plant (SBWRP).

For those alternatives where the SNRC tertiary treated effluent is discharged to Redlands Basin, City Creek, East Twin Creek Spreading Grounds, or any other location and not via the RIX facility, the potential impact on RIX operations relative to the 20:1 dilution ratio would be to increase the number of days that the discharge would be under the less restrictive discharge requirements. In other words, since the discharge from RIX would be reduced, the RIX discharge could meet the 20:1 dilution requirement with less flow in the river, hence it could meet the 20:1 dilution requirement more often, reducing the number of days the more restrictive discharge requirements would need to be met.

Finally, the DEIR recognizes that a bypass pipeline would be required to move the tertiary-treated effluent from SNRC around the SBWRP facility to access the RIX discharge pipeline. The bypass pipeline would be constructed by Valley District and would require approval by the City.

### Comment SBMWD-9

The comment states that the conclusion of “Significant and Unavoidable” impact is not supported by the evidence or impact analysis, is overly conservative, and may result in a jeopardy opinion.

### Response to SBMWD-9

Valley District as Lead Agency has evaluated the potential impact to the Santa Ana sucker and has independently concluded based on substantial evidence that impacts should be considered

significant and unavoidable. The conclusion is not based on an established habitat suitability threshold, which is not available, but rather on a qualitative threshold based on the fact that any new adverse effect on an already significantly impacted species should be considered as substantial. As a result, the DEIR concludes that the project would result in a significant and unavoidable impact.

The DEIR identifies a reasonable threshold of significance on page 3.4-42 that states that a significant impact would occur if the project would “have a substantial adverse effect, either directly or indirectly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFW or USFWS.” The DEIR summarizes the results of a hydrology study prepared for the project that estimates the impacts of a 6 MGD flow reduction on SAR depth and velocity. The DEIR concludes that although impacts to depth and velocity would be minor (page 3.4-51), any new contribution to the stress on a listed species should be considered “substantial.” The primary reason for this conclusion is the fact that the project would reduce base flows in the SAR by between 18 and 21 percent. The reduction of flows by about one-fifth readily satisfies the criterion that the project may have a “substantial adverse effect” on the Santa Ana sucker. An additional set of reasons for this conclusion stems from the fact that the Santa Ana sucker is already suffering from a variety of stressors, including but not limited to decreased groundwater levels that have transformed the portion of the SAR occupied by the Santa Ana sucker from a “gaining reach” to a “losing reach”; the invasion of red alga (an invasive species) that reduces the available food supply; and predatory fish species. Faced with this significant and substantial set of stressors, it was reasonable for the DEIR to conclude that the incremental effect of the project would result in a significant impact and contribute considerably to a cumulative impact. New “best available information” on habitat suitability thresholds would not change this conclusion. This impact conclusion is within the discretion of the Lead Agency based on the substantial evidence provided in the DEIR.

Finally, the determination of whether an action would result in a jeopardy opinion is the sole responsibility of the USFWS. The DEIR presents the results of technical studies and evaluates mitigation measures to reduce project impacts. Valley District has concluded that a jeopardy opinion can best be avoided through development of mitigation measures to minimize effects and to plan for species recovery as a cooperative stakeholder.

### **Comment SBMWD-10**

The comment states that high flow pulse events may not be feasible.

### **Response to SBMWD-10**

The DEIR recognizes that implementation of mitigation measures that require cooperation by the City and the SBMWD is contingent on their approval. The list of commitments in Mitigation Measure BIO-3 provides a performance standard for these mitigation measures. USFWS and CDFW will consider issuing permits for the project based on the combination of mitigation commitments that are feasible and have a high likelihood of being implemented. Valley District,

as noted above, seeks to cooperate with the City and SBMWD to implement the mitigation measures described in the DEIR. If cooperation cannot be achieved, Valley District intends to develop other sources of water (e.g., groundwater wells or the use of turnouts owned or operated by other water agencies) to provide the necessary pulse flows. Given the number of large pipelines in the vicinity of the RIX facility, such alternative arrangements are feasible.

### **Comment SBMWD-11**

The comment states that the RIX discharge does not support spawning habitat.

### **Response to SBMWD-11**

The DEIR recognizes that SAS spawning habitat exists within the Rialto Channel above the RIX discharge. However, current data shows that SAS spawning also occurs downstream of the RIX discharge point. Most recently, larval SAS were observed in areas downstream of the RIX discharge in June 2015.

### **Comment SBMWD-12**

The comment states that the project would impact groundwater quality and that mitigation measures are inadequate to mitigate the potential effects.

### **Response to SBMWD-12**

The DEIR concludes on page 3.9-22 that the anticipated TDS concentrations of the effluent would not exceed the assimilative capacity of the basin. The requirement to meet groundwater quality objectives including TDS would be a requirement of the discharge permit from the RWQCB that would include an anti-degradation analysis. The proposed project would be subject to the discharge permit requirements established by the RWQCB. The comment speculates that the RWQCB would be unwilling either to encourage the use of recycled water within the San Bernardino Basin Area (notwithstanding the State's General Permit for recycled water or the Recycled Water Policy) or to adopt a "maximum benefit" discharge permit as was done in the Chino Basin. However, discussions with the SWRCB and the RWQCB indicate that these regulatory agencies support the use of recycled water and so would be willing to issue the necessary permits.

### **Comment SBMWD-13**

The comment states that the Bunker Hill groundwater management zones have little or no capacity for assimilation of TDS.

### **Response to SBMWD-13**

A primary objective of the proposed project is to replenish groundwater with recycled water to meet local demands. Table 11-1 shows the assimilative capacity of TDS and Nitrate (as N) in the relevant groundwater subbasins. Bunker Hill A subbasin (which would receive discharges via



East Twin Creek Spreading Grounds) has ambient TDS and N levels that exceed Basin Plan standards established by the Santa Ana RWQCB; as such, no assimilative capacity currently exists for a 10 MGD discharge to that subbasin. Bunker Hill B subbasin (which would receive discharges via City Creek and Redlands Basins) has ambient TDS and N levels well below Basin Plan standards; as such, assimilative capacity does currently exist for a 10 MGD discharge to that subbasin. Antidegradation modeling currently underway suggests that proposed project discharges can be assimilated into the two subbasins within Basin Plan limits if a majority of Project discharges are recharged into Bunker Hill B, along with blending with Valley District's planned surface water recharge project (6,000 AFY) at East Twin Creek Spreading Grounds. Receipt of an NPDES permit from Santa Ana RWQCB, in collaboration with DDW, would ensure that proposed project discharges comply with Basin Plan standards and are accommodated within the subbasins' assimilative capacity.

**TABLE 11-1  
BASIN PLAN OBJECTIVES AND AMBIENT WATER QUALITY**

Constituent	Bunker Hill A		Bunker Hill B	
	TDS	N	TDS	N
Basin Plan Objective (mg/L)	310	2.7	330	7.3
Ambient Water Quality (mg/L)	340	4.0	280	5.6
Recycled Water Quality (mg/L)	463	5.5	463	5.5

Mitigation Measure HYDRO-2 requires that Valley District implement a groundwater monitoring program in conjunction with the replenishment. The monitoring program would assist in managing the groundwater basin effectively to maintain beneficial uses and to protect public health. Receipt of and compliance with an NPDES permit would ensure that no local drinking water wells are adversely affected by proposed project discharges. However, with the establishment of a groundwater monitoring network, water quality can be measured and recorded to evaluate potential impacts and implement corrective measures, if required. The identified corrective measures include modification of treatment of the replenishment water, or modification of operations of the well that may require providing replacement water until the water quality issue is corrected. The Mitigation Measure provides no specific modifications since those would depend on the water quality impairment identified during monitoring.

Groundwater modeling reports conducted by Valley District for each of the proposed recharge locations are included in Appendix I.

### **Comment SBMWD-14**

The comment states the belief that the RWQCB cannot make the required antidegradation analysis findings, given the circumstances of the project. The comment also states that Valley District has a separate CEQA obligation to evaluate and disclose potential impacts associated with an exceedance of water quality objectives and assimilative capacity.

## Response to SBMWD-14

As part of the NPDES permitting process, Santa Ana RWQCB and DDW would ensure that proposed project discharges comply with Basin Plan standards and groundwater replenishment regulations.<sup>1</sup> Antidegradation modeling is currently underway as part of the permitting process. Preliminary modeling results demonstrate that proposed project discharges can be assimilated into the Bunker Hill subbasins. This EIR evaluates potential groundwater quality impacts associated with project discharges in *Section 3.9, Hydrology and Water Quality*; no further CEQA evaluation is anticipated.

Figure 2-7g identifies four existing wells in Rialto that could be used to introduce groundwater into the Rialto Channel. The refurbishment of the wells would require minor work to be conducted by Valley District. Table 2-9 of the DEIR recognizes that the use of the wells would require approval of the well owners. Regarding the assumptions on temperature, the DEIR makes a reasonable assumption that the groundwater temperature would be substantially less than the recorded summer-time temperatures in the Rialto Channel which exceed 86 degrees. The DEIR does not target an ideal water temperature, but rather concludes that use of the wells to lower river water temperatures would improve conditions compared to existing conditions. Furthermore, the DEIR acknowledges on page 3.9-24 that local groundwater levels would be affected by the use of the supplemental water wells. The DEIR assumes that although a cone of depression around the wells would lower local groundwater levels, this effect would be similar to the original designed use of the wells. Furthermore, the water would be discharged into the SAR at a point where in-channel percolation is very high, re-introducing discharged water into the groundwater system. The DEIR concludes that use of the existing wells would not significantly impact groundwater levels or deplete the aquifer. Groundwater modeling reports conducted by Valley District for each of the proposed recharge locations are included in Appendix I.

Please see Response to Comment Rialto-1 and RPU-5.

## Comment SBMWD-15

The comment states that Mitigation Measure HYDRO-2 is inadequate since it does not provide specific treatment types or replacement water sources.

## Response to SBMWD-15

A primary objective of the proposed project is to replenish groundwater with recycled water to meet local demands. Mitigation Measure HYDRO-2 requires that Valley District implement a groundwater monitoring program in conjunction with the replenishment. The monitoring program would assist in managing the groundwater basin effectively to maintain beneficial uses and to protect public health. It is not anticipated that the replenishment water would adversely affect local drinking water wells. However, with the establishment of a groundwater monitoring network, water quality can be measured and recorded to evaluate potential impacts and

---

<sup>1</sup> Regulations for groundwater replenishment using recycled water, effective June 18, 2014, [http://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/RecycledWater.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/RecycledWater.shtml)

implement corrective measures, if required. The identified corrective measures include modification of treatment of the replenishment water, or modification of operations of the well that may require providing replacement water until the water quality issue is corrected. The Mitigation Measure cannot predetermine additional specific modifications since those would depend on and correct the water quality impairment identified during monitoring.

Furthermore, as noted in Response to Comment SBMWD-13 and SBMWD-14, the project would be subject to an NPDES permit that would protect beneficial uses of the groundwater basin. The Basin Plan objective for Bunker Hill subbasin B has assimilative capacity, which the RWQCB has indicated could be assigned to recycled water projects. The details of the project's use of assimilative capacity in Bunker Hill subbasin B would be determined with the RWQCB during the permitting process. Based upon the permits issued by the RWQCB to other recycled water projects, it is reasonable to conclude that the RWQCB will either require the project to meet Basin Plan objectives or to demonstrate that the project satisfies "maximum benefit" analysis. In either case, the RWQCB would find the permitted project to be consistent with the Basin Plan.

Please see Responses to Comments RPU-1, RPU-2, and RPU-5.

### **Comment SBMWD-16**

The comment addresses the concern that no information or analysis is provided regarding the potential for the supplemental wells to adversely affect groundwater levels or surface water quality or impact potentially higher flow velocity segments of the river used for spawning and juvenile Santa Ana suckers. The comment suggests the DEIR include summer groundwater temperature data for the Rialto wells.

### **Response to SBMWD-16**

DEIR Figure 2-7g identifies four existing wells in Rialto that could be used to introduce groundwater into the Rialto Channel. The refurbishment of the wells would require minor work to be conducted by Valley District. Table 2-9 of the DEIR recognizes that the use of the wells would require approval of the well owners. Regarding the assumptions on temperature, the DEIR makes a reasonable assumption that the groundwater temperature would be substantially less than the recorded summer-time temperatures in the Rialto Channel which exceed 86 degrees Fahrenheit. The DEIR does not target an ideal water temperature, but rather concludes that use of the wells to lower river water temperatures would improve conditions compared to existing conditions. The DEIR acknowledges on page 3.9-24 that local groundwater levels would be affected by the use of the supplemental water wells. The DEIR assumes that although a cone of depression around the wells would lower local groundwater levels; this effect would be similar to the original designed use of the wells. Furthermore, the water would be discharged into the SAR at a point where in-channel percolation is very high, re-introducing discharged water into the groundwater system. The DEIR concludes that use of the existing wells would not significantly impact groundwater levels or deplete the aquifer.

Please see Response to Comment Rialto-1.

**Comment SBMWD-17**

The comment states that the Clean Water Factory, including the capacity of the Redlands Basin to accommodate the Clean Water Factory, is not adequately assessed in the cumulative analysis.

**Response to SBMWD-17**

The Clean Water Factory is included as Cumulative Project # 6 in Table 4-1 of the DEIR. Since the Clean Water Factory would contribute to reduced discharges, the Reduced Discharge Study prepared for the proposed project includes an analysis of cumulative reductions up to 24 MGD. The analysis is summarized in Chapter 4 as well as on page 3.4-63. Furthermore, the use of the Redlands Basins by the City of Redlands was considered a cumulative project. The cumulative use of these basins by the Clean Water Factory was not analyzed since the Redlands Basins were not part of the Clean Water Factory project description in the Notice of Preparation for the Clean Water Factory. Conversely, the cumulative use of the East Twin Creek Spreading Grounds was considered since the Clean Water Factory project description identifies these basins as potential recharge locations. The DEIR concludes that sufficient capacity is available for both projects.

**Comment SBMWD-18**

The comment states that the Expanded Trunk Sewer Alternative would meet most of the project objectives when coupled with the Clean Water Factory.

**Response to SBMWD-18**

The Expanded Trunk Sewer Alternative would not meet the water supply objectives of the proposed project since recycled water would not be produced for replenishing the Bunker Hill Basin. Although SBMWD has the intention of implementing the Clean Water Factory, this outcome and its timing cannot be guaranteed. The proposed project would assist SBMWD in its recycled water goals and eliminate the need for an expanded trunk sewer. The comment provides no basis for its assertion that the combined proposed Clean Water Factory and Expanded Trunk Sewer Alternative would lower costs.

**Comment SBMWD-19**

The comment disagrees that under the No Project Alternative future wastewater needs would not be met.

**Response to SBMWD-19**

Under the No Project Alternative, the conveyance system would not accommodate planned future wastewater flows in the EVWD service area as summarized in the 2013 Wastewater Collection System Master Plan. Without conveyance capacity, the treatment could not be accommodated.

## Comment SBMWD-20

The comment states that the EVWD Master Plan recommends multiple small treatment plants that were not considered as a project alternative.

## Response to SBMWD-20

An Update of Recycled Water Feasibility Study prepared in 2015 concluded that the small projects alternative would not meet the needs of EVWD and directed focus towards a larger project as a solution.

## Comment SBMWD-21

The comment states that the DEIR's conclusions about the feasibility and environmental benefits of the 3 MGD Alternative are not supported by substantial evidence.

## Response to SBMWD-21

The DEIR explains the rationale for selecting the Environmentally Superior Alternative on page 6-24. The DEIR concludes that since the 3 MGD would result in less mitigation under Mitigation Measure BIO-3, it would not be the environmentally superior alternative. The CEQA Guidelines Section 15126.6(d) explains that an EIR's evaluation of alternatives should be sufficient "to allow meaningful evaluation, analysis, and comparison with the proposed project." Chapter 6 of the DEIR outlines several alternatives that would lessen certain impacts of the project. The DEIR concludes based on reasonable evaluation that the proposed project would be environmentally superior based on the commitments made in Mitigation Measure BIO-3 which would improve aquatic habitat compared to existing conditions and enhance regional water supplies.

## Comment SBMWD-22

The comment states that under the 1969 Agreement, SBMWD is required to discharge 16,000 AFY for delivery to Prado Dam. The comment further states that the intention of the DEIR at Riverside Narrows is unclear: is the flow obligation 15,250 AFY (DEIR 3.9-5) or 12,420 AFY (DEIR 3.9-28)? The comment also asks whether the SNRC raises a potential compensable takings issue.

## Response to SMBWD-22

The DEIR concludes that even with the reduction of 6 MGD from the RIX discharge, Valley District's water delivery obligation under the 1969 Judgment would be maintained through the remaining RIX discharges. The DEIR further concludes that the water delivery obligation is Valley District's as the regional water agency, though, as discussed below, the City of San Bernardino has agreed to discharge sufficient water to meet Valley District's obligation under the *Orange County* Judgment. The SBMWD has neither a contractual nor adjudicated ownership interest in the effluent generated within the proposed SNRC service area. Under the current agreement between SBMWD and EVWD, there is no obligation that EVWD deliver flows to

SBMWD, as there is no minimum flow requirement and the delivery of flows is permissive (“may”) and not mandatory. Accordingly, there is no concern or issue of compensable taking.

At present, under the terms of the *Orange County* Judgment, Valley District is entitled to reduce actual flows at Riverside Narrows to 12,420 afy of base flow due to the credits that Valley District has accrued since 1969. Valley District is prepared to enter into a memorandum of understanding with the City of San Bernardino that would: (i) allow for flow reductions from RIX or other sources so as only to provide 12,420 afy at Riverside Narrows rather than discharging the full 16,000 afy as required by the agreement between the City of San Bernardino and Valley District; (ii) allow the City of San Bernardino to use up to 3,580 afy that would have been discharged for the purpose of replenishing the San Bernardino Basin Area, replacing the 3,580 afy with credits previously accrued by Valley District under the terms of the *Orange County* Judgment; and (iii) prevent the City of San Bernardino from selling, leasing, or otherwise conveying or transferring the 3,580 afy, directly or indirectly, outside the boundaries of Valley District.

The differing numbers identified in the comment in the DEIR regarding Valley District’s delivery obligation to Prado Dam reflect the difference between Adjusted Base Flow and minimum flow commitments. These are described in detail in the referenced Watermaster Report.

Paragraph 5(b) of the Judgment states that "SBVMWD shall be responsible for an average annual Adjusted Base Flow of 15,250 acre-feet at Riverside Narrows. SBVMWD each year shall be responsible for not less than 13,420 acre-feet of Base Flow plus one-third of any cumulative debit, provided, however, that for any year commencing on or after October 1, 1986, when there is no cumulative debit, or for any year prior to 1986 whenever the cumulative credit exceeds 10,000 acre-feet, said minimum shall be 12,420 acre-feet." (2013-14 Watermaster Report, page 27)

### **Comment SBMWD-23**

The comment states that SBMWD owns and relies upon the effluent it discharges to the Santa Ana River and expresses concern that that the 6 MGD reduction of flow could have an adverse financial impact on SBMWD’s WRP and affect SBMWD’s proposed Clean Water Factory Project.

### **Response to SBMWD-23**

It is important to distinguish between the effluent that SBMWD discharges to the Santa Ana River and the wastewater produced in the EVWD service area. The project would only treat and use the latter, which SBMWD does not own. EVWD has conveyed its wastewater for treatment to the SBWRP under a permissive agreement with the City that has, since 1986, granted this option to EVWD at EVWD’s expense. The SNRC project does not propose to appropriate or use water that has been discharged to the Santa Ana River by the SBMWD.

The DEIR does not evaluate the impacts of reduced fees to the City resulting from the construction of the SNRC. As noted in CEQA Guidelines Section 15131, CEQA does not require that economic effects be considered unless they would result in an environmental impact. The DEIR assumes that the City of San Bernardino and SBMWD would continue to provide wastewater treatment services to its service area.

## **Comment Letter – San Bernardino International Airport Authority (SBIAA)**

### **Comment SBIAA-1**

The comment suggests that the Valley District carefully consider the potential impacts of the SNRC development. The comment states that the concerns set forth in FAA Advisory Circulars 150/5200-33B, 150/5200-34, as well as Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Public Law 106-181), and State guidelines including the provisions set forth in the California Airport Land Use Planning Handbook should be specifically addressed.

### **Response to SBIAA-1**

FAA Advisory Circulars 150/5200-33B, 150/5200-34, as well as Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Public Law 106-181) refers to construction interfering with air commerce and public airports. The project does not propose construction that may interfere with air commerce or a public airport. Further, the DEIR concludes on page 3.8-16 the project is consistent with airport land use plans.

### **Comment SBIAA-2**

The comment suggests that Valley District should provide clarification on the guidelines that will be followed with the design of the exterior lighting. The comment states that the lighting components should be reviewed and approved by SBIAA.

### **Response to SBIAA-2**

Exterior night lighting would be compliant with City of Highland requirements to shield glare from emanating from the site. (DEIR p. 3.1-13.) These requirements would apply to airspace glare as well, and so the proposed facility would not create a significant adverse impact to aircraft.

### **Comment SBIAA-3**

The comment states that the DEIR should acknowledge over flights (including single event noise spikes) as background noise conditions for the site.

### **Response to SBIAA-3**

The DEIR addresses noise and analyzes the constructional and operational impact of the proposed project. The DEIR acknowledges background levels of noise from airplane overflights and the proximity of airports to the SNRC site on pages 3.11-6 and 3.11-21. Impacts on noise resulting from the proposed project are expected to be less than significant with mitigation as stated on page 3.11-1. Thus, the operational impact of background noise is considered and would be



mitigated by the implementation of Mitigation Measures NOISE-2 and NOISE-3. To the extent that the comment is focused on the background noise generated by the existing operations at the airport, CEQA requires that the impacts of the *project* be mitigated, not environmental conditions that already exist. The DEIR sufficiently considered and mitigates for the project's impacts on sensitive noise receptors and the cumulative impacts of the project and the existing conditions at the airport. No further response or mitigation is required.

#### **Comment SBIAA-4**

The comment states that Valley District should provide information on the plans to mitigate wildlife attractants and standing water conditions at the proposed SNRC in conformance with the requirements set forth in FAA Advisory Circulars 150/5200-33B, 150/5200-34, and Public Law 106-81.

#### **Response to SBIAA-4**

The project proposes open-water detention ponds at the Administrative Center as one of the ways in which the project would replenish the groundwater basin. Those ponds serve two distinct purposes, first to collect and percolate onsite stormwater runoff, and second to percolate treated wastewater. The ponds will be designed to meet the 48-hour stormwater percolation goal established by the FAA and so would be consistent with the comment. In particular, the project will prevent the establishment of vegetation within the ponds that can serve as a wildlife attractant. The project would also be designed in conjunction with state and federal airport agencies so as to minimize the likelihood that wildlife that may use these ponds would create hazards at the airport.

#### **Comment SBIAA-5**

The comment states that special attention to ensure protection of the San Bernardino kangaroo rat and the Santa Ana woolly star during construction is required. The comment states that further information on the proposed pipelines residing on or adjacent to SBIAA owned property is required.

#### **Response to SBIAA-5**

Mitigation Measures BIO-1 and BIO-2 would ensure that impacts to SBKR and special status plants are not significant.

Please see Responses to Comments CDFW-1, CBD-5, CBD-9, CBD-10, CBD-12, and USFWS-12.

## Comment Letter – Endangered Habitats League (EHL)

### Comment EHL-1

The comment summarizes the Endangered Habitats League's concern that the proposed project could move forward in the absence of a Habitat Conservation Plan. EHL expresses their concern for the importance of adequately analyzing individual and cumulative impacts in case this occurs.

### Response to EHL-1

Valley District appreciates the comment's support for the HCP, as the HCP is the type of comprehensive approach that will create conditions that will contribute to the conservation and recovery of the SAS over the long term. As noted in the comment, Mitigation Measure BIO-3 commits Valley District to participating in the Upper SAR HCP. The project would not undermine the HCP process, but rather commits Valley District to participating. Further, in the event the HCP is not completed in a timely manner, Mitigation Measure BIO-3 requires implementation of an approved HMMP, which is designed to accomplish essentially the same beneficial activities that will be undertaken pursuant to the HCP.

Please see Responses to Comments CDFW-1 and USFWS-1.

### Comment EHL-2

The comment summarizes EHL's concern that the water needed for Santa Ana sucker survival was not adequately defined in terms of quantity, quality, and flow regime in the DEIR. EHL states that the EIR must identify and disclose the water that should remain in-stream for the Sucker and compare the survival parameters to the effects of implementing the proposed project and cumulative diversions.

### Response to EHL-2

The DEIR describes the existing condition of the SAR and RIX discharges on page 3.4-48. The Reduced Discharge Study estimates the impact to depth and velocity that may occur if discharges were reduced. Determining low flow requirements is complex since depth and velocity can vary substantially depending on the channel geometry and flow obstructions. In addition, preferred depth and velocity may be different for younger stage juveniles than for adults, recommending a variety of conditions within a targeted river segment. For these reasons, the scientific community has not established a widely accepted minimum flow volume although the USGS is in the process of developing a Habitat Suitability Model for the Santa Ana sucker as part of the HCP planning process. The model, which is expected to be completed and tested in the summer of 2016, will be used by this project and others to determine the most effective conservation activities for the species.

However, establishment of a fixed minimum flow volume is not necessary in order to accurately assess the impacts of flow reduction or identify measures that will mitigate those impacts. In

general, the project proposes to reduce the constant flow of water by 20% in a system that is already experiencing a multitude of stressors. Due to the currently degraded condition of the SAR habitat and a proposed reduction of constant flow, the DEIR concluded that the impact to the Santa Ana sucker in particular is properly deemed “significant and unavoidable.”

Even without reference to a definitive low flow “basement,” Valley District has been able to identify potential impacts and develop appropriate mitigation measures. Measure BIO-3 outlines conservation commitments to be included in an HMMP to specifically address the direct, indirect, and cumulative impacts of the proposed project. Notably, the volume of flow in the Santa Ana River is not the only factor affecting SAS survival. While the project will eventually reduce river flows, the matrix on page 3.4-52 of the DEIR sets forth measures that address numerous other factors that affect the long-term viability of the SAS. Improving those factors compared to existing conditions will help ameliorate the impacts of the project resulting from reduced flows, in part by creating a buffer against catastrophic events, including periodic dewatering events, which could otherwise result in virtual extirpation of the species.

In other words, the HMMP is designed to not simply rectify the impacts of the project in a way that will maintain the current status quo – which has not been beneficial to species like the SAS, to say the least – but to address, in a long-term, comprehensive manner, a variety of existing conditions that adversely affect the SAS and other species, like the Arroyo chub. Valley District has concluded that the project’s reduction of river flows is properly deemed a significant and unavoidable impact to the SAS, but in an effort to rectify that impact as CEQA requires, is committed to addressing numerous other undesirable conditions that interfere with the long-term survival of the species. Furthermore, through this project Valley District proposes to begin implementing the first phase of a long-term, regional conservation strategy that will provide the framework for recovery of the species.

Please see Response to Comment CDFW-3.

### **Comment EHL-3**

The comment includes EHL’s request to include a deeper analysis and comparison of the recharge sites in regards to the reduction of impacts, enhancement, and restoration opportunities.

### **Response to EHL-3**

Table 6-1 provides a comparison of each of the three discharge location alternatives. The discharge to City Creek would provide the greatest habitat benefit, which is why it is being considered. However, as other factors including hydrology must also be taken into account, the two other recharge locations are also being considered.

Please see Responses to Comments CDFW-1.

### **Comment EHL-4**

The comment addresses EHL's concern that the ultimate success of the Santa Ana sucker depends on a regional approach among public agencies. EHL recommends that public agencies make their lands available for enhancement and restoration opportunities with appropriate monetary compensation, even if the mitigating agency is not the landowning agency.

### **Response to EHL-4**

Valley District has confirmed its commitment to regional cooperation in the DEIR, and supports the recommendation that lands needed for restoration and enhancement be made available for those purposes even if the mitigating agency does not own the lands. This type of cooperative approach will provide the greatest long-term benefits to the region and offers the best opportunity for meaningful progress towards protection and recovery of species in the region that will be affected by the SNRC and other similar projects. Valley District is thus committed to participating in the Upper SAR HCP in coordination with regional stakeholders.

## Comment Letter - Center for Biological Diversity / San Bernardino Valley Audubon Society/ San Gorgonio Chapter of Sierra Club (CBD)

### Comment CBD-1

The comment agrees that the diversion of water from the Santa Ana River to the proposed SNRC may provide a benefit to biological resources such as the federally threatened Santa Ana sucker. However, the comment contends that the CEQA analysis is inadequate, that CBD is not able to determine if the release of water will be helpful or harmful, and that Valley District cannot move forward in approving the project based on the inadequate and incomplete DEIR.

### Response to CBD-1

The CEQA analysis documents and evaluates all potential project-related impacts to special-status and sensitive biological resources that occur or have the potential to occur on the project site and the area proposed to be affected by the project. Response to comments CBD-2 through CBD-23 will demonstrate the adequacy and completeness of the DEIR.

### Comment CBD-2

The comment is concerned about the diversion from the Santa Ana River that will be caused by the project as well as the impacts on biological resources from installing new pipes and outlet structures to existing infiltration basins at Twin Creeks and Redlands, the effects to City Creek, and the activation of wells and re-purposing an existing pipe to provide water into the Rialto Ditch when the outflow in that ditch is too warm to sustain Santa Ana sucker fish.

### Response to CBD-2

The DEIR assesses the potential for the project to result in significant impacts to biological resources from all facets of the project, including the installation of new pipelines and outlet structures and the effects to City Creek and the Rialto Channel. As stated in the first paragraph of the Biological Resources Section (Section 3.4) of the DEIR, “The analysis identifies the proposed project elements that may have measurable impacts on these resources”, which includes permanent and temporary impacts.

### Comment CBD-3

The comment states that the biological resources analysis has been deferred and the one “survey” that was conducted is inadequate because sufficient biological surveys have not been completed and only one “questionable” focused survey for a protected species occurred.

## Response to CBD-3

Valley District shares the commenter's concern regarding the potential impacts construction and operation of the project may have on sensitive species. That concern, however, is precisely why Valley District has chosen an approach to mitigation of those impacts that ensures the formulation of specific mitigation measures is based on contemporaneous site surveys that will provide the most up-to-date information possible, which in turn will increase the effectiveness of the final mitigation strategy. Surveys done prior to project approval would not best reflect the impacts that will occur at the time of construction of the project, because there will be lag time between approval and construction as the regulatory process continues. Valley District has concluded that conducting focused surveys closer to the time of construction is the approach that will best protect the affected biological resources.

Deferring formulation of specific mitigation measures based on the results of future surveys is permitted under CEQA when, as here, the agency commits to those future surveys, requires future regulatory review based on the results of those surveys, and identifies methods that will be considered for mitigating potential impacts.

A biological resources reconnaissance site survey was conducted of the proposed project's impact areas in the summer of 2015. The Biological Resources Report included in Appendix C of the DEIR summarizes the results of the site survey, including an inventory of all potentially present special status species. Tables 3.4-2 and 3.4-3 of the DEIR list these species and describe the likelihood that the project could impact them. The Report provided extensive information regarding the species and habitats then present at the sites. However, because the distribution of species may change over time, through Mitigation Measures BIO-1 and BIO-2 Valley District has committed to conducting focused surveys in the project impact areas to better understand the actual impacts to species and habitat in those areas, so that Valley District, in consultation with CDFW and/or USFWS, can develop mitigation measures that will be directly responsive to those precise impacts.

The special status species of concern with the highest potential to occur within the impact areas include SAS, SBKR, least Bell's vireo, southwest willow flycatcher, burrowing owl, and several rare plants including woolly star, and spineflower. Figure 11-1 has been added to the DEIR to identify occurrence data for these species within City Creek. The DEIR recognizes that construction of the discharge structure and the discharge of water could impact species that currently exist in the discharge locations. To ensure that these species are not impacted significantly, the DEIR presents a mitigation strategy that provides for surveys of the impact zones prior to construction, measures to avoid impacts, and compensation for unavoidable impacts. Since conditions within City Creek change over time due to flood events, Mitigation Measure BIO-1 rightfully commits Valley District to conducting surveys closer to the time of the impact in order to implement the project's impact minimization action requirements as outlined in the Mitigation Measure.

To provide further assurances that any impacts will be properly mitigated, in addition to other potential actions, Valley District is committed to a 1:1 mitigation ratio for temporary habitat

impacts resulting from construction, and a 3:1 ratio for permanent impacts to species associated with affected alluvial fan habitat, including the San Bernardino kangaroo rat. The precise details of how necessary mitigation measures will be carried out, however, will still be determined closer to the time of the actual impacts, when surveys providing up-to-date information regarding the affected species will be formulated. This is not an improper deferral of data collection, but creation of a fixed obligation to conduct additional focused surveys to provide precise data on sensitive plant and animal locations that will allow Valley District, in consultation with CDFW and /or USFWS, to ensure that the mitigation strategy adopted reflects actual conditions.

Please see response to CDFW-1.

### **Comment CBD-4**

The comment states the survey was a “reconnaissance-level survey” that did not span the entire year or cover the entire project area given the statement in the DEIR that visual observations of areas that were not accessible were made from the nearest accessible locations.

### **Response to CBD-4**

As stated in the first bullet point of the Literature Review and Field Reconnaissance Section on DEIR page 3.4-1, three reconnaissance-level surveys were conducted at the project site on April 28, July 17, and August 3, 2015. Due to the size of the project and standard industry practices, for this project a reconnaissance-level survey is sufficient to obtain general habitat conditions and determine species that occur or could occur on the project site.

Additionally, the reconnaissance-level surveys conducted on the project discharge sites spanned from spring to late summer, covering 5 months of the 2015 year and a time period when most plants are blooming and wildlife are breeding. This time period is the most suitable time to observe a vast majority of species in Southern California due to average climate conditions. And as stated in the methodology section of the Biological Resources Report (Section 3.2) “the surveys were conducted on foot within accessible portions of the site”, which contains a vast majority of the site and only excludes areas that were fenced off or gated where access was not granted. This exclusion did not, however, result in inadequate or less than thorough assessment of biological resources on the project site.

### **Comment CBD-5**

The comment states that there is limited discussion of the San Bernardino Merriam’s kangaroo rat known to be present in the area. The comment quotes a statement regarding surveys for the species and negative findings, but states that citation to and details of the survey report are not included in the discussion in the DEIR or as an attachment, and summarizes the accepted USFWS survey protocol. The comment also states without further information the CBD cannot determine if the surveys for San Bernardino Merriam’s kangaroo rat were conducted according to protocol and are therefore, valid.

## Response to CBD-5

Valley District appreciates and shares the concern for the SBKR – although there has been significant focus on efforts to protect and conserve the SAS, it is also important that impacts to the SKBR, including impacts that may result from efforts to benefit the SAS, be addressed.

The biological resources site survey conducted over the summer of 2015 (and summarized in Appendix C of the DEIR) identified SBKR habitat and historic occurrence within the City Creek impact areas (see Figure 11-1). The DEIR concludes on page 3.4-46 that SBKR may be displaced within the small permanent impacted area in the creek and in the center of the streambed from perennial flow.

To address potential significant impacts to the SBKR, the DEIR includes Mitigation Measure BIO-2 which commits Valley District to direct consultation with CDFW and USFWS for potential impacts to SBKR and other listed species impacted in City Creek. This consultation would be conducted directly and not through the Upper SAR HCP. Valley District is committed to conduct future site-specific surveys and appropriate consultation with CDFW and/or USFWS, the results of which will be used to determine proper mitigation for impacted SBKR. Valley District is also committed to a 1:1 mitigation ratio for temporary habitat impacts resulting from construction, and a 3:1 ratio for permanent impacts to species associated with affected alluvial fan habitat, including the SBKR. It is Valley District's goal to provide enhancement of SBKR habitat near the area if appropriate to achieve maximum ecological value to the species, in coordination with the Wildlife Agencies. However, if onsite enhancement is not possible, Valley District will seek to obtain and manage high-quality habitat or an area with the potential to become high quality through additional management adjacent to the impact area and within designated critical habitat. Additionally, Valley District will add to Mitigation Measure BIO-2 a subsection requiring pre-construction trapping and relocation of the San Bernardino kangaroo rat, in accordance with accepted protocol, if determined necessary by the USFWS during the Section 7 consultation process.

## Comment CBD-6

The comment states focused surveys for burrowing owl, 16 rare plants, and 35 rare animals were not conducted and are deferred to prior to construction. The comment states that lacking this information makes it impossible to conduct an adequate CEQA evaluation of impacts, and any conclusions cannot be demonstrated to be supported by substantial facts.

## Response to CBD-6

As noted in prior responses, a biological resources site survey was conducted of the proposed project's impact areas in the summer of 2015. The Biological Resources Report included in Appendix C of the DEIR summarizes the results of the site survey. The biological survey assessed all potential impact locations described in the Project Description, and the DEIR appropriately inventories all potentially impacted species. The DEIR thus informs Valley District, regulators, and the public that the project may have adverse effects on those species. That is



precisely why the DEIR sets forth mitigation measures that will ensure that those impacts will be less than significant.

Valley District has concluded that to provide the most effective mitigation of the projects impacts, it must develop specific mitigation measures through appropriate consultation with CDFW and USFWS based on up to date information that reflects the status of the impact areas near the time the impacts are expected to occur. The future surveys to which Valley District is committed will enable Valley District and the wildlife agencies to select specific mitigation measures that will render the project's impacts insignificant. The surveys will be conducted in accordance with CDFW-recommended protocols. The results of those future surveys will inform the selection of mitigation measures that will avoid or rectify any impacts to the burrowing owl, potentially including compensation for loss of occupied habitat, establishment of a suitable buffer (typically 500 feet) around nests, monitoring during construction or delaying construction, and, if necessary, passive relocation in accordance with CDFW's 2012 Staff Report on Burrowing Owl Mitigation. (See Mitigation Measures BIO-2, which commits Valley District to conducting future surveys and development of appropriate mitigation, and lists potential mitigation strategies.) The ultimate goal of the selected mitigation measures will be to ensure that any impact to the burrowing owl is rendered insignificant

Please also see response CDFW-5.

### **Comment CBD-7**

The comment states the DEIR fails to mention USFWS-designated Critical Habitat for the southwestern willow flycatcher which occurs in the project area; which is an oversight that makes for a legally insufficient DEIR.

### **Response to CBD-7**

Critical Habitat for this species does not occur in the areas impacted by construction of the project components. However, Figure 3.4-2 has been modified to show the proximity of Critical Habitat for southwestern willow flycatcher within the segment of the SAR downstream of the RIX discharge. The revised Figure 3.4-2 is included in Chapter 12.

The DEIR acknowledges that southwestern willow flycatcher is found in riparian habitats in the region (Table 3.4-3). The USFWS has designated primary constituent elements that are essential for the flycatcher, including dense riparian habitat near a dynamic river system. The DEIR on page 3.4-58 evaluates the potential for the reduction of 6 MGD to impact riparian habitat suitable for use by the flycatcher. The DEIR concludes that the reduced flow would have minimal effects to riparian habitat (please see response to comment OCWD-1) and therefore, impacts to southwestern willow flycatcher would not occur. In response to this comment, the following text has been added to page 3.4-54 of the DEIR to further acknowledge the southwest willow flycatcher Critical Habitat in the project area and to clarify that the project would not result in a reduction in southwestern willow flycatcher Critical Habitat.

### Operational Impacts

USFWS-designated Critical Habitat for southwestern willow flycatcher is located within the SAR (refer to Figure 3.4-2). The designation published in the Federal Register on January 3, 2013, lists Primary Constituent Elements (PCE) for the southwestern willow flycatcher as follows:

1. Riparian vegetation along a dynamic river or lakeside that is comprised of trees and shrubs with some combination of:
  - a. Dense trees and shrubs that can range in height from 2 to 30 meters
  - b. Areas of dense riparian understory foliage at least from the ground level up to approximately 13 feet.
  - c. Sites for nesting that contain a dense tree and/or shrub canopy
  - d. Dense patches of riparian forests that are interspersed with small openings of open water or marsh
2. Insect Prey Populations

The operational requirements of the project will divert 6 MGD of recycled water that would have been discharged into the Santa Ana River from the RIX facility, and discharge that water into City Creek northeast of the project area, Redlands Basins, and/or the East Twin Creek Spreading Grounds. The reduction in flow of 6 MGD would not result in a substantial decrease in riparian cover that would restrict the primary constituent elements identified by USFWS for southwestern willow flycatcher including dense understory and insect populations. Sufficient volumes of water would remain in the river channel to support the riparian habitat similar to existing conditions. Furthermore, implementation of Mitigation Measure BIO-3 would provide for management of the riparian habitat including the removal of invasive weeds including *arundo donax* which would increase the acreage of native riparian vegetation compared with existing conditions, as native willows emerge in areas where *arundo donax* has been removed. Additionally, the discharge of water into City Creek or other basins by the proposed project will support the growth of riparian habitat at those locations. Therefore, there will be no adverse modification of Critical Habitat as a result of the operational requirements of the project.

### Comment CBD-8

The comment states the DEIR fails to quantify the decrease in southwestern willow flycatcher habitat due to the decrease in 6 MGD into the Santa Ana River, and without a quantified amount of impact proposed mitigation measures to offset impacts cannot develop clear goals or truly offset the impact.

## Response to CBD-8

The DEIR recognizes on page 3.4-26 that southwestern willow flycatcher may occur within the willow forests supported by surface water flows in the SAR. The DEIR concludes on page 3.4-45 that the reduction of 6 MGD flow would not significantly reduce riparian vegetation along the SAR corridor. The Reduced Discharge Study estimates the reduction in wetted area of the channel to be less than 6 percent. This small reduction in the width of the channel would not result in substantial loss of riparian habitat. As a result, any special status species that utilize riparian habitat including the southwestern willow flycatcher would not be significantly impacted by the project. Additionally, increased native vegetation in City Creek resulting from a perennial water supply and potentially in Rialto Channel due to the augmentation of summer water supply will have the virtue of distributing the flycatcher and vireo spatially throughout the Santa Ana River Basin. Distributing the population spatially could indirectly benefit the species due to less competition for food, cover and nesting locations resulting in a net benefit to the Santa Ana River population of vireo and/or flycatcher. Additionally, the expanded distribution could potentially reduce the risk of catastrophic loss due to an accident (e.g. fire, contamination, disease) or other disaster. Please see response to comment OCWD-1.

Please see response to comments CBD-7 and OCWD-1.

## Comment CBD-9

The comment states the identification of impacts to San Bernardino Merriam's kangaroo rat is vague or unidentified, and as an example identifies that the City Creek outlet structure alternative locations are within designated Critical habitat and while permanent impacts are identified, temporary impacts are not identified and could be extensive and profound.

## Response to CBD-9

The DEIR addresses potential impacts to the SBKR. The biological resources site survey conducted in the summer of 2015 identified SBKR habitat and historic sightings within the City Creek impact areas. The DEIR concludes on page 3.4-46 that SBKR may be displaced within the small permanent impacted area in the creek and in the center of the streambed from perennial flow. Therefore, the DEIR includes Mitigation Measure BIO-2 which commits Valley District to direct consultation with CDFW and USFWS for potential impacts to SBKR and other listed species impacted in City Creek. This consultation would be conducted directly and not through the Upper SAR HCP.

The DEIR also evaluates on page 3.4-47 the potential for discharges at City Creek to modify habitat within the creek bed that is within the USFWS-designated Critical Habitat of the SBKR. The DEIR concludes that the addition of perennial flows within the creek would contribute to a native ecosystem creating a perennial stream in an existing ephemeral channel within an area of overlapping Critical Habitat designations. The proposed project would not create a new creek where one did not previously exist. Mitigation Measures BIO-1 and BIO-2 provide for compensation of impacted SBKR habitat (RAFSS) at a 3:1 ratio.

Please see responses to CBD-5 and CDFW-1.

### **Comment CBD-10**

The comment states Mitigation Measure BIO-2 relies on surveys for the kangaroo rat will be conducted in the future making it unclear how animals and Critical Habitat will be impacted, and subsequent mitigation measures that rely on the Biological Assessments submitted during the Section 7 and 2081 consultations with wildlife agencies. This approach fails to provide the public and decision makers with adequate data and analysis of impacts, and does not allow for public comment on proposed conservation measures and compensation.

### **Response to CBD-10**

A biological resources site survey was conducted of the proposed project's impact areas in the summer of 2015. The Biological Resources Report included in Appendix C of the DEIR summarizes the results of the site survey. The survey identified SBKR habitat and historic sightings within the City Creek impact areas. The DEIR concludes on page 3.4-46 that SBKR may be displaced within the small permanent impacted area in the creek and in the center of the streambed from perennial flow.

To address potential impacts to the SBKR, the DEIR includes Mitigation Measure BIO-2 which commits Valley District to direct consultation CDFW and USFWS for potential impacts to SBKR and other listed species impacted in City Creek. This consultation would be conducted directly and not through the Upper SAR HCP. Valley District has concluded that conducting focused surveys closer to the time of construction and basing specific mitigation measures on the results of those surveys and consultation with CDFW and/or USFWS is the approach that will best protect the affected biological resources.

In addition, while the SNRC site is a particularly poor location for the SBKR and Valley District does not expect SBKR to be found on the site, if warranted, Valley District will conduct pre-construction trapping and relocation of the San Bernardino kangaroo rat, in accordance with accepted protocol, at the SNRC facility site in addition to the existing measures set forth in Mitigation Measure BIO-2.

Please see Responses to Comments CDFW-1, CBD-5, and CBD-9.

### **Comment CBD-11**

The comment states the DEIR does not attempt to quantify the change in decreasing RAFSS and increase in riparian habitat, and the related potential impact to rare and endangered species. The comment contends that a decrease in RAFSS habitat would require mitigation which the DEIR fails to discuss and should fully address.

## Response to CBD-11

Since the exact locations for the discharge structures will be refined during final design, precise impact locations have not been identified. However, the approximate locations are well understood and shown in Figures 2-7a through 2-7d.

Valley District is committed to conducting future site-specific surveys and appropriate consultation with CDFW and/or USFWS, the results of which will be used to determine proper mitigation for impacted species, and will also meet at least a 1:1 mitigation ratio for temporary habitat impacts and a 3:1 ratio for permanent habitat impacts. Future permitting processes will serve to better refine and further develop appropriate mitigation and, importantly, will give CDFW and other agencies further opportunities to suggest how mitigation strategies can be best adapted to respond to the actual conditions of the impacted areas. Valley District is eager to develop mitigation measures that have the best chance of benefitting the affected species, and looks forward to collaborating with CDFW and USFWS to develop both an effective plan for mitigating the project's impacts, and a regional, long term strategy for improving the system in City Creek for both RAFSS and riparian dependent species.

Please see Response to Comment CDFW-1.

## Comment CBD-12

The comment states that any segments of the 36-inch Santa Ana River Pipeline that need to be replaced will likely fall within Critical Habitat for the San Bernardino Merriam's kangaroo rat, and the DEIR falls short of identifying and quantifying potential impacts to Critical Habitat, and subsequent mitigation.

## Response to CBD-12

Mitigation Measures BIO-1 and BIO-2 cover impacts to any construction zone that may support special status plants or animals including on property traversed by the SAR Pipeline.

Please see Responses to Comments CDFW-1, CBD-5, CBD-9, and CDB-10.

## Comment CBD-13

The comment requests additional clarity on the operation of the wells and the minimum flows going into the Santa Ana River.

## Response to CBD-13

The supplemental water wells would be one component in a broader mitigation strategy. The supplemental water could be used in the summer months to reduce temperature in the Rialto Channel or to provide supplemental flows during RIX shut downs. The supplemental water is not intended to be a full-time contribution to the river flow. Based on analysis conducted by the USGS, it is possible to reduce the water temperature from the current 89 degrees Fahrenheit to

below 85 degrees Fahrenheit (the maximum tolerance of SAS) with approximately 2 cfs of groundwater, for a total of about 365 acre feet per year if introduced from July to September. The goal of this measure would be to implement the supplemental water to increase the temporal availability of suitable habitat for SAS. The habitat condition triggers and success criteria will be developed in coordination with the Wildlife Agencies and USGS for inclusion in the HMMP.

**Comment CBD-14**

The comment states the DEIR fails to examine the opportunity for re-introduction of Gambel’s watercress back into the Santa Ana River watershed from which it has been extirpated, and strongly suggests that re-introduction be part of the strategy for recovering this very rare species.

**Response to CBD-14**

Valley District appreciates the comment, but as listed in Table 3.4-2 (page 3.4-17) Gambel’s watercress is not expected to occur on the project site due to the fact the species has been extirpated from the area entirely, has not been documented in the area in over 100 years, and the only known location currently exists in Santa Barbara County. Therefore, there is no potential for the project to result in any significant impacts to this species and, as instructed by CEQA, no mitigation is proposed.

**Comment CBD-15**

The comment states it seems wrong for the arroyo chub to only have a medium potential to occur on the project site because arroyo chub is sympatric with the Santa Ana sucker in the Santa Ana River. Clarification is requested.

**Response to CBD-15**

The DEIR recognizes on page 3.4-11 and 3.4-12 that arroyo chub occur within the SAR watershed. The comment correctly notes that the arroyo chub exists sympatric with Santa Ana sucker in the SAR below the RIX discharge. To emphasize the potential for the arroyo chub to occur in the SAR, Table 3.4-4 will be modified as follows:

**TABLE 3.4-4  
POTENTIALLY OCCURRING SENSITIVE WILDLIFE SPECIES**

<b>Common and Scientific Name</b>	<b>Status<sup>1</sup> (Federal/State/ CNDDDB)</b>	<b>Habitat</b>	<b>Potential to Occur in Project Impact Area</b>
Arroyo chub <i>Gila orcutti</i>	FSC/SSC/S2	Los Angeles Basin south coastal streams. Slow water stream sections with mud or sand bottoms.	<b>HighMedium.</b> Suitable habitat for this species is present in the <u>Santa Ana River</u> and throughout much of City Creek within the project area when water is present.

Although the chub and SAS are sympatric, impacts to the species are not the same. The arroyo chub occur in the SAR in higher abundance and throughout a greater geographic range than the SAS. The arroyo chub is not affected to the same degree as the SAS by changes in habitat variables such as substrate composition, food availability, water depth, and velocity. Furthermore, the arroyo chub is a species of special concern, but is not listed under either the federal or state Endangered Species Act. The DEIR concludes that aquatic habitat would benefit from implementation of mitigation measures including the HCP, which includes the chub as a covered species.

### **Comment CBD-16**

The comment states the prescribed microhabitat enhancement efforts in mitigation measure SAS-1 may not be suitable means of mitigation to increase scour and pool formation since previous use of gabions have not worked and boulders/woody debris placed in ineffective locations would be ineffective mitigation that is left up to interpretation by the vague language of the mitigation measure. It is also unclear if Flood Control Districts would allow installation of boulders/woody debris in the river due to potential flooding or downstream damage.

### **Response to CBD-16**

Mitigation Measure BIO-3 commits Valley District to implementing micro-habitat improvements where feasible and allowed by the San Bernardino County Flood Control District. Based on field observations in the portion of the river proposed for this activity (within the project's area of impacts) Valley District believes that strategic placement of woody debris or boulders will produce the desired scour and pool and riffle formation. This is primarily due to the firm layer of rock substrate typically less than 12 inches below the sand surface that will prevent features from sinking below the substrate surface. In contrast, the OCWD gabions were placed in areas of greater than 6 feet of shifting sands. However, the OCWD project did show that even temporary, localized scour is an attractant to sucker and will be utilized by the species as available. Valley District believes multiple areas of microhabitat availability strategically placed in conjunction with available spawning habitat, would be beneficial to the species. The project is committed to maintaining a level of microhabitat availability, as negotiated in consultation with the Service, in perpetuity to offset the potential impacts of permanent reduced flow. Valley District will design the microhabitat features in coordination with the Flood Control District to ensure the project does not impair the flood capacity of the channel or pose a threat while providing benefit to regional goals and objectives for public trust resources. The improvements would be one component in a broader mitigation strategy. The DEIR concludes that attempts to improve habitat conditions in the river would be an improvement on existing conditions.

Please also see Responses to Comments USFWS-3, USFWS-8, and USFWS-9.

### **Comment CBD-17**

The comment states the non-native predator control in Mitigation Measure SAS-2 is limited to the upstream reach of the affected river segment, which is not clearly defined, and does not include

predator control downstream. The comment suggests a comprehensive measure for treatments both upstream and downstream should be included.

### **Response to CBD-17**

Mitigation Measure BIO-3 provides for predator control as one component in a broader mitigation strategy. The project is committing to management of exotic predators in perpetuity within the area of the project's impacts and will meet success criteria developed in consultation with the Wildlife Agencies. Although Valley District supports predator control downstream of the project area, at this time its focus is on project-related impacts and measures to reduce the associated effects. Valley District fully expects the SAR HCP will implement a larger predator control program in the river as part of the large-scale conservation strategy. The DEIR concludes that implementation of predator control in the river segment below the RIX discharge would result in a habitat improvement compared to existing conditions.

### **Comment CBD-18**

The comment states that weed abatement prescribed in Mitigation Measure SAS-3 must be systematically implemented from the top of the watershed to the bottom to effectively reduce weeds, since exotic plants will continue to re-infest downstream reaches resulting in an ongoing weed problem, and the measure needs to identify a goal for exotic reduction and triggers for action if exotics reappear.

### **Response to CBD-18**

Mitigation Measure BIO-3 provides for invasive plant removal as one component in a broader mitigation strategy. The DEIR concludes that implementation of invasive plant removal in the river segment below the RIX discharge would result in a habitat improvement compared to existing conditions. The project is committing to management of exotic weeds in perpetuity within the area of the projects impacts and will meet success criteria developed in consultation with the Wildlife Agencies. Although Valley District supports upper watershed management of exotic weed, at this time its focus is on project-related impacts and measures to reduce the associated effects. Valley District fully expects the SAR HCP will implement a larger exotic weed control program in the river as part of the large-scale conservation strategy. The mitigation provides the opportunity for routine weed removals in the river segment that currently receives no management.

### **Comment CBD-19**

The comment supports keeping the water in the Rialto Channel cool enough for Santa Ana sucker and other aquatic fauna as mentioned in Mitigation Measure SAS-5. However, water temperature and quantity should both be triggers for augmentation in Rialto Channel. The comment also states that revegetation of the channel above Agua Mansa would provide additional habitat and reduce heating of the pumped groundwater.



## Response to CBD-19

Mitigation Measure BIO-3 does not include modifications to the Rialto Channel for water temperature and augmentation. However, the proposed activity is under consideration as part of the long-term SAR HCP conservation strategy.

Please see Response to Comment USFWS-11.

## Comment CBD-20

The comment states Mitigation Measure SAS-6 needs to clarify the goals and success criteria of the translocation plan and the translocated fish should not be considered an experimental population under the ESA.

## Response to CBD-20

Mitigation Measure BIO-3 provides for participation in a SAS relocation program as one component in a broader mitigation strategy. The DEIR concludes that participation in a relocation program would result in benefits to the SAS compared to existing conditions. The relocation effort would be managed in consultation with USFWS and would be complementary to efforts underway by Valley District in support of the Upper SAR HCP. The HCP will articulate success criteria envisioned for the translocation which is an ambitious, long-term project with multiple challenges, but with the potential for becoming a key component of the species' recovery plan. The reintroduced population will not be considered experimental under Section 10(j) of the ESA. Valley District fully expects the population to establish and contribute to the ultimate recovery of the species.

## Comment CBD-21

The comment is requesting the Biological Assessment, discussed in Mitigation Measure BIO-1 pertaining to Endangered Species Act permitting, be provided as an appendix to the DEIR to provide more specific data on the existing resources with potential for impact and clear avoidance, minimization, and mitigation to reduce or eliminate the impact.

## Response to CBD-21

The Biological Assessment will be timely submitted to the USFWS in connection with its formal consultation process, following the certification of the FEIR and approval of the proposed project.

## Comment CBD-22

The comment is requesting clarification of the project description and impact analysis of the proposed pipeline that traverses City Creek at 5<sup>th</sup> and Greenspot Road, continuing east to some undisclosed terminus.

## **Response to CBD-22**

The Figure 2-5 has been modified to show that the treated water conveyance alternative would traverse City Creek in order to discharge to the creek from the eastern edge. The revised Figure 2-5 is included in Chapter 12.

## **Comment CBD-23**

The comment states the District needs to carefully consider the need to divert water from the Rialto Channel through the three separate projects since the cumulative effect of these three projects (SNRC, City of Rialto, and the Clean Water Factory Project) could cause a catastrophic decline in water levels in the Santa Ana River to support a variety of species. The comment urges Valley District and the participating Cities to safeguard against the extirpation of the Santa Ana sucker, as well as wildlife agencies implementing measures to protect the species.

## **Response to CBD-23**

The project would not divert water from the Rialto Channel. Rather the project would reduce the discharge from the RIX facility to the SAR, downstream of the Rialto Channel. The DEIR recognizes the cumulative impact of reduced discharges in the SAR. The DEIR concludes that cumulative impacts to SAS would be significant and unavoidable. The DEIR notes that Valley District is currently preparing the Upper SAR HCP as a means of addressing cumulative impacts to SAS on a regional scale and ensuring the long-term persistence of the species in the Santa Ana River watershed. Through a regional multi-stakeholder approach, the SAR HCP will develop and implement a multi-faceted, large-scale conservation strategy, with appropriate financial assurances to guarantee management in perpetuity that will provide resiliency and redundancy to the sucker population and ultimately aide in recovery of the species. The proposed SNRC project would be a covered activity in the HCP.

## Comment Letter – Local Agency Formation Commission for San Bernardino County (LAFCO)

### Comment LAFCO-1

The comment states that there is no information addressing the greater control over costs.

### Response to LAFCO-1

The DEIR does not evaluate the cost of the project since cost is not an environmental impact of this recycled water supply project. However, project costs are included in the Update of the Recycled Water Feasibility Study 2015. As the responsible decision makers, the Valley District Board of Directors will consider project costs when considering approval of the project, which will occur as a separate action from the certification of the EIR.

### Comment LAFCO-2

The comment states that on page 1-2 the reference to East Highland and Highland should be one and the same.

### Response to LAFCO-2

The comment correctly identifies an error. The following modifications have been made on page 1-2:

#### ***San Bernardino Valley Municipal Water District***

Valley District was formed in 1954 as a regional water supply agency with a service area that covers about 353 square miles in southwestern San Bernardino County and a population of about 660,000. Its enabling act includes a broad range of powers to provide water, groundwater replenishment, storm water and wastewater treatment and disposal, recreation, and fire protection services. Valley District is a water wholesaler, delivering imported and local water supplies to local water retailers. Valley District contracts with the State Water Project (SWP) to provide imported water to the region and also manages groundwater storage within its boundaries, which include the cities and communities of San Bernardino, Colton, Loma Linda, Redlands, Rialto, Bloomington, Highland, ~~East Highland~~, Mentone, Grand Terrace, and Yucaipa.

### Comment LAFCO-3

The comment states that on Page 1-2 the description of the District's service area should clearly identify that it primarily serves the City of Highland

### Response to LAFCO-3

The comment identifies an appropriate clarification to page 1-2. In response to the comment, the text of the Introduction has been modified as follows:

#### ***East Valley Water District***

EVWD was formed in 1954 to provide domestic water service to the unincorporated and agricultural-based communities of Highland and East Highlands, which were incorporated in 1987 as the City of Highland. Today, EVWD primarily serves the City of Highland. As the population of the area has increased, these agricultural demands have been replaced by municipal demands. EVWD has built a water system to meet the growing municipal demands and currently serves a population of approximately 101,000. EVWD delivers 18 million gallons per day (MGD) of potable water from three sources: Bunker Hill Groundwater Basin provides 90 percent, Santa Ana River (SAR) water provides 9 percent, and SWP water provides 1 percent.

Groundwater is pumped from the Bunker Hill Groundwater Basin through a series of 18 EVWD-owned wells. Surface water supplies are treated at the 8 MGD Philip A. Disch Surface Water Treatment Plant (Plant 134), which is owned and operated by EVWD. In addition, EVWD also operates and maintains the sanitary sewer collection system within its service area. Currently, the collection system conveys approximately 6 MGD of untreated wastewater to the City of San Bernardino via the East Trunk Sewer, where it is treated at the San Bernardino Water Reclamation Plant and RIX facility.

### Comment LAFCO-4

The comment states that on Page 1-4 the issue of the location of the East Valley Water District (EVWD) wells relative to the recharge sites is not addressed. The comment requests additional information regarding the benefits to be received by EVWD from the projects.

### Response to LAFCO-4

The proposed project does not include any new extraction wells. The project would recharge recycled water to augment the regional water supply and assist with managing the groundwater basin. Valley District proposes the project for the water benefits it will provide to the region, including EVWD.

EVWD will receive the benefit of additional water supply reliability, which is difficult to quantify given the quantity of water already in storage in the groundwater basin. However, this is clearly a benefit because operating a groundwater basin in a sustainable fashion is the chief goal of California's new groundwater legislation. Moreover, because the SNRC facility will be able to treat wastewater with better technology than the current treatment processes, EVWD ratepayers will directly benefit from reduced costs once the facility comes on line (Appendix J includes the Update of the Recycled Water Feasibility Study, 2015). Finally, there is a regional benefit from the manner in which Valley District has structured the project and the mitigation to balance water

supply reliability with the needs of threatened and endangered species. As noted by the USFWS, the proposed mitigation strategy that will be implemented if the project is approved charts a course towards the recovery of the Santa Ana sucker, and will provide a valuable model that can be emulated by other water projects in the San Bernardino Valley. (Please see Response to Comment USFWS-1.) Implementation of the project is thus expected to help streamline the formation of mitigation measures for and approval of other regional water projects that may be proposed in the future.

### **Comment LAFCO-5**

The comment states that Figure 1-2 on Page 1-5 does not provide a legend for the lines on the map.

### **Response to LAFCO-5**

In response to the comment, a legend has been added to Figure 1-2. The figure is reproduced in Chapter 12: Clarifications and Modifications.

### **Comment LAFCO-6**

The comment states that Figure 2-1 on Page 2-2 does not show the location of Rialto well pumps.

### **Response to LAFCO-6**

The existing groundwater wells that are proposed to be refurbished are shown on Figure 2-7g.

### **Comment LAFCO-7**

The comment states that on Page 2-13 there is no explanation of what will happen during a larger storm. The comment also states that there is no explanation as to where the excess flow would drain.

### **Response to LAFCO-7**

The SNRC would be designed with MBR technology to accommodate peak flows that enter the collection system during storm events. Furthermore, the Draft EIR notes on page 2-14 that the Administration Center would include retention ponds to capture stormwater on site.

### **Comment LAFCO-8**

The comment states that there is no information about who owns the four existing groundwater wells and if they have current outlets to the Santa Ana River (SAR). The comment states that there is no information on what groundwater basin they will draw from or the current status of the basin.

### **Response to LAFCO-8**

As shown in Table 2-9, approval would be required from the City of Rialto for the use of the groundwater wells. The wells are located within the Riverside Arlington groundwater subbasin as shown on Figure 3.9-2. The DEIR recognizes on page 3.9-24 that the use of supplemental water from the wells in Rialto would lower groundwater levels locally. The DEIR notes that the SAR is a losing stream in the initial 6,000 feet below the Rialto Channel and the water introduced into the channel would percolate back into the ground through the river bed. Furthermore, the use of the wells is consistent with their past uses. The DEIR concludes on page 3.9-24 that the use of the existing wells would not significantly lower groundwater levels relative to baseline conditions.

### **Comment LAFCO-9**

The comment states that there is no information related to the length of the new 24” SAR pipeline to the existing Rapid Infiltration Extraction (RIX) discharge pipeline. The comment states that there are no operational scenarios for SAR deliveries to RIX or pumping and delivering of groundwater to SAR for mitigation. The comment states that estimates of future mitigation scenarios should be provided.

### **Response to LAFCO-9**

The SAR Pipeline is described on page 2-24 and Figure 2-7f. The SAR Pipeline would be refurbished from Alabama Street to the SBWRP, a distance of approximately 5.27 miles. A bypass pipeline of approximately 2,500 feet would be constructed to connect the SAR pipeline with the SBWRP’s discharge connection to RIX. The DEIR addresses the construction and operational impacts of this project component. Operational scenarios for the use of the SAR Pipeline and supplemental water will depend on the need for water to be discharged into the SAR. A minimum flow in the river has not been established (please see response to comment CDFW-1). Therefore, Mitigation Measure BIO-3 provides a mechanism to introduce supplemental water into the river during warm periods to reduce temperature. The DEIR concludes on page 3.9-24 that any contribution would be an improvement over the existing condition, and the wells would be functioning as designed. The SAR Pipeline would be used until the HCP or HMMP is fully implemented.

### **Comment LAFCO-10**

The comment states that on Page 3.3-13 the “San” in the text “City of San Highland” should be removed. The comment states that this error appears in other parts of the DEIR.

### **Response to LAFCO-10**

The comment identifies a typographical error in the DEIR. The following modifications have been made on page 3.3-13:

### ***City of Highland General Plan***

The City of ~~San Highland~~ Highland General Plan Air Quality Element contains various policies to address citywide air quality issues. The following are relevant to the proposed project:

#### **Comment LAFCO-11**

The comment states that on Page 3.3-14 “City of San Highland” should be replaced with “City of Redlands.”

#### **Response to LAFCO-11**

The comment identifies a typographical error in the DEIR. The following modifications have been made on page 3.3-14:

### ***City of Redlands General Plan***

The City of ~~San Highland~~ Redlands General Plan Air Quality Element contains various policies to address citywide air quality issues. The following are relevant to the proposed project:

#### **Comment LAFCO-12**

The comment states the installation of the facility may not be suitable for the location due to “potential modes for failure of the facility.”

#### **Response to LAFCO-12**

Impacts from hazardous materials involved with the implementation of the proposed project are analyzed in Chapter 3.8. The proposed project would require preparation of a Hazardous Materials Business Plan and must comply with all notification requirements of storing chemicals onsite as stated on pages 3.18-14 and 3.18-15. The facility would not store acutely hazardous materials or have the potential to result in hazardous air emissions. Accordingly, the DEIR concludes that impacts involving hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste would be less than significant. The SNRC would be designed with MBR technology to accommodate peak flows that enter the collection system during storm events. The DEIR complies with CEQA guidelines and the proposed project would comply with all safety and building regulation to prevent facility failures.

#### **Comment LAFCO-13**

The comment states that there is no analysis of release of any of the chemicals and causes of releases to adjacent land uses.

### **Response to LAFCO-13**

The DEIR addresses and analyzes the hazards of the potential for chemical releases on page 3.8-14. The DEIR concludes that the storage, handling, and transport of chemicals used for treatment would comply with regulations and would therefore pose low risk to the local community.

### **Comment LAFCO-14**

The comment states that there is no evaluation of consistency with a treatment plant and the adjacent land uses.

### **Response to LAFCO-14**

The DEIR evaluates compatibility of the proposed treatment plant with neighboring land uses in the aesthetics section, air quality section, land use section, noise section, population and housing section, public services and utilities section and traffic section. As noted on page 3.12-11 the proposed project would benefit the local community through providing community open space and a community meeting facility. Furthermore, the Administration Center of the proposed project is compliant and consistent with the Business Park designation as explained on page 3.10-10.

Please see Response to Comment Highland-1.

### **Comment LAFCO-15**

The comment states that the statement “water infrastructure” is flawed due to the fact the facility is primarily a wastewater treatment facility.

### **Response to LAFCO-15**

As discussed on page 3.10-10, the DEIR concludes that the Government Code sections 53091 and 53095 exempt the project from local building and zoning laws. Government Codes section 53091 states that the county or city zoning ordinances “shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water”. The SNRC treatment facility is proposed to produce, generate, store, and treat water. Further, the SNRC administrative facility is a consistent, allowable public facilities use expressly authorized by the City of Highland’s Municipal Code Chapter 16.24 and in accordance with the City of Highland’s existing business park land use zoning and general plan designations.

Please see Response to Comment Highland-1.

### **Comment LAFCO-16**

The comment suggests the environmental justice discussion is flawed on Page 3.12-11. The comment states that an evaluation of future operational costs to the minority and low income residents of the city of San Bernardino should be provided.



## Response to LAFCO-16

Environmental justice concerns the disproportionate impacts of a proposed project on the health or physical environment of minority and low income populations. The DEIR does not evaluate the cost of the project since cost is not such an impact. Project costs may be independently viewed in the Update of the Recycled Water Feasibility Study 2015. The EVWD ratepayers, including the 8,350 connections located in the City of San Bernardino, can expect reduced future costs as a result of the project. No other residents of the City of San Bernardino will bear any of the project's operational costs. As the responsible decision makers, the Valley District Board of Directors will consider project costs when considering approval of the project, which will occur as a separate action from the certification of the EIR.

Please see Response to Comment SBMWD-2.

## Comment LAFCO-17

The comment states that a detailed discussion of the effects on costs to EVWD's customer's needs to be included.

## Response to LAFCO-17

The DEIR does not evaluate the cost of the project since cost is not an environmental impact. Project costs are included and may be independently viewed in the Update of the Recycled Water Feasibility Study 2015. As the responsible decision makers, the Valley District Board of Directors will consider project costs when considering approval of the project, which will occur as a separate action from the certification of the EIR. The Feasibility Study concluded that implementation of the project would result in lower rate increases in the future compared with the No Project condition (Feasibility Study, Table 11-6). The estimated capital and O & M costs were developed based on a survey of similar facilities that utilize Membrane Bioreactor (MBR) technology to achieve tertiary/Title 22 treated water quality standards. A data base of approximately 25 recent treatment plants utilizing MBR technology was compiled, with the capital cost for each facility adjusted to the local/current Engineering News Record Construction Cost Index. In addition, the reuse of recycled water would present a substantial regional water supply benefit to water customers of the region through groundwater recharge in the Bunker Hill Groundwater Basin.

## Comment LAFCO-18

The comment states that reference to East Highland and Highland should be one and the same.

## Response to LAFCO-18

The comment correctly identifies error on page 3.13-4. The following modification has been made in response to this comment:

Valley District covers about 353 square miles and serves a population of 660,000 in southwestern San Bernardino County; it includes the cities and communities of San Bernardino, Colton, Loma Linda, Redlands, Rialto, Bloomington, Highland, ~~East Highland~~, Mentone, Grand Terrace, and Yucaipa (Valley District, 2015).

### **Comment LAFCO-19**

The comment states that the text “Local Area Formation commission...” should be corrected to “Local Agency Formation Commission.”

### **Response to LAFCO-19**

The comment correctly identifies error on page 3.13-5. The following modification has been made in response to this comment:

The City of Redlands provides drinking water to the Redlands and Mentone areas; the water utility service area generally coincides with the area designated by the Local Agency Area Formation Commission (LAFCO) as the City and its sphere of influence.

### **Comment LAFCO-20**

The comment states that the text identifies wastewater treatment as a “critical public demand” but that this is not accurate since treatment is already provided, and the need is for additional water.

### **Response to LAFCO-20**

The DEIR notes on page 3.13-13 that wastewater treatment is a “critical public service” that is currently being provided at the SBWRP and that the proposed project would meet existing and future demands. As correctly stated in the comment, the proposed project would provide water supply benefits.

### **Comment LAFCO-21**

The comment states that modifications should be made due to the fact that the wastewater treatment project will result in significant impacts.

### **Response to LAFCO-21**

The DEIR explains that the project would construct a new wastewater treatment plant and evaluates the impacts of the proposed wastewater treatment facility throughout Chapter 3. As stated in Impact 3.13-3, wastewater generated during construction would be minimal and the environmental analysis of operational impacts for each environmental resource is sufficiently performed throughout the DEIR. Thus the conclusion of less than significant is correct.

### **Comment LAFCO-22**

The comment states that the analysis of cumulative hydrology impacts should include an evaluation of all upstream agency plans for reductions in flows into the Prado Basin. The comment suggests a survey of all water/wastewater management agencies located upstream of Prado Dam to evaluate the cumulative impact of potential water withdrawals from the Santa Ana River.

### **Response to LAFCO-22**

Please see Responses to Comments OCWD-2 and CBD-23.

### **Comment LAFCO-23**

The comment states that there is no data to substantiate the conclusion that the Redlands Basins have sufficient capacity to accommodate both discharges.

### **Response to LAFCO-23**

The City of Redlands commissioned a study of the recharge capacity of its recharge basins that determined the recharge capacity of the basins to be approximately 6 feet per day. With a recharge area of approximately 35 acres, the total recharge capacity of the Redlands basins is estimated to be 210 acre-feet per day, which is approximately 69 MGD. This 69 MGD is well in excess of the potential combined contributions of 10 MGD from the SNRC and the full capacity of the City of Redlands wastewater treatment plant.

### **Comment LAFCO-24**

The comment states that several of the alternatives were rejected due to proximity to residential development; therefore this consideration should also apply to the project site.

### **Response to LAFCO-24**

The DEIR describes several alternative locations for the treatment plant that were rejected from further consideration based on several factors. Each of the alternative locations is described on page 6-4. The proximity to residential neighborhoods was not a constraint that caused the rejection of any of the alternatives. The elevation of the EVWD Headquarters alternative would result in significantly increased energy usage and risk of spills, thereby rendering this alternative infeasible.

## **Comment Letter – Mentone Area Community Association (MACA)**

### **Comment MACA-1**

The comment states that there is no mention of the proposed SBVMWD wastewater treatment plant project in the Harmony Specific Plan Environmental Impact Report. The comment states the lack of consistency needs to be corrected.

### **Response to MACA-1**

The proposed project would divert the existing wastewater flows in the EVWD service area to the new SNRC. Future flows within the service area would be conveyed to the SNRC as well. The DEIR addresses the environmental impacts of the proposed SNRC project. Valley District is not the lead or a responsible agency for the Harmony Specific Plan or its Environmental Impact Report and cannot direct or require the contents of those documents.

### **Comment MACA-2**

The comment states that the outfall sewer that is necessary to connect the Harmony Specific Plan to the proposed Sterling Natural Resource Center wastewater treatment plant has not been identified.

### **Response to MACA-2**

The proposed project does not include constructing new sewer collection facilities for any new portions of the service area. Because the comment does not address the contents of the DEIR, no further response is available or required.

### **Comment MACA-3**

The comment states that MACA would be interested in having a service review conducted and having sewer service made available in conjunction with the proposed Sterling Natural Resources Center project.

### **Response to MACA-3**

The proposed project does not include constructing new sewer collection facilities for any new portions of the service area. Because the comment does not address the contents of the DEIR, no further response is available or required.

## **Comment Letter – SoCal Environmental Justice Alliance (SEJA)**

### **Comment SEJA-1**

The comment states that the DEIR is deeply flawed with respect to project description, analysis of impacts, alternatives, and cumulative impacts and should be recirculated.

### **Response to SEJA-1**

The comment is a summary of comments to follow. See responses to comments SEJA-2 through SEJA-70.

### **Comment SEJA-2**

The comment states that the DEIR does not explain how much water will be conveyed to each of the discharge location alternatives.

### **Response to SEJA-2**

The proposed project would divert the full wastewater flow from the EVWD service area, currently a 6 MGD flow. As detailed on pages 2-5 and 2-6 of the DEIR, the project proposes to convey the treated water to one or more of the three recharge locations, and water may also be conveyed to the Santa Ana River Pipeline, as described and analyzed in detail throughout the document. The FEIR includes results of the groundwater modeling of the three recharge locations in Appendix I.

### **Comment SEJA-3**

The comment states that it is impossible to tell why Valley District is the Lead Agency.

### **Response to SEJA-3**

The DEIR describes why Valley District is the CEQA Lead Agency in Section 1.2.2. The DEIR states that Valley District, acting as the regional water supply agency with the requisite regional expertise and the authority to provide water supply, groundwater replenishment, storm water and wastewater treatment and disposal services within its service area, is the agency that has initiated the SNRC project for its regional recycled water supply benefits. Those benefits include recharge of the Bunker Hill Groundwater Basin and reduced reliance on imported water through development of a local drought-proof supply. The wastewater of EVWD will be treated at the SNRC. EVWD is located entirely within Valley District's service area, and its customers are also ratepayers of Valley District.

### **Comment SEJA-4**

The comment requests clarification for the purpose of the SAR Pipeline component of the project.

## Response to SEJA-4

The SAR Pipeline component is described in Section 2.4.4 of the DEIR. The DEIR describes on page 2-27 that with the SAR Pipeline discharge component, “treated water may be discharged to the SAR at RIX for short periods to ensure adequate river flows if needed for environmental benefits.” Essentially, this project component provides for back-up assurance that river flows can be maintained at existing levels until biological mitigation measures have been successfully approved and implemented sufficiently to mitigate significant impacts to aquatic resources within the SAR below the RIX discharge. Maintenance of the aquatic resources in the SAR will require regional cooperation and coordination, and this component increases operational flexibility of the regional water resource.

## Comment SEJA-5

The comment points out an error in Table 2-8: annual biosolids truck trips should be 600, with annual total truck trips at 740. The comment also states that elsewhere in the DEIR a total of 5 truck trips per day is assumed.

## Response to SEJA-5

As stated on page 2-33 of the DEIR, the proposed project would generate an average of fewer than 2 biosolids haul trips per day, totaling approximately 600 trips per year. The total of 600 biosolids truck trips was used in the air emissions calculations as shown on page 5 of Appendix B. The comment correctly identifies an error in Table 2-8. In response to this comment, Table 2-8 on page 2-33 of the DEIR has been corrected to show that total annual truck trips would be approximately 720, with biosolids truck trips constituting 600 of those trips.

**TABLE 2-8  
OPERATIONAL TRUCK TRIPS**

<b>Purpose</b>	<b>Number of Truck Trips per Year</b>
Chemical Deliveries	14
Screenings and Grit Disposal	104
Biosolids Removal	<u>600</u>
<u>Total</u>	718 (say 720)

SOURCE: Valley District, 2015

In response to the comment the following change has been made to the last paragraph on page 3.15-7. This change reflects the accurate number of trips and reduces the number analyzed in the section such that the change does not affect the impact conclusion:P

~~Approximately 5~~An average of fewer than 2 biosolids haul trips per day would be generated at the facility.

### **Comment SEJA-6**

The comment suggests that the DEIR does not evaluate the potential for an aesthetic impact of scenic vistas toward the mountains since Figure 3.1-11 does not show the view toward the mountains.

### **Response to SEJA-6**

Photo 1 in Figure 3.1-1a shows the San Bernardino Mountains in the background and confirms the conclusion that the mountains are sufficiently far from the SNRC facility such that the facility will not obscure scenic vistas. The DEIR recognizes that the City of Highland Conservation and Open Space Element specifies the goal of preserving views including the San Bernardino Mountain ridgeline. Although the new facility would introduce structures that would block long-range views from the immediate proximity, the buildings would be consistent with urban development land uses and would not affect existing long-range views. The DEIR properly concludes on page 3.1-11 that the proposed project would not alter views of this scenic resource.

### **Comment SEJA-7**

The comment states that the haul trips should be considered in the localized air quality impact assessment.

### **Response to SEJA-7**

As noted on page 3.3-19 localized air impacts are focused on local receptors and therefore are only concerned with emissions within close proximity of certain local receptors. This precludes mobile trips that produce emissions further than 1,000 feet from the site. The DEIR complies with SCAQMD guidelines for conducting localized impact analysis using its Localized Significance Thresholds (LST) (page 3.3-30). The DEIR does assess mobile emissions for all vehicle trips associated with construction and operation under Impact 3.3-2 (page 3.3-21) which evaluates project emissions using SCAQMD approved regional emissions thresholds.

### **Comment SEJA-8**

The comment notes that the air emissions calculations assumed 25 employees per day whereas the DEIR states that only 5 employees would be necessary.

### **Response to SEJA-8**

The DEIR air emissions calculations for operational worker commute trips assume a more-conservative 25 workers per day. This provides for a more conservative analysis.

### **Comment SEJA-9**

The comment states that the project is not consistent with the City of Highland General Plan and is therefore not consistent with the Air Quality Management Plan that relies on the assumptions of the local land use assumptions.

### **Response to SEJA-9**

The DEIR examines specific policies contained in the City of Highland General Plan and concludes on page 3.10-11 that the proposed project is substantially consistent with and is also, as a water treatment facility, exempt from that General Plan. Furthermore, the DEIR describes the applicable air quality standards on page 3.3-21 and bases its conclusions on those standards, finding that the project is consistent with regional population, housing, and employment forecasts. The proposed project would not induce unplanned growth as explained on page 5-4 of the DEIR. Therefore, the project is consistent with the AQMP irrespective of the SNRC site zoning or General Plan land use designation.

Please also see Response to Comment Highland-1.

### **Comment SEJA-10**

The comment suggests that air emissions should be evaluated as stand-alone emissions and that the project should not be considered one that will reduce emissions at RIX.

### **Response to SEJA-10**

The emissions calculations provided in Tables 3.3-6 through 3.3-12 evaluate the project's emissions as stand alone emissions without providing any emission reduction credits from the reduced treatment that will be provided by SBWRP and RIX. The statement in the DEIR referred to in the comment explains that the analysis conducted in the DEIR is a conservative approach.

### **Comment SEJA-11**

The comment states that prolonging or phasing construction activities would avoid significant daily emissions impacts.

### **Response to SEJA-11**

The SCAQMD significance thresholds listed in Table 3.3-5 are daily emissions thresholds. The daily project emissions estimates provided in Table 3.3-7 utilize a worse-case scenario whereby construction activities for multiple components would occur simultaneously during a single day. The analysis provides for a conservative assessment of potential impacts that may be significant. As the comment points out, significant construction emissions could be avoided in every situation through reduced productivity and a prolonged construction schedule. However, the EIR concludes that construction emissions would be significant and unavoidable since delaying construction activities is impractical and simply prolongs and extends the daily impact over time of not only air emissions, but also other construction related impacts such as noise and traffic.



## **Comment SEJA-12**

The comment takes issue with the SCAQMD methodology for assessing cumulative impacts and recommends that additional mitigation measures be applied to minimize cumulative impacts.

## **Response to SEJA-12**

The DEIR identifies cumulative projects that would contribute cumulative emissions in Table 4-1. The DEIR also notes on page 3.3-28 that SCAQMD has designated the South Coast Air Basin as being in nonattainment for ozone, PM<sub>10</sub> and PM<sub>2.5</sub>. Therefore, the DEIR recognizes that the existing air quality is impacted by the region's cumulative emissions and that future projects will contribute to the already significantly impacted air quality. As a result, the DEIR concludes that cumulative impacts to air quality are significant. The DEIR applies the SCAQMD cumulative impact methodology to conclude that NO<sub>x</sub> emissions would be cumulatively significant, but contributions of PM<sub>10</sub> and PM<sub>2.5</sub> to the cumulative condition would not be considerable based on stated thresholds, and therefore not a significant impact of the project. Other criteria pollutants would be less than significant since the regional air quality is in attainment for those pollutants. This impact assessment methodology is recommended by SCAQMD.

## **Comment SEJA-13**

The comment states that the SCAQMD LST methodology underestimates impacts to local receptors.

## **Response to SEJA-13**

The DEIR utilizes the SCAQMD LST methodology to estimate potential impacts to local receptors because that methodology is widely accepted in this region as one that accurately evaluates such impacts. The significance determination output of the methodology includes assumptions to capture distance variation to receptors. Therefore, although the exposure may be greater at shorter distances, the LST is not exceeded when the methodology is used appropriately. The conclusion of the DEIR is that based on the SCAQMD-recommended methodology, impacts to local receptors from temporary construction emissions would not be significant.

## **Comment SEJA-14**

The comment states that the DEIR should have evaluated risks in addition to cancer risk posed by diesel exhaust.

## **Response to SEJA-14**

The DEIR evaluates potential localized impacts that could result from the emissions of toxic air contaminants including diesel exhaust on page 3.3-32. The DEIR describes that health risk assessments evaluate potential cancer risks over a 70-year period. The DEIR concludes that the two-year construction period is not long enough to warrant concerns from diesel particulate matter exposure from a specific source. Furthermore, the use of diesel powered engines at the

construction site would occur largely during initial phases of the project and would be substantially reduced as the construction progressed. The DEIR concludes that even when using conservative assumptions, the health risk from diesel emissions would be small.

### **Comment SEJA-15**

The comment states that the TAC air emissions associated with the cogeneration equipment should have been included in the air impact analysis.

### **Response to SEJA-15**

Project operation emissions from the process equipment will depend on the equipment used. The DEIR provides an estimate of operational emissions in Table 3.3-10 that includes cogeneration emissions. The estimates are well below the SCAQMD operational significance thresholds. Stationary emissions from process equipment including cogeneration is highly regulated and controlled to protect public health in the immediate vicinity and within the region. As noted on page 3.3-33 of the DEIR, stationary emission sources will require emissions permits through the New Source Review process that imposes rigorous control and monitoring requirements to minimize emissions. The DEIR properly concludes that the potential for TAC emissions to impact public health would be low with the application of emissions controls required by the SCAQMD.

### **Comment SEJA-16**

The comment states that the odor control mitigation measure is inadequate and requests that biosolids haul trucks are enclosed.

### **Response to SEJA-16**

Mitigation Measure AIR-2 requires preparation and implementation of an Odor Impact Minimization Plan that would include odor control system operations plan and performance standards in addition to complaint response protocols. Controlling odors from the biosolids handling process is within the scope of the Plan. The odor control performance standards will include fenceline standards that will be met with operation of the odor control systems over each of the treatment processes. The Plan serves as the management tool to enforce performance standards to ensure that odors do not escape from the facility or during the hauling process.

The Plan will be based on standard industry practices. For instance, haul trucks are always covered with blue tarp as suggested in the comment. Dewatered biosolids from a wastewater treatment plant are typically loaded in a transportation truck through a conveyor system in an enclosed scrubbed facility. Doors are closed when the truck trailer is being loaded. Loading facility is equipped with scrubbers for odor control. Loaded biosolids truck trailers are properly covered with tarp before leaving the facility. Many agencies in California transport the biosolids for long distance transportation without causing any nuisance to the public. As an example, Coachella Valley Water District and many others in Riverside County transport to Arizona.

## Comment SEJA-17

The comment states that field surveys should have been conducted for the East Twin Creek Spreading Grounds.

## Response to SEJA-17

Since access to the basins was denied by the County Flood Control Agency, field surveys were not conducted within the spreading grounds. However, aerial imagery and past survey data provide substantial information for the types of habitats and habitat values that could be encountered at the site at the time of construction. The DEIR lists the special status plants and wildlife that may be encountered at the site. Furthermore, surveys today at the spreading grounds would have limited value since conditions within the basins change depending on the frequency of their use. Focused surveys to quantify habitat acreage within the basins would be subject to revision at the time of the impact that may be two years or more in the future. The DEIR provides a survey strategy that commits Valley District to quantification of the project effect at the time the effect occurs, and mitigation of the effect through compensation ratios established through consultation with CDFW and USFWS.

Please see also Responses to Comments CDFW-1, USFWS-1, CBD-3, and CBD-6.

## Comment SEJA-18

The comment states that Valley District is responsible for mitigating all special status plants not just listed species, that the HCP may not cover all special status species, and that surveys should have been conducted to quantify impacts.

## Response to SEJA-18

The types of plant and animal species that could be encountered during the time of the impact are well understood and identified in the DEIR.

The DEIR recognizes that within the impacted areas within City Creek there is the potential for sensitive plant and animal species to occur. For example, construction of the discharge facility within either City Creek or East Twin Creek Spreading Grounds would result in approximately 2,000 square feet of temporary disturbance to RAFSS and approximately 1,000 square feet of permanent disturbance. Once discharged into City Creek, the perennial flow would convert a corridor of the existing mulefat and RAFSS habitat into riparian vegetation. This could impact approximately 1.5 acres of RAFSS in the center of the creek channel. Accordingly, Mitigation Measures BIO-1 and BIO-2 commit Valley District to replacing impacted sensitive habitat that supports sensitive species in consultation with CDFW and USFWS. Furthermore, since conditions within City Creek change over time due to flood events, Mitigation Measures BIO-1 and BIO-2 rightfully commit Valley District to conducting surveys closer to the time of the impact in order to more accurately quantify the project's effect and compensation requirements

In response to the comment, the mitigation has been modified as shown below. Mitigation for sensitive plants will be conducted in consultation with the wildlife agencies either through the Endangered Species Act or other permitting mechanisms such as a streambed alteration agreement for non-listed species. In addition, in response to other comments received on the DEIR, the Mitigation Measures have been refined to expressly require replacement of permanently impacted RAFSS habitat at a ratio no less than 3:1 in consultation with CDFW and USFWS. Valley District is committed to and looks forward to working with the wildlife agencies to develop appropriate compensation for the replacement of RAFSS habitat in City Creek with riparian vegetation:

**BIO-1: Disturbance to Special-Status Plants.** The following measures will reduce potential project-related impacts to special-status plant species that may occur adjacent to the project site within City Creek to a less than significant level. Potential project-related impacts may result from the construction of the pipeline extension and discharge structure within City Creek, Redlands Basins, and/or the East Twin Creek Spreading Grounds.

- e. Prior to the start of construction within City Creek, Redlands Basins, and/or the East Twin Creek Spreading Grounds, a focused botanical survey will be conducted to determine the presence/absence of any of the special-status species with a moderate or high potential to occur. The focused botanical survey will be conducted by a botanist or qualified biologist knowledgeable in the identification of local special-status plant species, and according to accepted protocol outlined by the CNPS and/or CDFW.
- f. If a special status state or federally-listed plant species is discovered in a project impact area, informal consultation with CDFW and/or USFWS will be required prior to the impact occurring to develop an appropriate avoidance strategy. Depending on the sensitivity of the species, relocation, site restoration, or other habitat improvement actions may be an acceptable option to avoid significant impacts, as determined through consultation with the resource agencies.
- g. If impact avoidance of a state or federally-listed species is not feasible, Valley District shall quantify the impacted acreage supporting state or federally-listed plant species within the construction area and estimated perennial flow area and prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected plants species. Valley District shall implement the conservation measures and compensation requirements identified through consultation by USACE with both CDFW and USFWS.

Please also see Responses to Comments CDFW-1, CBD-3, and CBD-6.

## Comment SEJA-19

The comment states that surveys and mitigation for wildlife should include all special status species not just listed species.

## Response to SEJA-19

The DEIR identifies all sensitive-status wildlife species that have a potential to be impacted by the project. Mitigation Measure BIO-2 presents a mitigation strategy for listed species. In response to this comment the mitigation measure has been expanded to include pre-construction site clearing surveys to remove special status wildlife species from the impact areas prior to construction.

**BIO-2: Disturbance to Special-Status Wildlife.** The following measures will reduce potential project-related impacts to special-status wildlife species that may occur within disturbed and native habitats, to a less than significant level. Potential project-related impacts may result from construction of the SNRC, construction of the discharge structures within City Creek and other discharge locations, and perennial discharges to City Creek or other discharge locations.

- f. Prior to the start of construction within City Creek or other discharge locations, Valley District shall conduct focused surveys within the project impact areas to determine if any state or federally-listed wildlife species (southwestern willow flycatcher, coastal California gnatcatcher, San Bernardino kangaroo rat, and least Bell's vireo) are located within project impact areas. Focused surveys will be conducted by a qualified and/or permitted biologist, following approved survey protocol. Survey results will be forwarded to CDFW and USFWS. If state or federally-listed species are determined to occur on the project site with the potential to be impacted by the project, consultation with CDFW and/or USFWS will be required.
- g. If impact avoidance is not feasible, Valley District shall quantify the impacted acreage supporting state or federally-listed wildlife species within the construction area and estimated perennial flow area and prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected wildlife species. Valley District shall implement the conservation measures and compensation requirements identified through consultation by USACE with both CDFW and USFWS.
- h. Prior to the start of construction of the SNRC building and the recycled water pipeline along 6th Street, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the CDFW Staff Report on Burrowing Owl Mitigation (2012). If burrowing owl is observed within undeveloped habitat within or immediately adjacent to the project impact area,

avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance with the *Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans* of the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW, 2012).

- i. Prior to the start of construction within City Creek, pre-construction site clearing surveys will be conducted of the project impact area within natural habitats. Any special status ground-dwelling wildlife will be removed from the immediate impact area and released in the nearby area.

Please also see Responses to Comments CDFW-1, SEJA-18, CBD-3, and CBD-6.

### **Comment SEJA-20**

The comment states that focused surveys of the burrowing owl and other species should have been conducted and relocation areas identified.

### **Response to SEJA-20**

The DEIR describes the results of initial surveys conducted to identify potential habitat for burrowing owl as required in the burrowing owl survey guidelines. No burrowing owls were observed during the initial surveys. However, in compliance with the survey protocol, Mitigation Measure BIO-2 commits Valley District to conduct the focused surveys required at the time of construction to evaluate precise construction zones once they are identified. If burrowing owls are present and unavoidable, the mitigation measure commits Valley District to following the established relocation protocol in consultation with CDFW.

Please also see Responses to Comment CDFW-1, CDFW-5, CDFW-6, CBD-3, and CBD-6.

### **Comment SEJA-21**

The comment states that mitigation for SBKR could not be achieved through the Upper SAR HCP since it is not yet approved.

### **Response to SEJA-21**

The biological resources site survey conducted over the summer of 2015 (and summarized in Appendix C of the DEIR) identified SBKR habitat and historic sitings within the City Creek impact areas. The DEIR concludes on page 3.4-46 that SBKR may be displaced within the small permanent impacted area in the creek and in the center of the streambed from perennial flow.

To address potential significant impacts to the SBKR, the DEIR includes Mitigation Measure BIO-2 which commits Valley District to direct consultation with CDFW and USFWS for potential impacts to SBKR and other listed species impacted in City Creek. This consultation would be conducted directly and not through the Upper SAR HCP. Valley District is committed to conduct future site-specific surveys and appropriate consultation with CDFW and/or USFWS, the results of which will be used to determine proper mitigation for impacted. Valley District is also committed to a 1:1 mitigation ratio for temporary habitat impacts resulting from construction, and a 3:1 ratio for permanent impacts to species associated with affected alluvial fan habitat, including the SBKR. It is Valley District's goal to provide enhancement of SBKR habitat near the area if appropriate to achieve maximum ecological value to the species, in coordination with the Wildlife Agencies and in accordance with applicable regulations. However, if onsite enhancement is not possible, Valley District will seek to obtain and manage high-quality habitat or an area with the potential to become high quality through additional management adjacent to the impact area and within designated critical habitat. Additionally, Valley District will add to Mitigation Measure BIO-2 a subsection requiring pre-construction trapping and relocation of the San Bernardino kangaroo rat, in accordance with accepted protocol, if determined necessary by the USFWS during the Section 7 consultation process.

Please also see Responses to Comments USFWS-12, CBD-5, CBD-9, CBD-10, and CBD-12.

### **Comment SEJA-22**

The comment states that Mitigation Measure BIO-2 does not address non-listed special status species.

### **Response to SEJA-22**

In response to this comment, Mitigation Measure BIO-2 has been modified as described in Response to Comment SEJA-19.

### **Comment SEJA-23**

The comment suggests an inconsistency in the description of impact to acreage of velocity class.

### **Response to SEJA-23**

The DEIR summarizes the Reduced Discharge Study accurately on page 3.4-48 as follows:

The study concludes that a diversion of 6 MGD from the Santa Ana River at the RIX discharge would reduce total flow by 18-21 percent, lower water depth in the channel by a maximum of approximately 1.1 inches, reduce the wetted area by 6 percent, and result in an average change in a velocity class of 2 percent (not exceeding 6 percent) of the total channel area. (See Appendix F)

The comment correctly notes that there is a discrepancy previously on page 3.4-45. In response to the comment, the second paragraph on page 3.4-45 has been modified to accurately reflect the Reduced Discharge conclusions and to be consistent with the summary on page 3.4-48:

The reduction of discharge from RIX will reduce water currently supporting riparian habitats in the Santa Ana River below the RIX discharge point. The reduced discharge study conducted by ESA for the project (ESA 2015b) determined that the diversion of 6 MGD of water from the Santa Ana River will not significantly change the existing conditions within the river pertaining to flow, velocity and sedimentation. As noted on page 8 of the reduced discharge study (**Appendix F**), the reduction of 6 MGD from the RIX discharge would reduce water depth in the channel a maximum of approximately 1.1 inch, reduce the wetted area by 6 percent, and result in an average change in a velocity class of 2 percent (not exceeding 6 percent) of the total channel area. (See Appendix F) ~~and would alter existing flow velocities on average by two percent. This would reduce wetted area by three percent within the upper reach of the reduced discharge study area.~~ The stream width would be reduced by ~~three~~ 6 percent, but the riparian vegetation would continue to encroach and hang over the stream channel as under existing conditions. The small reduction in wetted area in the river channel would not significantly affect the vitality of the riparian corridor currently supported by the perennial surface water discharge.

### **Comment SEJA-24**

The comment states that other projects covered by the Upper SAR HCP are not identified as cumulative projects.

### **Response to SEJA-24**

Table 4-1 appropriately identifies and lists those cumulative projects that were known at the time the DEIR was published. The list includes recycled water projects for the City of San Bernardino and Rialto as well as the HCP itself. The DEIR cumulative analysis recognizes that the HCP as it is being developed will include new projects that may not be known at this time. The proposed project would be compatible with the HCP and the cumulative impacts associated with its implementation. The Reduced Discharge Study evaluates potential impacts of reduced flow up to 24 MGD to better understand cumulative reductions as described on page 3.4-63.

### **Comment SEJA-25**

The comment questions whether discharge into City Creek would mitigate for impacts to SAS.

### **Response to SEJA-25**

The DEIR identifies a discharge location within City Creek as a potential method of combining groundwater recharge with riparian habitat creation. The proposed project does not suggest that the introduction of aquatic features in City Creek would mitigate direct impacts of reduced



discharge at RIX. Rather, Mitigation Measure BIO-3 outlines specific measures that would mitigate impacts to SAS.

### **Comment SEJA-26**

The comment asks how funding would be applied to implement the mitigation measures of the HMMP. The comment notes that a discharge permit would be required for discharge into Rialto Creek and asks for additional details on the establishment of SAS in upper reaches of the SAR.

### **Response to SEJA-26**

In adopting the Mitigation Monitoring and Reporting Plan that is inclusive of the mitigation measures identified in the DEIR, Valley District is committing to fund the mitigation. Mitigation is an integral part of the project and is included in the project construction and operational costs. .

As noted in Response to Comment SBMWD-7, Table 2-9 has been updated to acknowledge that a low-threat discharge permit would be required from the RWQCB.

Mitigation Measure BIO-3 includes conservation measure SAS-6 to assist in relocating a SAS population in the upper reaches of the SAR within the San Bernardino Mountains, not within City Creek. The relocation would be conducted in consultation with USFWS under the authority of Section 7 of the Endangered Species Act. The DEIR concludes that the combination of the conservation measures listed in Mitigation Measure BIO-3 would minimize impacts to SAS to the extent feasible.

### **Comment SEJA-27**

The comment states that use of the SAR Pipeline would reduce the discharge reduction impact of the proposed project.

### **Response to SEJA-27**

As stated in the Project Description page 2-32, the SAR Pipeline would provide the flexibility to convey treated water to the RIX facility to augment RIX discharges. The DEIR evaluates a reduced diversion Alternative in Chapter 6. The DEIR concludes that the Reduced Diversion Alternative would meet the project objectives to a lesser degree and would result in less benefit to the SAS as a result of reduced mitigation commitments.

### **Comment SEJA-28**

The comment states that the DEIR did not analyze the impacts of reduced SBKR habitat that would result due to the introduction of water into City Creek.

## Response to SEJA-28

The DEIR notes on page 3.4-47 that the perennial flow in City Creek would modify the existing vegetation, increasing habitat for some listed species while slightly reducing SBKR habitat. The DEIR concludes that the use of the creek channel for water-related habitat would not reduce SBKR habitat in the surrounding channel that would require compensation. However, to provide further assurances that any impacts to this habitat will be properly mitigated, Valley District is committed to a 1:1 mitigation ratio for temporary habitat impacts resulting from construction, and a 3:1 ratio for permanent impacts to RAFSS and associated species.

Please see Response to Comments CDFW-1, CBD-5, CBD-9, CBD-10, CBD-11, CBD-12.

## Comment SEJA-29

The comment states that the DEIR states that City Creek discharge would provide SAS habitat.

## Response to SEJA--29

The DEIR does not conclude that the City Creek discharge would create SAS habitat, but rather riparian and aquatic habitat. The DEIR does not rely on the City Creek segment to support SAS or mitigate direct impacts to SAS.

## Comment SEJA-30

The comment disagrees with the conclusion in the DEIR that Critical Habitat would not be adversely modified.

## Response to SEJA-30

The DEIR describes potential impacts to Critical Habitat on page 3.4-54. The DEIR concludes that as shown in the Reduced Discharge Study, reduction of 6 MGD from the RIX discharge would not substantially reduce wetted acreage within SAS Critical Habitat. The segment of SAR would continue to provide vital habitat to the listed SAS.

However, due to the currently degraded condition of the SAR habitat and a proposed reduction of constant flow, the DEIR concludes that the impact to the Santa Ana sucker in particular is properly deemed “significant and unavoidable.” At the same time, while the project will eventually reduce river flows, the matrix on page 3.4-52 of the DEIR sets forth measures that address numerous other factors that affect the long-term viability of the SAS. Improving those factors compared to existing conditions will help ameliorate the impacts of the project resulting from reduced flows, in part by creating a buffer against catastrophic events, including periodic dewatering events, which could otherwise result in virtual extirpation of the species absent the commitments Valley District is making.

The DEIR also recognizes that within the impacted areas within City Creek there is the potential for sensitive plant and animal species to occur. For example, construction of the discharge facility

within either City Creek or East Twin Creek Spreading Grounds would result in approximately 2,000 square feet of temporary disturbance to RAFSS and approximately 1,000 square feet of permanent disturbance. Once discharged into City Creek, the perennial flow would convert a corridor of the existing mulefat and RAFSS habitat into riparian vegetation. This could impact approximately 1.5 acres of RAFSS in the center of the creek channel. Mitigation Measures BIO-1 and BIO-2 commit Valley District to replacing impacted sensitive habitat that supports sensitive species in consultation with CDFW and USFWS. In response to comments received on the DEIR, the Mitigation Measures have been refined to expressly require replacement of permanently impacted RAFSS habitat at a ratio no less than 3:1 in consultation with CDFW and USFWS. Valley District is committed to and looks forward to working with the wildlife agencies to develop appropriate compensation for the replacement of RAFSS habitat in City Creek with riparian vegetation.

Please also see Responses to Comments CDFW-1, USFWS-1, USFWS-12, CBD-5, CBD-7, CBD-8, CBD-9, and CBD-10.

### **Comment SEJA-31**

The comment states that focused surveys for plants should have been done and that non-listed species should be included in Mitigation Measure BIO-1.

### **Response to SEJA-31**

As noted in Response to Comment SEJA-18, since conditions within City Creek change over time due to flood events, Mitigation Measure BIO-1 rightfully commits Valley District to conducting surveys closer to the time of the impact in order to more accurately quantify the project's effect and compensation requirements. The types of plant and animal species that could be encountered during the time of the impact are well understood and identified in the DEIR. However, their distribution may change over time, so surveys need to be conducted close to the time of impact. The need to relocate individual plants or provide compensation will depend on how effectively the discharge structures can avoid plants identified during pre-construction surveys, as directed by CDFW and USFWS. Surveys done prior to project approval would not best reflect the impacts that will occur at the time of construction of the project, because there will be lag time between approval and construction and operation of the project as the regulatory process continues. Mitigation Measure BIO-1 has been modified as shown in Response to Comment SEJA-18 to be inclusive of non-listed plant species.

Please also see Responses to Comments CDFW-1, CBD-3, and CBD-6.

### **Comment SEJA-32**

The comment states that BIO-2 does not include non-listed species and that burrowing owl mitigation is inadequate.

## Response to SEJA-32

The DEIR identifies all sensitive-status wildlife species that have a potential to be impacted by the project, including the burrowing owl. For example, the DEIR notes on page 3.4-26 that burrowing owl may be encountered at either the SNRC site or discharge locations and, as required in the Burrowing Owl Survey Protocol, the field biologists noted suitable habitat within the project impact areas. Mitigation Measure BIO-2 therefore commits Valley District to conducting focused surveys, closer to the time of construction, which will guide development of a mitigation strategy that will ensure any impact to the burrowing owl is rendered insignificant. The surveys will be conducted in accordance with CDFW-recommended protocols. The results of those future surveys will inform the selection of mitigation measures that will avoid or rectify any impacts to the burrowing owl, potentially including compensation for loss of occupied habitat, establishment of a suitable buffer (typically 500 feet) around nests, monitoring during construction or delaying construction, and, if necessary, passive relocation in accordance with CDFW's 2012 Staff Report on Burrowing Owl Mitigation.

In addition, in response to this comment the mitigation measure has been expanded to include pre-construction site clearing surveys to remove special status wildlife species from the impact areas prior to construction.

Please also see Responses to Comments CDFW-5, CBD-6, SEJA-19 and SEJA-20.

## Comment SEJA-33

The comment states that reduction of flow in the SAR below RIX does not contribute to the recovery of the SAS.

## Response to SEJA-33

As described beginning on page 3.4-48 of the DEIR, a Reduced Discharge Study was conducted to estimate the impact to hydrology from the reduction of 6 MGD from the RIX discharge. The Study concludes that minor impacts to depth and velocity would be expected. However, the DEIR acknowledges on page 3.4-58 that any reduction in flow could be considered a contribution to increased stress on a listed species and therefore the impact would be significant. The DEIR further concludes within the matrix on page 3.4-52 that the proposed mitigation measures presented by Valley District would provide substantial value to the listed species in all other respects including habitat availability and habitat quality improvements. The DEIR concludes that the benefits provided through the mitigation are consistent with the recovery of the species. Furthermore, the DEIR recognizes that the project would be subject to approval and oversight by the USFWS and CDFW whose mandate it is to effect species recovery. Finally, the HCP being developed for the Upper SAR watershed represents a cooperative regional effort to comprehensively address a multitude of factors that affect SAS survival rates, and will be carried out in strict compliance with Section 10 of the federal Endangered Species Act. Should the HCP not be completed in a timely manner, Mitigation Measure BIO-3 commits Valley District to the preparation and implementation of a Santa Ana sucker (SAS) Habitat Monitoring and

Management Plan (HMMP), which will involve similar activities to the HCP and will be approved by the USFWS and CDFW under their authority to enforce the federal and state Endangered Species Acts. As noted in Mitigation Measure BIO-3 on page 3.4-56 of the DEIR, the project would not reduce discharges to the river until either the HMMP or HCP are approved.

### **Comment SEJA-34**

The comment states that the impact to SAS is not adequately mitigated.

### **Response to SEJA-34**

Please see response to comment SEJA-33. The DEIR fully analyzes impacts to the SAS and proposes extensive mitigation to counter those impacts. The DEIR concludes that the benefits provided through the mitigation measures are consistent with the recovery of the species and in fact substantially improve conditions compared with existing conditions. However, due to the stressed nature of the species, Valley District has adopted a conservative approach and deemed impacts to the SAS significant and unavoidable despite the improvements that will be made to SAS habitat under Mitigation Measure BIO-3.

With respect to the SAS, please also see Responses to Comments CDFW-2, CDFW-3, USFWS-5, USFWS-8, USFWS-10, CBD-16, CBD-17, CBD-18, and CBD-20.

With regard to other species and habitat, please also see Responses to Comments: CDFW-1, CDFW-5, CDFW-6, USFWS-1, USFWS-12, CBD-3, CBD-5, CBD-6, CBD-7, CBD-8, CBD-9, CBD-10, CBD-11, and CBD-12.

### **Comment SEJA-35**

The comment suggests that additional mitigation is needed to mitigate impacts to RAFSS habitat from discharge to City Creek.

### **Response to SEJA-35**

The DEIR recognizes that introduction of perennial flow within City Creek will modify the condition of the creek bed. Riparian habitat will emerge, replacing existing RAFSS scrub within the center of the creek, leaving the wide creek flood plain unaffected. The DEIR concludes that the addition of perennial flows within the creek would contribute to a native ecosystem within an area of overlapping habitat values.

Construction of the discharge facility within either City Creek would result in approximately 2,000 square feet of temporary disturbance to RAFSS and approximately 1,000 square feet of permanent disturbance. Once discharged into City Creek, the perennial flow would convert a corridor of the existing mulefat and RAFSS habitat into riparian vegetation. This could impact approximately 1.5 acres of RAFSS in the center of the creek channel. Mitigation Measures BIO-1 and BIO-2 commit Valley District to replacing impacted sensitive habitat that supports sensitive

species in consultation with CDFW and USFWS. In response to comments received on the DEIR, the Mitigation Measures have been refined to expressly require replacement of permanently impacted RAFSS habitat at a ratio no less than 3:1 in consultation with CDFW and USFWS. Valley District is committed to and looks forward to working with the wildlife agencies to develop appropriate compensation for the replacement of RAFSS habitat in City Creek with riparian vegetation.

In response to comments and to provide further assurances that any impacts will be properly mitigated, and as noted above, Valley District is committed to a 1:1 mitigation ratio for temporary habitat impacts resulting from construction, and a 3:1 ratio for permanent impacts to RAFSS and associated species.

Please see Response to Comment CDFW-1.

### **Comment SEJA-36**

The comment states that non-listed plants are not included in Mitigation Measure BIO-1.

### **Response to SEJA-36**

This comment is addressed above in Response to Comment SEJA-18.

### **Comment SEJA-37**

The comment states that impacts to migratory corridor should be considered significant.

### **Response to SEJA-37**

The DEIR evaluates impacts to migratory corridors on page 3.4-61. The DEIR concludes that the modest change of water depth and velocity imposed by the reduced discharge of 6 MGD would not reduce the viability of the river as a wildlife movement corridor. This is substantively supported in the Reduced Discharge Study. The DEIR states that a similar type of habitat corridor would result if the City Creek discharge point were to be used.

### **Comment SEJA-38**

The comment states that no construction would occur from February through August and that Mitigation Measure BIO-5 is inadequate to ensure the protection of birds during construction.

### **Response to SEJA-38**

Mitigation Measure BIO-5 imposes survey requirements and impact avoidance requirements from February through August, but does not preclude all construction during this period. Furthermore, Mitigation Measure BIO-5 would impose standard impact minimization measure for summer-time construction activities and would be included as conditions of approval in wildlife agencies approvals.

### **Comment SEJA-39**

The comment states that the DEIR should have analyzed cumulative impacts from other projects which might result in future reductions in river discharges.

### **Response to SEJA-39**

The DEIR did in fact evaluate the effects of cumulative discharge reductions in the Reduced Discharge Study as summarized on page 3.4-63 and Figure 3.4-4. The DEIR concludes that cumulative discharge reductions would increase the stress to SAS within the SAR. The Upper SAR HCP is being prepared to address cumulative impacts recognizing the critical nature of the SAR segment below RIX. Mitigation Measure BIO-3 commits Valley District to participating in the Upper SAR HCP. The DEIR concludes that the proposed projects contribution to the cumulative reduction in flow would be significant and unavoidable.

### **Comment SEJA-40**

The comment suggests that an archaeologist should have surveyed the site prior to issuing the DEIR.

### **Response to SEJA-40**

As noted on page 3.5-25, a cultural resources survey was indeed conducted at the SNRC site and treated water conveyance corridors in August, 2015. The DEIR describes in detail the results of the survey. Mitigation Measures CUL-1 through CUL-3 commit Valley District to pre-construction training of construction personnel and others on the site by a qualified archaeologist and to document any resources that may be uncovered during construction.

### **Comment SEJA-41**

The comment states that consultation with Native Americans should have been conducted.

### **Response to SEJA-41**

As described on page 3.4-22, consultation was conducted with Native American groups. Table 3.5-2 summarizes the consultation.

### **Comment SEJA-42**

The comment states that a geotechnical analysis should have been conducted to determine if the site is suitable for construction.

### **Response to SEJA-42**

The DEIR notes on page 3.6-21 that geotechnical investigations would be conducted pursuant to Special Publication 117 to establish the appropriate construction methods and building design

features. This type of investigation would occur as part of the project design. The structures would all be subject to CBC and AWWA structural design standards for the seismic hazards present at the site. The DEIR concludes that the knowledge of the local geology as described on page 3.6-2 through 3.6-8 adequately identifies the potential geologic hazards and that the building standards adequately protect the structure from the potential hazards. The project description identifies the need for some excavation to accommodate the facilities. If final project designs were to require significantly more excavation as suggested in the comment, Valley District as Lead Agency would determine whether additional impact analysis would be required to comply with CEQA requirements.

### **Comment SEJA-43**

The comment states that the DEIR ignores a public safety concern that could result if seismic hazards resulted in failure of the treatment plant.

### **Response to SEJA-43**

The DEIR recognizes on page 3.6-21 that seismic hazards are present in the region and describes how engineering controls through seismic resistant designs would minimize the potential for failure of the facility. The Operational Procedures for all treatment plants include contingencies for emergency situations including seismically-induced emergencies. The SNRC would include emergency design features to ensure that sewage releases would be avoided during emergency conditions.

### **Comment SEJA-44**

The comment states that the DEIR defers the quantification of the potential liquefaction hazard.

### **Response to SEJA-44**

The DEIR notes on page 3.6-21 that geotechnical investigations would be conducted pursuant to Special Publication 117 to establish the appropriate construction methods and building design features. This type of investigation would occur as part of the project design. The structures would all be subject to CBC and AWWA structural design standards for the seismic hazards present at the site. The DEIR concludes that the knowledge of the local geology as described on page 3.6-2 through 3.6-8 adequately identifies the potential geologic hazards and that the building standards adequately protect the structure from the potential hazards.

It is important to note that the threat of liquefaction during a seismic event only occurs where the groundwater table is quite high. The project is located in an area that does not experience high groundwater. .

### **Comment SEJA-45**

The comment states that subsidence should be a potentially significant impact of the project.



### **Response to SEJA-45**

The DEIR notes that subsidence has historically been caused by water extraction activities. The DEIR concludes that the project would not extract groundwater excessively and would instead contribute to elevated groundwater levels that would not induce subsidence.

### **Comment SEJA-46**

The comment states that the DEIR should have evaluated GHG emissions of both the SBWRP and SNRC at full capacity.

### **Response to SEJA-46**

The DEIR evaluates GHG emissions associated with the proposed project on page 3.7-12. The DEIR estimates the project's GHG emissions. The emissions are summarized in Table 3.7-2. The DEIR concludes that impacts would be less than the SCAQMD recommended significance threshold. The DEIR acknowledges that this is a conservative estimate since SBWRP may decrease emissions due to the reduced treatment requirements, but the analysis does not depend on this reduction for its significance conclusions.

### **Comment SEJA-47**

The comment states that the DEIR concludes that the proposed project would not result in handling of hazardous materials near a school.

### **Response to SEJA-47**

The DEIR recognizes on page 3.8-14 three schools within one-quarter mile of the proposed SNRC. The DEIR concludes that the proximity of the schools does not in itself constitute a significant impact of the project since emissions would be controlled and hazardous materials would be handled according to regulations.

### **Comment SEJA-48**

The comment states that the discharge to City Creek would significantly impact water quality since the creek has a MUN designation.

### **Response to SEJA-48**

The DEIR evaluates impacts to surface water quality on page 3.9-21. The DEIR concludes that since the creek is normally dry, existing surface water quality would not be reduced. However, the DEIR recognizes that the Basin Plan-identified Beneficial Uses of the creek segment include Municipal Use. As a result, the DEIR concludes that a discharge permit from the RWQCB will need to take into consideration potential impacts to drinking water prior to discharge. The DEIR points out that from a permitting standpoint, this could occur with a beneficial use designation change or an approval from the California Division of Drinking Water. Nonetheless, from a water

quality impact standpoint, the DEIR concludes that the recharge of recycled water into the ground is consistent with State-wide recycled water policies and local water supply development priorities in a manner that is fully protective of public health.

### **Comment SEJA-49**

The comment states that the discharge to the Bunker Hill Groundwater Basin could significantly impact groundwater quality and suggests that the DEIR should have included an anti-degradation analysis.

### **Response to SEJA-49**

The DEIR evaluates potential impacts to groundwater quality on page 3.9-22. The DEIR concludes that recharge of groundwater with recycled water is allowable under Title 22 of the California Code of Regulations and consistent with state-wide recycled water reuse policies. The DEIR acknowledges that the recharge activities would be subject to compliance with discharge permits from the RWQCB and DDW. The permits will require levels of treatment necessary to ensure that the water quality objectives are met, subject to an anti-degradation analysis. Valley District is currently working with the RWQCB to prepare information needed to conclude the anti-degradation analysis. The DEIR concludes that implementation of the proposed project would require approvals from the RWQCB to ensure consistency with the Basin Plan and protection of groundwater quality and public health. Mitigation Measure HYDRO-2 imposes additional protections to local pumpers through performance standards to ensure impacts are less than significant.

### **Comment SEJA-50**

The comment asks how the potential sediment transport in City Creek was determined to be minor.

### **Response to SEJA--50**

The DEIR describes on page 3.9-24 that the introduction of perennial flow in the City Creek would result in minor amounts of sediment movement. However, the creek bed is subjected to high storm event flows that move large quantities of sediment downstream. In comparison to the major storm events that do much of the river bed sculpting, the much lower velocities expected from the City Creek discharge would be minor.

### **Comment SEJA-51**

The comment states that the DEIR should have identified cumulative reductions in the discharge and determined a plan to maintain minimum flows.

## Response to SEJA-51

Table 4-1 of the DEIR lists cumulative projects including proposed recycled water projects. The Final EIR has been augmented at page 4-16 as shown below to further support this conclusion.

The proposed project would contribute to the cumulative reduction in flows to the SAR that reach Prado Dam and Orange County. As more recycled water projects are implemented in the upper SAR watershed to support local water supply development and sustainable groundwater management practices, less surface water will reach the Prado Basin. However, pursuant to the 1969 Stipulated Judgment, minimum flows to Prado Dam will be maintained to ensure that Orange County receives its appropriative water rights. The cumulative reduction in surface water reaching Prado Dam would not significantly impact local drainage patterns, floodplains, downstream water rights, or surface water or groundwater quality. The cumulative reduction in surface water flows may result in depletion of groundwater levels near Prado that are also subject to local pumping. However, the proposed project would result in increased groundwater levels in subbasins higher in the watershed. The proposed project would support sustainable management of groundwater basins within the entire Upper Santa Ana River Watershed as required under Sustainable Groundwater Management Act and will assist in minimizing long-term cumulative impacts to groundwater.

## Comment SEJA-52

The comment suggests that the proposed project is not consistent with the City of Highland's land use designations.

## Response to SEJA-52

The DEIR describes on page 3.10-10 that the proposed treatment facility is exempt from local zoning ordinance under Government Code section 53091 and that the proposed administration facility is consistent with the City of Highland's land use designations.

Please also see Response to Comment Highland-1.

## Comment SEJA-53

The comment states that noise control features should be required in the DEIR.

## Response to SEJA-53

Mitigation Measure NOISE-1 requires that construction contractors provide necessary controls to ensure noise ordinances are met. The measure appropriately allows for the control features to fit the noise impact wherever that may be on the construction site. If noise barriers are needed to meet the noise standard, then the mitigation measure ensures that they will be installed.

**Comment SEJA-54**

The comment states that there is no indication that the Administration Center will be made available to the public in a manner that benefits the low-income community.

**Response to SEJA-54**

The DEIR describes the demographic and economic status of the local neighborhood. The DEIR acknowledges that the neighborhood is one of the lowest for median income in the area. The DEIR concludes that the facility will benefit the community through providing open space and community meeting rooms. Valley District is committed to providing this asset to the community including open space features open to the public.

**Comment SEJA-55**

The comment states that if the habitat in City Creek is needed to participate in the HCP, then what will happen if a discharge permit is not issued.

**Response to SEJA-55**

The project does not rely on the establishment of habitat in City Creek as mitigation for any impact. The resultant habitat could merely provide incidental habitat benefits. The DEIR evaluates three different treated-water conveyance systems any of which on its own could satisfy the water supply objectives of the project.

**Comment SEJA-56**

The comment states that the cumulative projects list should have included other recycled water projects rather than just public work projects.

**Response to SEJA-56**

Table 4-1 lists cumulative projects provided by the planning departments of local cities including currently proposed recycled water projects. The list of projects provides a perspective on planned construction activities that will contribute to cumulative conditions. The project list is an appropriate method for assessing cumulative impacts pursuant to CEQA Guidelines Section 15130. Cumulative air impacts are evaluated on page 3.3-28 in addition to page 4-12.

**Comment SEJA-57**

The comment suggests that if a project has a less than significant air impact it is not necessarily less than significant at the cumulative impact level.

## **Response to SEJA-57**

The DEIR conclusion methodology is consistent with the SCAQMD's CEQA Compliance Guidelines. Furthermore, pursuant to CEQA Guidelines Section 15130(a)3, CEQA recognizes that a project's incremental contribution to an impact may be considered less than cumulatively considerable even when the cumulative condition is poor.

## **Comment SEJA-58**

The comment states that the DEIR does not quantify the cumulative reduction in SAR flows or the commensurate impact on riparian vegetation. The comment states that the Mitigation Measure BIO-3 does not indicate how long the invasive reductions would occur.

## **Response to SEJA-58**

Please see Responses to Comments CDFW-3, CBD-23, and OCWD-1.

## **Comment SEJA-59**

The comment states that not knowing the quality of the cumulative flow reduction makes an assessment of cumulative impacts difficult.

## **Response to SEJA-59**

The future reduction in discharges is speculative, and depends on many factors including ability to obtain permits for other proposed projects and costs of water recycling. The DEIR makes no assumptions for the ultimate quantity of the cumulative discharge reduction, but rather relies on the Upper SAR HCP to establish a low flow requirement that all recycled water projects combined must exceed. Acting as a cumulative impact mitigation, the Upper SAR HCP will provide the roadmap for species recovery that will include maintaining certain conditions in the river. The HMMP conservation measures have been designed to be complementary to the ultimate HCP requirements, providing project level mitigation that supports the ultimate cumulative mitigation as well.

## **Comment SEJA-60**

The comment states that just because GHG emissions are not significant on their own does not mean they are not cumulatively considerable.

## **Response to SEJA-60**

As noted on page 3.7-11, the GHG emissions impact is by definition a cumulative impact. The DEIR concludes that GHG emissions are less than significant based on a significance threshold recommended for use by the SCAQMD.

**Comment SEJA-61**

The comment suggests acknowledgement that water supply supports population growth.

**Response to SEJA-61**

The DEIR does acknowledge on page 5-5 that the project would remove an obstacle to growth that would result in significant and unavoidable secondary effects of growth already identified by local planning jurisdictions. The DEIR concludes that these impacts would result in a significant and unavoidable effect of the project.

**Comment SEJA-62**

The comment requests the total amount of water to be discharged at the identified discharge locations.

**Response to SEJA-62**

The DEIR evaluates three distinct discharge location alternatives. Valley District intends to construct one or more of these alternatives to receive the full projected 10 MGD of flow, except when water is instead diverted through the SAR Pipeline.

**Comment SEJA-63**

The comment states that the DEIR evaluates more than 3 Alternatives.

**Response to SEJA-63**

The comment is correct in pointing out the error on page 6-7 of the document. In response to this comment, the following change has been made to the DEIR:

**6.2 Project Alternatives**

Five ~~Three~~ alternatives were selected for detailed analysis. The goal for evaluating these alternatives is to identify alternatives that would avoid or lessen the significant environmental effects of the project, while attaining most of the project objectives. Significant impacts of the project include construction air emissions, construction noise, modification of Santa Ana sucker habitat, and secondary effects of growth.

**Comment SEJA-64**

The comment states that the alternatives should be different enough to make a difference in the impact analysis for environmental justice. The comment also suggests that cultural resources are not adequately assessed in Alternative 2.

## **Response to SEJA-64**

The DEIR evaluates a reasonable range of alternatives to reduce impacts of the proposed project including a SNRC location alternative (Alternative 2). The location for the Alternative 2 property is constrained by the need to be low in the watershed. As a result, it is in close proximity to the proposed project. Nonetheless, the alternative minimizes potentially significant impacts of construction to the immediate neighborhood. CEQA does not require that alternatives be evaluated exhaustively. Although no cultural resource survey was conducted for the Alternative 2 site, the area was included in the literature search area and known cultural sites near it are included in the Cultural Report.

## **Comment SEJA-65**

The comment states that the Reduced Capacity Alternative (Alternative 3) is not adequately described or analyzed.

## **Response to SEJA-65**

Alternative 3: Reduced Treatment Capacity Alternative is described on page 6-10. The Alternative reduces the size of the construction effort and ultimate energy use, truck trips, and chemical usage. However the alternative does not avoid any significant impacts of the proposed project and reduces the benefits of the project.

## **Comment SEJA-66**

The comment suggests that the Reduced Capacity Alternative (Alternative 3) would reduce biosolids truck trips and would create an obstacle to growth.

## **Response to SEJA-66**

The comment is correct that the Alternative would result in slightly fewer biosolids truck trips than the proposed project, but not enough to reduce any significant impacts. Furthermore, although the reduced capacity could pose a limit to growth that would reduce some significant effects of growth, it would also increase some significant impacts of growth including water supply and wastewater treatment requirements.

## **Comment SEJA-67**

The comment states that the location of the Plunge Creek Alternative has not been identified and is therefore difficult to evaluate. The comment asks how much water would be conveyed to this location.

## **Response to SEJA-67**

The project would convey the full 6 MGD of water to the Plunge Creek Basins under this alternative. The Wash Plan refers to the San Bernardino Valley Water Conservation District's

Upper Santa Ana River Wash Land Management Plan. Since the project would be located in an area designated in the Wash Plan for open space, the DEIR concludes that it would result in greater land use impacts.

### **Comment SEJA-68**

The comment states that the Reduced Diversion Alternative is confusing and that the difference could be significant to the SAS.

### **Response to SEJA-68**

The Reduced Diversion Alternative would treat all effluent from the EVWD service area, which is currently 6 MGD, and provide 3 MGD to RIX through the SAR Pipeline. The alternative would reduce the significant impact to the SAS, but would still result in a significant impact to the SAS since even a 3 MGD reduction would contribute stress to the listed species under the same impact assessment methodology made for the proposed project.

### **Comment SEJA-69**

The comment states that despite another alternative, the DEIR improperly concludes the project is the environmentally superior alternative. The comment also states that there is no viable habitat for SAS in City Creek, nor can it be created.

### **Response to SEJA-69**

The comment misunderstands the rationale for concluding that the project would be the environmentally superior alternative. The DEIR concludes that the mitigation provided by the proposed project in addition to the water supply benefits makes it environmentally superior. However, the benefits provided by Mitigation Measure BIO-3 do not include the creation of riparian habitat in City Creek, but rather a list of immediate habitat improvements below RIX and other actions. The City Creek discharge is not provided as mitigation for any project impact.

### **Comment SEJA-70**

The comment states that security of the SNRC has not been described, potential hazards assessed, or processes described.

### **Response to SEJA-70**

The DEIR describes the SNRC site security on page 2-14, evaluates potential hazards in Section 3.8, and describes treatment processes in section 2.4.1.



## Comment Letter – Anthony Serrano (Serrano)

### Comment Serrano-1

The comment expresses concern that there are no cost estimates for the proposed project listed in the Draft EIR and states this is required pursuant to Public Resources Code section 21001(g).

### Response to Serrano-1

The DEIR does not list or evaluate the cost of the project because cost is not an environmental impact. Public Resources Code section 21001(g) does not set forth the requirements for the contents of an EIR, but is a statement of policy requiring consideration of qualitative, economic, and technical factors, long-term benefits and costs, short-term benefits and costs, and alternatives to proposed actions affecting the environment. This policy is amplified by Public Resources Code section 21002.1, which states that the purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided.

Public Resources code section 21061 specifies that the purpose of an EIR is to provide public agencies and the public in general with detailed information “about the effect which a proposed project is likely to have on the environment” and to address mitigation of those impacts and potential alternatives to the proposed project. Lead Agencies are directed to consider economic costs “in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR.”

Sections 15120-15132 of the CEQA Guidelines outline the contents required of EIRs. Section 15131 makes clear that a Lead Agency may but need not include economic information in an EIR, or may present this information in whatever form the agency desires, shall not treat economic effects of a project as significant effects on the environment, and must reserve the focus of its analysis for physical changes to the environment. As an EIR need not include information regarding the costs of a project, the absence of this information cannot render the DEIR inadequate.

Costs of the proposed SNRC project are, however, included in the Update of the Recycled Water Feasibility Study 2015. As the responsible decision makers, the Valley District Board of Directors will consider project costs when considering approval of the project, which will occur as a separate action from the certification of the EIR.

### Comment Serrano-2

The comment states that the Harmony Project in the City of Highland is supposed to be connected to the proposed project according to the commenter’s conversation with the City of Highland Director of Community Development, but the Draft EIR does not include any provisions for this connection.

## **Response to Serrano-2**

The proposed project would divert the existing wastewater flows in the EVWD service area to the new SNRC. Future flows within the service area would be conveyed to the SNRC as well. The project does not propose constructing new sewer collection facilities for the Harmony Project or any future connections in the service area. Because the comment does not address the project or the contents of the DEIR, no further response is available or required.

## **Comment Serrano-3**

The comment expresses concern that there is no reference in the DEIR to the water pollution caused by Lockheed Martin.

## **Response to Serrano-3**

The DEIR recognizes that the Bunker Hill groundwater basin is compromised by legacy contamination on page 3.9-6. Figure 3.9-3 shows the known locations of the contamination plumes from both the Norton Airforce Base and from testing operations in Mentone that are referred to in the comment. The DEIR concludes that the groundwater recharge operations would avoid impacting these plumes.

## **Comment Serrano-4**

The comment further expresses concern that the old Lockheed Martin propulsion company polluting Bunker Hill Basin and Mill Creek spreading grounds is not addressed as an issue in the DEIR and that there is no mitigation plan to prevent further contamination of the proposed project.

## **Response to Serrano-4**

Please see Response to Comment Serrano-3

## **Comment Serrano-5**

The comment states that the DEIR fails to address the issues associated with the Lockheed groundwater basin contamination and the status of this problem.

## **Response to Serrano-5**

Please see Response to Comment Serrano-3

## Comment Letter – Fred Yauger

### Comment Yauger-1

Fred Yauger supports implementation of the Sterling Natural Resource Center.

### Response to Yauger-1

The comment is noted for the record and no response to comment is necessary.

## Comment Letter – Anthony Serrano 2 (Serrano 2)

### Comment Serrano 2-1

The comment provides background, summarizes the contents of the letter and the commenter's concerns, and requests additions to and recirculation of the DEIR.

### Response to Serrano 2-1

The contents of the comment letter are addressed below and in the Responses to Comments Serrano 1-5. Valley District notes that this comment letter was received before the hearing on the certification of the EIR, but after the close of the public comment period. Although Valley District is not required to respond to untimely comments, it has prepared these responses for inclusion in the FEIR.

### Comment Serrano 2-2

The comment references Public Resources Code section 21001(g) and Section 15088.5(a)(4) of the CEQA Guidelines, and states that the DEIR did not include any cost information.

### Response to Serrano 2-2

Please see Response to Comment Serrano-1.

### Comment Serrano 2-3

The comment states that the DEIR does not disclose the EVWD lawsuits against the San Bernardino International Airport Authority.

### Response to Serrano 2-3

Litigation between EVWD and SBIAA is not part of the proposed project, is not an environmental impact of the proposed project, and is not one of the “physical environmental conditions” that must be included in the description of the baseline environmental setting. Accordingly, the litigation is not required to be addressed in the EIR, and so the absence of this information does not affect the adequacy of the EIR. Moreover, the litigation referenced in the comment concerned property unrelated to the SNRC parcels, has been resolved through settlement by the parties, and the settlement agreement has no impact on the proposed SNRC project.

Figure 2-1 of the DEIR depicts the location of the proposed SNRC site in relation to the SBIA, and Chapter 3.8 of the DEIR notes that the project site is located approximately one half mile southeast of the San Bernardino International Airport, within the SBIAA's Influence Area (pages 3.8-4, 3.8-6). Chapter 3.11 of the DEIR identifies airports and aircraft overflights as existing sources of noise. It concludes that temporary noise impacts resulting from construction will be

significant and unavoidable, that operational noise will be less-than-significant, and that the project's noise impacts are not cumulatively considerable.

#### **Comment Serrano -4**

The comment states that there is no disclosure of the old and ongoing Lockheed Propulsion Co. plumes of trichloroethylene and plumes of perchlorate.

#### **Response to Serrano 2-4**

The DEIR recognizes that the Bunker Hill groundwater basin is compromised by legacy contamination on page 3.9-6. Figure 3.9-3 shows the known locations of the contamination plumes, including plumes of perchlorate, from both the Norton Airforce Base and from testing operations in Mentone that are referred to in the comment. The DEIR concludes that the groundwater recharge operations would avoid impacting these plumes.

#### **Comment Serrano 2-5**

The comment states that the DEIR did not disclose the Mid-Valley landfill plume or perchlorate located in Rialto.

#### **Response to Serrano 2-5**

The Mid Valley Landfill contamination plume is located in Rialto near the SR-210 within the Rialto-Colton Subbasin shown in Figure 3.9-2. The supplemental Rialto wells would be located near RIX overlying the Riverside-Arlington Subbasin. The contamination plume referred to in the comment letter is too far from the project components to impact water quality at the project's Rialto wells.

#### **Comment Serrano 2-6**

The comment states that there is no disclosure of Governor Brown's signing of S.B. 88 in 2015, and asks if savings can be achieved by reducing the number of water agencies.

#### **Response to Serrano 2-6**

The Senate Bill 88 authorizes the SWRCB to order consolidation of water districts under certain limited circumstances. The enactment of S.B. 88 has no bearing on the environmental impacts of the proposed project. Valley District is not being considered for consolidation at this time, and any suggestion that Valley District will be consolidated at some future date under this legislation is entirely speculative. Accordingly, the EIR need not address S.B. 88. In addition, CEQA does not require analysis of hypothetical cost savings that could be achieved by reorganization of other agencies, or analysis of unrelated rate increases proposed by other agencies.

Please see Response to Comment Serrano-1.

### **Comment Serrano 2-7**

The comment states that there is no disclosure of EVWD's decision to close down Plant 150 operations during October 2015 and asks how this will affect water supply to the project.

### **Response to Serrano 2-7**

The Plant 150 project was proposed to remove contamination from certain wells and was deemed infeasible after an evaluation of the water resources in the EVWD's Water System Master Plan. The Plant 150 project will not affect water supply for the SNRC project.

### **Comment Serrano 2-8**

The comment notes that the City of Highland proposes Mello-Roos funding for the proposed Harmony Project and inquires whether pending A.B. 1666 will impact funding for the project.

### **Response to Serrano 2-8**

The proposed project would divert existing flows from the EVWD service area to the SNRC. Connections to other proposed projects, including the proposed Harmony Project, are not under consideration, and so funding for such other proposed projects has no effect on the proposed project. The DEIR, which evaluates the potential physical impacts to the environment from the proposed project, is not required to address funding sources for other projects.

## Comment Letter – Anthony Serrano Emails

### Comment Serrano Emails-1

The comment includes corresponds between the commenter and the San Bernardino International Airport Authority regarding unrelated settled litigation.

### Response to Serrano Emails-1

The comment does not address the contents of the EIR. No further response is therefore available or necessary.

### Comment Serrano Emails-2

The comment includes correspondence between the commenter and Kamron Saremi regarding groundwater contamination.

### Response to Serrano Emails-2

Regarding the Lockheed contamination, please see Responses to Comments Serrano-3 and Serrano-2.4. The comment does not otherwise address the contents of the EIR. No further response is necessary.

### Comment Serrano Emails-3

The comment provides information regarding State Board funding for recycled water projects and notes that Valley District and EVWD are not listed as recipients of funding.

### Response to Serrano Emails-3

The comment does not address the contents of the EIR. No further response is therefore available or necessary.

# CHAPTER 12

## Clarifications and Modifications

---

### 12.1 Introduction

The following clarifications and revisions are intended to update the Draft EIR in response to the comments received during the public review period. These changes, which have been incorporated into the Draft EIR, constitute the Final EIR, to be presented to the Valley District Board of Directors for certification and approval. These modifications clarify, amplify, or make insignificant changes to the EIR. Revisions to the EIR have not resulted in new significant impacts or mitigation measures or increased the severity of an impact. None of the criteria for recirculation set forth in the CEQA Guidelines section 15088.5(a) have been met, and recirculation of the EIR is not required.

CEQA Guidelines Section 15088.5(a):

- (a) A Lead Agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification...”Significant new information” requiring recirculation include, for example, a disclosure showing that:
  - (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
  - (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
  - (3) A feasible project alternative or mitigation measure considerably different from the others previously analyzed would clearly lessen the environmental impacts of the project, but the project’s proponents decline to adopt it.
  - (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

The revisions compiled in this Chapter do not constitute “Significant new information” noted in Section 15088.5(a)(1) since no new significant environmental impacts have been identified following the publication of the Draft EIR. Although new mitigation measures have been added based on input from commenters to ensure impacts remain less than significant, these new measures would not in and of themselves result in significant impacts nor do they represent that a



new impact was identified. Rather, the measures provide for greater assurance of less than significant impacts.

The revisions compiled in this Chapter do not constitute “Significant new information” noted in Section 15088.5(a)(2) since none of the modifications would result in a substantial increase in impacts already identified. Rather, the revisions are designed to further reduce the potential for significant impacts.

The revisions compiled in this Chapter do not constitute “Significant new information” noted in Section 15088.5(a)(3) since no new alternatives have been identified that would clearly lessen impacts.

Finally, the revisions compiled in this Chapter do not constitute “Significant new information” noted in Section 15088.5(a)(4) since the EIR is not fundamentally and basically inadequate and conclusory in nature. The EIR compiles information available at the time of publication to assist in evaluating the values and risks of moving forward with a Permit compliance program.

## **12.2 Clarification and Modifications**

The changes to the Draft EIR are listed by section and page number. Text which has been removed is shown in this chapter with a strikethrough line, while text that has been added is shown with an underline. All of the changes shown in this section have also been made in the corresponding Final EIR sections. The addition of the cumulative impact conclusions shown as underlined in Table ES-1 do not reflect new conclusions, but rather that the conclusions from Chapter 4 have been compiled into the table, since they were inadvertently left off the table in the Draft EIR. Please refer to Chapter 11, *Responses to Comments*, for referenced comment letters and corresponding comments.

See next page showing entire Table ES-1 containing Mitigation Measure refinements.

**TABLE ES-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE STERLING NATURAL RESOURCE CENTER**

<b>Impacts</b>	<b>Mitigation Measures</b>	<b>Significance before Mitigation</b>	<b>Significance if Mitigation is Implemented</b>
<b>Aesthetics</b>			
<b>3.1-1:</b> The project would have a significant impact if it would have a substantial adverse effect on a scenic vista.	None required	Less than Significant	Not applicable
<b>3.1-2:</b> The project could have a significant impact if it would substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	None required	No Impact	Not Applicable
<b>3.1-3:</b> The project would not substantially degrade the existing visual character or quality of the site and its surroundings.	<b>AES-1:</b> Aboveground buildings/structures associated with the proposed SNRC shall be designed to be consistent with the aesthetic qualities of existing structures in the surrounding area to minimize contrasting features. <b>AES-2:</b> During project design, a landscape plan shall be prepared for the SNRC that restores disturbed areas and minimizes effects to local character. Valley District shall implement and maintain the landscape plan.	Significant	Less than significant
<b>3.1-4:</b> The project would not have a significant impact due to substantial light or glare which would adversely affect daytime or nighttime views in the area.	None required	Less than significant	Not applicable
<b>Agriculture and Forestry Resources</b>			
<b>3.2-1:</b> The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use	None required	No Impact	Not applicable
<b>3.2-2:</b> The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.	None required	No Impact	Not Applicable
<b>3.2-3:</b> The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland or timberland zoned Timberland Production.	None required	No Impact	Not Applicable

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
<b>3.2-4:</b> The project would not result in the loss of forest land or conversion of forest land to non-forest use.	None required	No Impact	Not Applicable
<b>3.2-5:</b> The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.	None required	No Impact	Not Applicable
Air Quality			
<b>3.3-1:</b> The project could conflict with or obstruct implementation of the applicable air quality plan.	None required	Less than significant	Not applicable
<b>3.3-2:</b> The project could violate any air quality standard or contribute substantially to an existing or projected air quality violation.	<b>AIR-1:</b> For off-road construction equipment greater than 50 HP, all engines shall be certified as USEPA Tier 3 at a minimum and Tier 4 where available.	Significant	Significant and unavoidable for construction; Less than significant for operations.
<b>3.3-3:</b> The program could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	<b>AIR-1</b>	Significant	Significant and unavoidable for NOx emissions
<b>3.3-4:</b> The project could expose sensitive receptors to substantial pollutant concentrations.	None required	Less than Significant	Not Applicable
<b>3.3-5:</b> The proposed program could create objectionable odors affecting a substantial number of people.	<b>AIR-2:</b> Valley District shall prepare and implement an Odor Impact Minimization Plan that includes a monitoring and reporting plan. The plan shall include the following elements at a minimum: <ul style="list-style-type: none"> <li>• Identification of responsible parties</li> <li>• Description of odor control system design and performance standards</li> <li>• Odor control system operations plan</li> <li>• Identification of fence-line odor monitoring and reporting program</li> <li>• Achievable odor remediation actions and implementation protocol</li> <li>• Local community outreach program</li> </ul>	Significant	Less than significant

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
<u>Cumulative Air Quality Impacts</u>	<u>Implement Mitigation Measures AIR-1 through AIR-2</u>	<u>Significant</u>	<u>Significant and unavoidable for short-term impacts</u>
Biological Resources			
<p><b>3.4-1:</b> Construction and operation of the project could have a substantial adverse effect, either directly or through habitat modifications on plant and wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.</p>	<p><b>BIO-1: Disturbance to Special-Status Plants.</b> The following measures will reduce potential project-related impacts to special-status plant species that may occur adjacent to the project site within City Creek to a less than significant level. Potential project-related impacts may result from the construction of the pipeline extension and discharge structure within City Creek, Redlands Basins, and/or the East Twin Creek Spreading Grounds.</p> <ul style="list-style-type: none"> <li>a) Prior to the start of construction within City Creek, Redlands Basins, and/or the East Twin Creek Spreading Grounds, a focused botanical survey will be conducted to determine the presence/absence of any of the special-status species with a moderate or high potential to occur. The focused botanical survey will be conducted by a botanist or qualified biologist knowledgeable in the identification of local special-status plant species, and according to accepted protocol outlined by the CNPS and/or CDFW.</li> <li>b) If a <u>special status state or federally listed</u> plant species is discovered in a project impact area, <u>informal</u> consultation with CDFW and/or USFWS will be required prior to the impact occurring to develop an appropriate avoidance strategy. Depending on the sensitivity of the species, <u>site restoration, or other habitat improvement actions</u> may be an acceptable option to avoid significant impacts, as determined through consultation with the resource agencies.</li> <li>c) If impact avoidance <u>of a state or federally-listed species</u> is not feasible, Valley District shall quantify the impacted acreage supporting state or federally-listed plant species within the construction area and estimated perennial flow area and prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected plants species. Valley District shall implement the conservation measures and compensation requirements identified through consultation by USACE with both CDFW and USFWS.</li> <li>d) <u>Permanent impacts to RAFSS habitat from construction and operation of the discharge including within the City Creek channel resulting from perennial flow shall require on-site replacement or off-site compensation at a ratio of at least 3:1 in consultation with CDFW and USFWS. Temporary impacts to</u></li> </ul>	Significant	<p>Significant and unavoidable for modifications to Santa Ana sucker habitat.</p> <p>Less than significant with mitigation for other impacts</p>

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
	<p><u>RAFSS habitat would be mitigated at a ratio of at least 1:1 in consultation with CDFW and USFWS.</u></p> <p><b>BIO-2: Disturbance to Special-Status Wildlife.</b> The following measures will reduce potential project-related impacts to special-status wildlife species that may occur within disturbed and native habitats, to a less than significant level. Potential project-related impacts may result from construction of the SNRC, construction of the discharge structures within City Creek and other discharge locations, and perennial discharges to City Creek or other discharge locations.</p> <ul style="list-style-type: none"> <li>a) Prior to the start of construction within City Creek or other discharge locations, Valley District shall conduct focused surveys within the project impact areas to determine if any state or federally-listed wildlife species (southwestern willow flycatcher, coastal California gnatcatcher, San Bernardino kangaroo rat, and least Bell's vireo) are located within project impact areas. Focused surveys will be conducted by a qualified and/or permitted biologist, following approved survey protocol. Survey results will be forwarded to CDFW and USFWS. If state or federally-listed species are determined to occur on the project site with the potential to be impacted by the project, consultation with CDFW and/or USFWS will be required.</li> <li>b) If impact avoidance is not feasible, Valley District shall quantify the impacted acreage supporting state or federally-listed wildlife species within the construction area and estimated perennial flow area and prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected wildlife species. Valley District shall implement the conservation measures and compensation requirements identified through consultation by USACE with both CDFW and USFWS.</li> <li>c) Prior to the start of construction of the SNRC building and the recycled water pipeline along 6th Street, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the CDFW Staff Report on Burrowing Owl Mitigation (2012). If burrowing owl is observed within undeveloped habitat within or immediately adjacent to the project impact area, avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying</li> </ul>		

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
	<p>construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance with the <i>Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans</i> of the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW, 2012).</p> <p>d) <u>Prior to the start of construction within City Creek, pre-construction site clearing surveys will be conducted of the project impact area within natural habitats. Any special status ground-dwelling wildlife will be removed from the immediate impact area and released in the nearby area.</u></p> <p>e) <u>Permanent impacts to RAFSS habitat from construction and operation of the discharge including within City Creek channel resulting from perennial flow shall require on-site replacement or off-site compensation at a ratio of at least 3:1 in consultation with CDFW and USFWS. Temporary impacts to RAFSS habitat would be mitigated at a ratio of at least 1:1 in consultation with CDFW and USFWS.</u></p> <p><b>BIO-3: Disturbance to Santa Ana Sucker.</b> The following measures will reduce potential project-related impacts to avoid, minimize, and compensate for impacts to Santa Ana sucker while contributing to the long-term conservation of the species.</p> <p>a) The diversion of wastewater flow to the new SNRC shall not occur until either the Upper Santa Ana HCP has been fully executed by the USFWS and CDFW or Valley District's SAS HMMP has been approved by the USFWS and CDFW.</p> <p>b) The Valley District will be a signatory to the Upper SAR HCP that will include the proposed project as a covered activity. The HCP will include a menu of projects to be implemented by the signatory agencies that will create habitat, restore habitat, and establish self-sustaining populations in the watershed. The HCP will be approved by the CDFW and USFWS.</p> <p>c) In the event that the Upper Santa Ana River HCP is not approved in time to meet the project schedule, Valley District shall prepare and implement a SAS Habitat Monitoring and Management Plan (HMMP) that identifies habitat improvement actions, implementation methods, monitoring, and maintenance methods. The HMMP will consist of measures listed below to offset direct and indirect impacts to the Santa Ana sucker and its habitat resulting from the loss of 6 MGD of discharged water. The HMMP will be implemented by a contracted, qualified and permitted entity such as the Riverside-Corona Resource Conservation District (RCRCD) in coordination with the USFWS and CDFW. The HMMP will</p>		

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
	<p>identify the goals and performance criteria of each conservation measure and will identify annual reporting and work forecasting requirements. The HMMP will be approved by the USFWS and CDFW under their authority to enforce the federal and state Endangered Species Acts. The proposed diversion of 6 MGD from the RIX discharge will not occur until the HMMP has been approved by USFWS and CDFW. The HMMP will include the following elements.</p> <ul style="list-style-type: none"> <li>• <b>SAS-1: Microhabitat Enhancements.</b> The HMMP will identify microhabitat enhancements within the upstream reach of the affected river segment using natural materials to increase scour and pool formation. This could include placement of large boulders and/or large woody debris to increase velocity of flow and gravel bar patches as well as deep pool refugia areas.</li> <li>• <b>SAS-2: Aquatic Predator Control Program.</b> The HMMP will include an Aquatic Predator Control Program to be implemented within the upstream reach of the affected river segment that will target and remove exotic fish, amphibians, and reptiles immediately prior to the SAS spawning season.</li> <li>• <b>SAS-3: Exotic Weed Management Program.</b> The HMMP will include an Exotic Weed Management Program targeting the removal of non-native species such as tamarisk, castor bean, tree of heaven, etc. The HMMP will include an annual maintenance and performance goal for non-native plant removal within the upper reach of the affected river segment.</li> <li>• <b>SAS-4: High Flow Pulse Events.</b> The HMMP will identify means to create high flow pulse events as needed based on substrate conditions, up to 2 times per year. The high flow pulse events would be implemented through a cooperative agreement with the City of San Bernardino Municipal Water Department.</li> <li>• <b>SAS-5: Supplemental Water.</b> Valley District will increase habitat availability in Rialto Channel during the summer months by providing cool supplemental water from nearby groundwater source to lower the water temperature in this tributary. Supplemental water will be added to the Rialto Channel when water temperatures reach 85 degrees. Supplemental water could be pumped groundwater or other water source. The discharge into the Rialto Drain will require a discharge permit from the Regional Water Quality Control Board.</li> </ul>		

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
<p><b>3.4-2:</b> Construction of the project could result in potential direct and indirect impacts to riparian habitat and other sensitive natural communities identified in local or regional plans, policies, and regulations or by CDFW or USFWS.</p>	<ul style="list-style-type: none"> <li>• <b>SAS-6: Upper Watershed SAS Population Establishment.</b> The HMMP will outline a plan for establishing a population of Santa Ana sucker in City Creek, or other suitable watershed tributary, in coordination with the Wildlife Agencies. The HMMP will identify measures to directly increase the number of Santa Ana sucker in the SAR population, increase the amount of suitable and occupied habitat in this watershed, and distribute the risk of a catastrophic event between multiple locations. The HMMP will identify the goals and success criteria of the establishment plan and will identify the amount of financial assistance to be provided by Valley District for the regionally-beneficial population establishment program.</li> <li>• <b>SAS-7: Monitoring.</b> <u>The HMMP will outline a monitoring program to collect hydrology data in the segment of river between the RIX discharge and Mission Boulevard. The data will include flow velocity and depth.</u></li> </ul> <p><b>BIO-4: Construction Best Management Practices.</b> The Contractor shall implement the following Best Management Practices during construction of the pipeline and discharge structure adjacent to and within City Creek to protect any adjacent sensitive natural communities that provide habitat for special-status species.</p> <ol style="list-style-type: none"> <li>a. The following water quality protection measures shall be implemented during construction: <ul style="list-style-type: none"> <li>• Stationary engines, such as compressors, generators, light plants, etc., shall have drip pans beneath them to prevent any leakage from entering runoff or receiving waters.</li> <li>• All construction equipment shall be inspected for leaks and maintained regularly to avoid soil contamination. Leaks and smears of petroleum products will be wiped clean prior to use.</li> <li>• Any grout waste or spills will be cleaned up immediately and disposed of off-site.</li> <li>• Spill kits capable of containing hazardous spills will be stored on-site.</li> </ul> </li> <li>b. To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than two-feet deep shall be covered with tarp, plywood or similar materials at the close of each working day to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow for animals to escape, if necessary.</li> </ol>	Significant	Less than significant



Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
	<p>Before such holes or trenches are backfilled, they should be thoroughly inspected for trapped animals. If trapped wildlife are observed, escape ramps or structures shall be installed immediately to allow escape.</p> <p>All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods should be thoroughly inspected for burrowing owls and nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved.</p>		
<p><b>3.4-3:</b> Construction of the project could result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA, as well as wetland waters of the State regulated by the RWQCB under the Porter-Cologne Act and also CDFW under Section 1600 of CFG Code, through direct removal of water and hydrological interruption</p>	None required	Less than Significant	Not Applicable
<p><b>3.4-4:</b> Construction of the project could result in the interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.</p>	<p><b>BIO-5:</b> To minimize potential construction-related project impacts to avian species that may be nesting on or immediately adjacent to the project area, the following measures will reduce any potential impact to a less than significant level.</p> <ol style="list-style-type: none"> <li>To avoid potential impacts to birds that may be nesting on or immediately adjacent to the project area, construction of the project should avoid the general avian breeding season of February through August.</li> <li>If construction must occur during the general avian breeding season, a pre-construction clearance survey shall be conducted within 30 days prior to the start of construction, to determine if any active nests or sign of nesting activity is located on or immediately adjacent to the project area, specifically at the proposed SNRC location. <u>An additional survey shall be conducted within 3 days prior to the commencement of construction activities.</u> If no nesting activity is observed during the pre-construction survey, construction may commence without potential impacts to nesting birds.</li> <li>If an active nest is observed a suitable buffer will be placed around the nest, depending on sensitivity of the nesting species, and onsite monitoring may be required during construction to ensure no disturbance or take of the nest occurs. Construction may continue in other areas of the project and construction activities may only encroach within the buffer at the discretion of the monitoring biologist. The buffer will remain in place until the nestlings have fledged and the nest is no longer considered active.</li> </ol>	Significant	Less than Significant

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
<b>3.4-5:</b> Construction of the project could conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	None required	Less than Significant	Not Applicable
<b>3.4-6:</b> Construction of the project could conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.	None required	Less than significant	Not applicable
<u>Cumulative Biological Resources Impacts</u>	<u>Implement Mitigation Measures BIO-1 through BIO-5</u>	<u>Significant</u>	<u>Significant and unavoidable impacts to SAS habitat</u>
Cultural Resources			
<b>3.5-1:</b> The project could have a significant impact if it would cause a substantial adverse change in the significance of a historical or archaeological resource, as defined in <i>CEQA Guidelines</i> Section 15064.5.	<p><b>CUL-1:</b> Prior to the start of ground-disturbing activities, Valley District shall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior 2008) to carry out all mitigation related to cultural resources. The qualified archaeologist shall conduct a Phase I survey for all areas within the project impact area that have not received a survey within the last five years, including treated conveyance pipeline corridors.</p> <p><b>CUL-2:</b> Prior to start of ground-disturbing activities, the qualified archaeologist shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. Valley District shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.</p> <p><b>CUL-3:</b> In the event of the unanticipated discovery of archaeological materials, Valley District shall immediately cease all work activities within approximately 100 feet of the discovery until it can be evaluated by the qualified archaeologist. Construction shall not resume until the qualified archaeologist has conferred with Valley District on the significance of the resource.</p> <p>If it is determined that a discovered archaeological resource constitutes a historic property under the NHPA or a historical or unique archaeological resource under CEQA, avoidance and preservation in place is the preferred manner of mitigation. Preservation in place maintains the important relationship between artifacts and their archaeological context and also serves to avoid conflict with traditional and religious values of groups who may ascribe meaning to the resource. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the</p>	Significant	Less than Significant

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
	<p>resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, a Treatment Plan shall be prepared and implemented by a qualified archaeologist in consultation with Valley District that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource. Valley District shall consult with appropriate Native American representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond that which is scientifically important, are considered.</p>		
<p><b>3.5-2:</b> The project could have a significant impact if it would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.</p>	<p><b>CUL-4:</b> Paleontological resources monitoring shall be conducted for the proposed SNRC in areas that are subject to excavations in excess of 15 feet below ground surface. Paleontological monitoring shall be conducted by a qualified paleontological monitor (QPM). The QPM, in consultation with the Valley District, may reduce or increase monitoring based on observations of subsurface soil stratigraphy or other factors. If construction or other project personnel discover any potential fossils during construction, regardless of the depth of work, work at the discovery location shall cease within 50 feet of the find until the QPM has assessed the discovery and made recommendations as to the appropriate treatment.</p>	<p>Significant</p>	<p>Less than significant</p>
<p><b>3.5-3:</b> The project could have a significant impact if it would disturb any human remains, including those interred outside of formal cemeteries.</p>	<p><b>CUL-5:</b> If human remains are encountered, Valley District shall halt work within 100 feet of the find and contact the San Bernardino County Coroner in accordance with PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the County Coroner determines that the remains are Native American, the NAHC shall be notified in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC Section 5097.98 (as amended by Assembly Bill 2641). The NAHC shall designate a MLD for the remains per PRC Section 5097.98. Until the landowner has conferred with the MLD, Valley District shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities take into account the possibility of multiple burials.</p>	<p>Less than Significant</p>	<p>Not Applicable</p>
<p><b>3.5-4:</b> The project could have a significant impact if it would cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074.</p>	<p><b>CUL-1, CUL-2, CUL-3, CUL-5</b></p>	<p>Significant</p>	<p>Less than significant</p>

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
Geologic and Mineral Resources			
<b>3.6-1:</b> The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving rupture of a known earthquake fault; strong seismic ground shaking; or seismic-related ground failure, including liquefaction or landslides.	None required	Less than significant	Not applicable
<b>3.6-2:</b> The proposed project would not result in substantial soil erosion or the loss of topsoil.	None required	Less than significant	Not applicable
<b>3.6-3:</b> The proposed project would not be located on a geologic unit or soil that is unstable or that would become unstable as a result of the proposed project and potentially result in on-or off-site landslide, subsidence, or collapse.	None required	Less than significant	Not applicable
<b>3.6-4:</b> The proposed project would not be located on problematic soils such as those characterized as expansive, as defined in 24 CCR 1803.5.3 of the California Building Code (2013), or corrosive.	None required	Less than significant	Not applicable
<b>3.6-5:</b> The proposed project would not have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.	None required	No Impact	Not applicable
<b>3.6-6:</b> The proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state or result in the loss of availability of a locally important mineral resources recovery site delineated on a local general plan, specific plan or other land use plan.	None required	Less than significant	Not applicable
Greenhouse Gas Emissions			
<b>3.7-1:</b> The proposed project could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.	None required	Less than significant	Not applicable
<b>3.7-2:</b> The proposed project could conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.	None required	Less than significant	Not applicable

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
Hazards and Hazardous Materials			
<b>3.8-1:</b> The project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of, or through foreseeable upset and accident conditions involving hazardous materials.	None required	Less than significant	Not applicable
<b>3.8-2:</b> The proposed project could not result in hazardous emission or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	None required	Less than Significant	Not applicable
<b>3.8-3:</b> The project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.	None required	Less than significant	Not applicable
<b>3.8-4:</b> The project would be located within an area covered by an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, and could result in a safety hazard for people residing or working in the project area.	None required	No Impact	Not applicable
<b>3.8-5:</b> The project would not be located within the vicinity of a private airstrip and would not result in a safety hazard for people residing or working in the project area.	None required	No Impact	Not applicable
<b>3.8-6:</b> The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	None required	Less than significant	Not applicable
<b>3.8-7:</b> The project could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	None required	Less than significant	Not applicable
Hydrology and Water Quality			
<b>3.9-1:</b> The project could violate water quality standards or waste discharge requirements, or otherwise substantially degrade water quality.	<b>HYDRO-1:</b> Valley District will prepare a Water Quality Management Plan (WQMP) to ensure that the SNRC facility design complies with stormwater management goals of the MS4.	<u>Significant</u>	<u>Less than Significant</u>

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
	<b>HYDRO-2:</b> Valley District shall prepare and implement a groundwater monitoring program that includes installation of an array of groundwater monitoring wells sufficient to characterize the effects of the discharge on local groundwater quality. If monitoring shows that beneficial uses of the groundwater may become adversely affected by the discharge, the monitoring program would require either modifications to treatment, modify the well screened area by sealing the affected portion of the screen in the impacted groundwater bearing zone, or compensation for adversely affected groundwater wells through replacement of the affected well or through providing replacement water.		
<b>3.9-2:</b> The project could substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table.	None required	Less than Significant	Not applicable
<b>3.9-3:</b> The project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation or flooding on- or offsite.	<b>HYDRO-3:</b> The City Creek discharge structures shall be designed with velocity dissipation features as needed to prevent scour at the point of discharge. The design and location of these discharge facilities would be approved by the SBCFCD and USACE to ensure that they do not impede high flow capacity. <b>HYDRO-4:</b> Valley District shall prepare a City Creek Channel Vegetation Management Plan in coordination with SBCFCD and CDFW that outlines vegetation management measures to minimize impacts to the flood control function within City Creek. The plan will include periodic vegetation trimming to remove large trees that could impact flood control facilities downstream. The plan will outline schedule, permitting and reporting requirements.	Significant	Less than significant
<b>3.9-4:</b> The project would create or contribute runoff water which could exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	<b>HYDRO-5:</b> Valley District shall prepare an Operational Manual for the discharge to City Creek that identifies when discharges would be conveyed to other discharge basins to avoid contributing to flood flows in City Creek during peak flow periods.	Significant	Less than significant
<b>3.9-5:</b> The project would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.	None required	No Impact	Not applicable
<b>3.9-6:</b> The project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	None required	Less than Significant	Not applicable

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
<b>3.9-7:</b> The project would not place structures within a 100-year flood hazard area structures which would impede or redirect flood flows.	<b>HYDRO-3</b>	Significant	Less than Significant with Mitigation
<b>3.9-8:</b> The project would not result in inundation by seiche, tsunami or mudflow.	None required	No Impact	Not applicable
<b>3.9-9:</b> The change in the point of discharge would not adversely affect downstream beneficial uses including water rights or conflict with the Stipulated Judgment requiring minimum flows for downstream diverters.	None required	Less than significant	Not applicable
Land Use and Agriculture			
<b>3.10-1:</b> The project would not physically divide an established community.	None required	No Impact	Not applicable
<b>3.10-2:</b> The project could conflict with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	None required	Less than Significant	Not applicable
<b>3.10-3:</b> The project would not conflict with a habitat conservation plan or natural community conservation plan.	None required	Less than Significant	Not applicable
Noise			
<b>3.11-1:</b> The proposed project could result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	<p><b>NOISE-1:</b> Valley District shall implement the following measures during construction:</p> <ul style="list-style-type: none"> <li>• Include design measures necessary to reduce construction noise levels to comply with local noise ordinances. These measures may include noise barriers, curtains, or shields.</li> <li>• Place noise-generating construction activities (e.g., operation of compressors and generators, cement mixing, general truck idling) away from the nearest noise-sensitive land uses.</li> <li>• Contiguous properties shall be notified in advance of construction activities. A contact name and number shall be provided to contiguous properties to report excessive construction noise.</li> </ul> <p><b>NOISE-2:</b> Noise-generating machinery at the proposed SNRC shall be enclosed within structures that are designed with insulation sufficient to comply with applicable nighttime noise standards at the</p>	Significant	Less than significant

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
	facility fenceline. <b>NOISE-3:</b> Valley District shall establish a 24-hour Hot-Line to serve the local community. Valley District shall ensure that neighbor concerns are investigated and addressed immediately. The Hot-Line number shall be provided to the neighboring properties and be posted conspicuously at the entrance to the facility.		
<b>3.11-2:</b> The proposed program could result in exposure of persons to, or generation of, excessive groundborne vibration.	None required	Less than significant	Not applicable
<b>3.11-3:</b> The proposed program could result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	<b>NOISE-2 and NOISE-3</b>	Significant	Less than significant
<b>3.11-4:</b> The proposed program could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	NOISE-1	Significant	Significant and unavoidable
<b>3.11-5:</b> For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within 2 miles of a public airport or public use airport, implementation of the proposed program could expose people residing or working in the area to excessive noise levels.	None required	Less than significant	Not applicable
<b>3.11-6:</b> For a project located in the vicinity of a private airstrip, the proposed program could expose people residing or working in the project area to excessive noise levels.	None required	Less than significant	Not applicable
Population, Housing, and Environmental Justice			
<b>3.12-1:</b> The project would not induce population growth in an area, either directly or indirectly.	None Available	Significant	Significant and unavoidable
<b>3.12-2:</b> The project would not have a significant impact if it would eliminate existing dwelling units.	None required	No Impact	Not applicable
<b>3.12-3:</b> The project would not displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere.	None required	No Impact	Not applicable



Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
<p><b>3.12-4:</b> The project could significantly affect the health or environment of minority or low income populations disproportionately.</p>	<p><b>AES -1. AIR-2, NOISE – 1, NOISE-2, TR-1</b></p>	<p>Significant</p>	<p>Less than Significant</p>
Public Services, Utilities, and Energy			
<p><b>3.13-1:</b> The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, or other public facilities.</p>	<p>None required</p>	<p>Less than Significant</p>	<p>Not applicable</p>
<p><b>3.13-2:</b> The project would have a significant impact if it would exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.</p>	<p>None required</p>	<p>Less than significant</p>	<p>Not applicable</p>
<p><b>3.13-3:</b> The project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.</p>	<p>None required</p>	<p>Less than significant</p>	<p>Not applicable</p>
<p><b>3.13-4:</b> The project would have a significant impact if it would require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.</p>	<p>None required</p>	<p>Less than significant</p>	<p>Not applicable</p>
<p><b>3.13-5:</b> The project would have sufficient water supplies available to serve the project from existing entitlements and resources.</p>	<p>None required</p>	<p>Less than significant</p>	<p>Not applicable</p>
<p><b>3.13-6:</b> The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.</p>	<p>None required</p>	<p>Less than significant</p>	<p>Not applicable</p>

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
<b>3.13-7:</b> The project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.	None required	Less than significant	Not applicable
<b>3.13-8:</b> The project would comply with federal, state, and local statutes and regulations related to solid waste.	None required	Less than significant	Not applicable
<b>3.13-9:</b> The project could encounter buried utilities.	<b>UTIL-1:</b> During design and prior to construction, Valley District shall verify the nature and location of underground utilities before the start of any construction that would require excavation. Valley District shall notify and coordinate with public and private utility providers at least 48 hours before the commencement of work adjacent to any located utility. The contractor shall be required to notify the service provider in advance of service interruptions to allow the service provider sufficient time to notify customers. The contractor shall be required to coordinate timing of interruptions with the service providers to minimize the frequency and duration of interruptions.	Significant	Less than Significant with Mitigation
<b>3.13-10:</b> Operation of the proposed project would require additional power that could affect local and regional energy supplies.	<b>UTIL-2:</b> Valley District shall require the use of energy efficient equipment, including but not limited to, pumps, conveyance features, and lighting for the proposed SNRC and pump stations.	Significant	Less than Significant with Mitigation
Recreation			
<b>3.14-1:</b> The project would not increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial deterioration of the facility would occur or be accelerated.	None required	Less than Significant	Not applicable
<b>3.14-2:</b> The project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical impact on the environment.	None required	No Impact	Not applicable
Transportation and Circulation			
<b>3.15-1:</b> The project would result in increases in vehicle trips by construction workers, facility operators, haul trucks, and deliveries that could conflict with applicable plans and policies regarding the effectiveness of the circulation system.	<b>Mitigation Measure TR-1:</b> Valley District shall require the contractor to prepare a traffic control plan that identifies specific traffic control measures to ensure access and safety on the local roadway network. The traffic control plan will include the following elements at a minimum: <ul style="list-style-type: none"> <li>• A schedule of lane closures and road closures over the construction period</li> <li>• Measures to maintain traffic flow at all times across the construction zone including requiring flaggers to direct traffic</li> </ul>	Significant	Less than significant

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
	<p>when only one lane of traffic is available</p> <ul style="list-style-type: none"> <li>• Detour routes and notification procedures if full road closures are needed</li> <li>• Lane closure notifications to the City of Highland, City of San Bernardino and City of Redlands and local emergency services providers</li> <li>• Temporary signalization modifications (if any) for intersection signals</li> <li>• On-road traffic control features and signage compliant with city traffic control requirements</li> <li>• Maintain access to residence and business driveways, public facilities, and recreational resources at all times to the extent feasible; Minimize access disruptions to businesses and residences</li> <li>• Include the requirement that all open trenches be covered with metal plates at the end of each workday to accommodate traffic and access</li> <li>• Identify all roadway locations where special construction techniques (e.g., horizontal boring, directional drilling or night construction) will be used to minimize impacts to traffic flow</li> </ul> <p><b>Mitigation Measure TR-2:</b> Valley District shall prepare a notification plan for communication with affected residents and businesses prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which lanes and access point/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints.</p> <p><b>Mitigation Measure TR-3:</b> Prior to installation of pipelines in East 5th Street, Valley District shall coordinate with the City of Highland to ensure that the proposed East 5th Street curb and drainage improvements are conducted simultaneously with the pipeline installation to avoid impacting the street twice in a short period of time.</p> <p><b>Mitigation Measure TR-4:</b> Valley District shall ensure that deliveries, biosolids haul trips, and worker shift transitions are discouraged during the period of 7:30 to 8:30 AM and 2:30 to 3:30 PM corresponding to peak pick up and drop off times at the high school.</p> <p><b>Mitigation Measure TR-5:</b> Valley District shall design turn-in and turn-out ramps adjacent to 5th Street to accommodate solids haul trips and material deliveries ingress and egress in a manner that ensures safe traffic conditions. Roadway improvements including</p>		

Impacts	Mitigation Measures	Significance before Mitigation	Significance if Mitigation is Implemented
	modifications to the curb shall be approved by the City of Highland Department of Transportation.		
<b>3.15-2:</b> The project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.	None required	No Impact	Not applicable
<b>3.15-3:</b> The project would not result in a substantial increase in hazards due to a design feature or incompatible uses.	<b>TR-4</b>	Significant	Less than Significant
<b>3.13-4:</b> The project would not result in inadequate emergency access.	<b>TR-1</b>	Significant	Less than significant
<b>3.13-5:</b> The project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.	None required	Less than Significant	Not applicable
Secondary Effects of Growth			
The project would remove an obstacle to growth	None required	Significant	Significant and unavoidable
<u>Cumulative Secondary Growth</u>	<u>None required</u>	<u>Significant</u>	<u>Significant and unavoidable</u>

**Section Chapter 1, Introduction****Page Clarification/Revision**

1-2 The following modifications to text have been corrected in, *Introduction* as shown below.

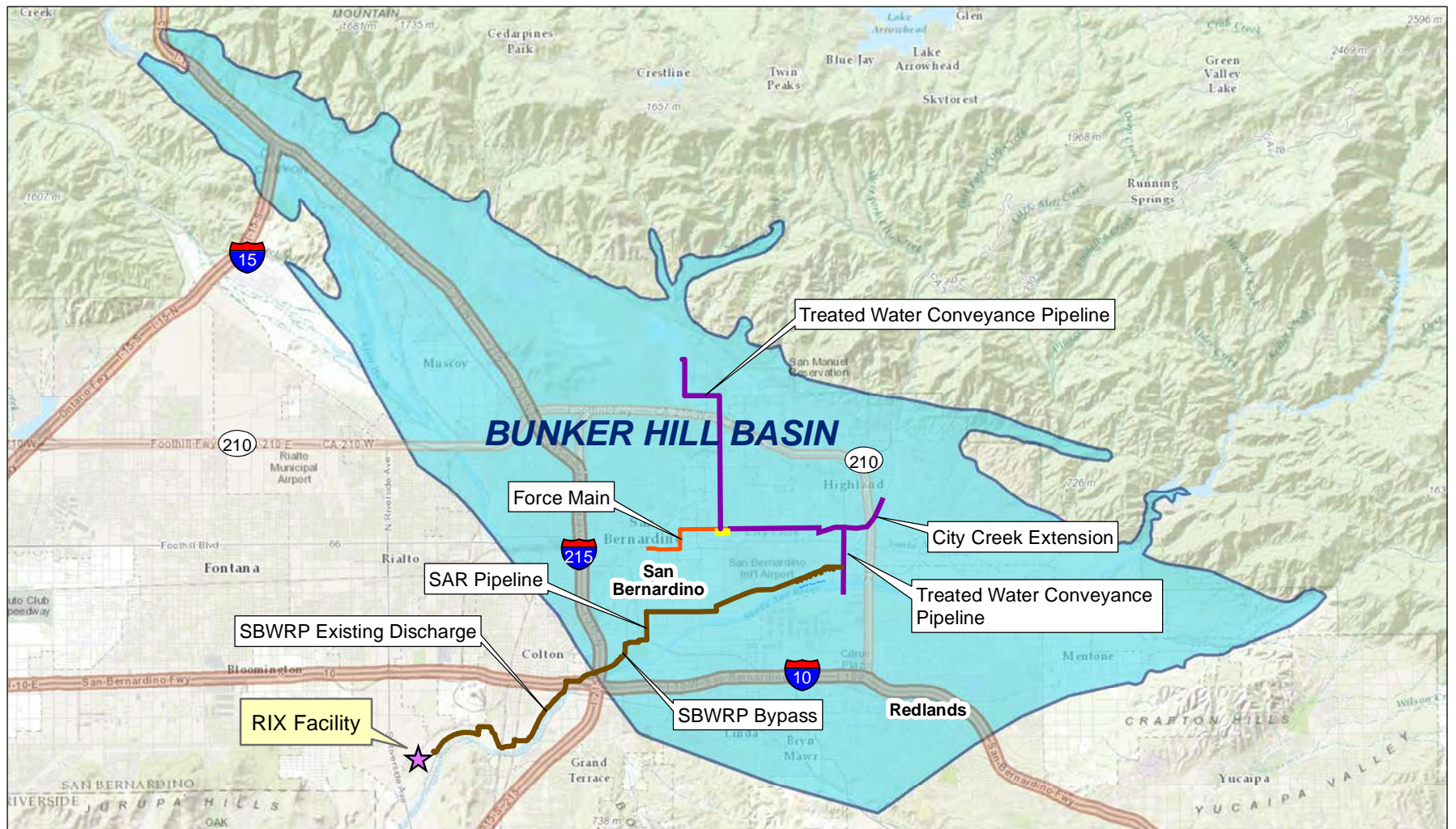
***San Bernardino Valley Municipal Water District***

Valley District was formed in 1954 as a regional water supply agency with a service area that covers about 353 square miles in southwestern San Bernardino County and a population of about 660,000. Its enabling act includes a broad range of powers to provide water, groundwater replenishment, storm water and wastewater treatment and disposal, recreation, and fire protection services. Valley District is a water wholesaler, delivering imported and local water supplies to local water retailers. Valley District contracts with the State Water Project (SWP) to provide imported water to the region and also manages groundwater storage within its boundaries, which include the cities and communities of San Bernardino, Colton, Loma Linda, Redlands, Rialto, Bloomington, Highland, ~~East Highland~~, Mentone, Grand Terrace, and Yucaipa.

***East Valley Water District***

EVWD was formed in 1954 to provide domestic water service to the unincorporated and agricultural-based communities of Highland and East Highlands, which were incorporated in 1987 as the City of Highland. Today, EVWD primarily serves the City of Highland. As the population of the area has increased, these agricultural demands have been replaced by municipal demands. EVWD has built a water system to meet the growing municipal demands and currently serves a population of approximately 101,000. EVWD delivers 18 million gallons per day (MGD) of potable water from three sources: Bunker Hill Groundwater Basin provides 90 percent, Santa Ana River (SAR) water provides 9 percent, and SWP water provides 1 percent.

1-5 Figure 1-2 was revised to include labels that identified the proposed project components.



SOURCE: ESRI

Sterling Natural Resource Center . 150005

**Figure 1-2**  
Bunker Hill Groundwater Basin

**Section Chapter 2, Project Description****Page Clarification/Revision**

2-11 Information in regards to the processing of biosolids at RIX facility was corrected to identify the SBWRP instead. The correct text has been updated in Chapter 2, *Project Description*, as shown below.

***Biosolids Dewatering and Offloading***

Screw presses would be employed for biosolids dewatering. Biosolids, would be hauled offsite either to soil augmentation reuse facilities or to a landfill such as the San Timoteo Landfill for disposal. An offloading facility would be constructed that would convey treated biosolids onto haul trucks. The facility would generate less than five biosolids haul trucks per day on average. The San Timoteo landfill is located approximately 7 miles from the SNRC. Biosolids reuse opportunities such as land application may be utilized in the San Joaquin Valley or Arizona. Truck trips up to 250 miles to Kings County or 300 miles to Arizona may be necessary. Biosolids are currently processed at the SBWRP and reused for composting. ~~This is consistent with current biosolids reuse and disposal activities from the RIX facility.~~

2-16 Figure 2-5 did not show the entire route of the proposed City Creek pipeline and the proposed discharge structure location. It has been modified to show that the treated water conveyance alternative would traverse City Creek in order to discharge to the creek from the eastern edge.

2-33 Table 2-8 did not include the amount of biosolids removal trips mentioned in the text 8. The table and text has been corrected as shown below.

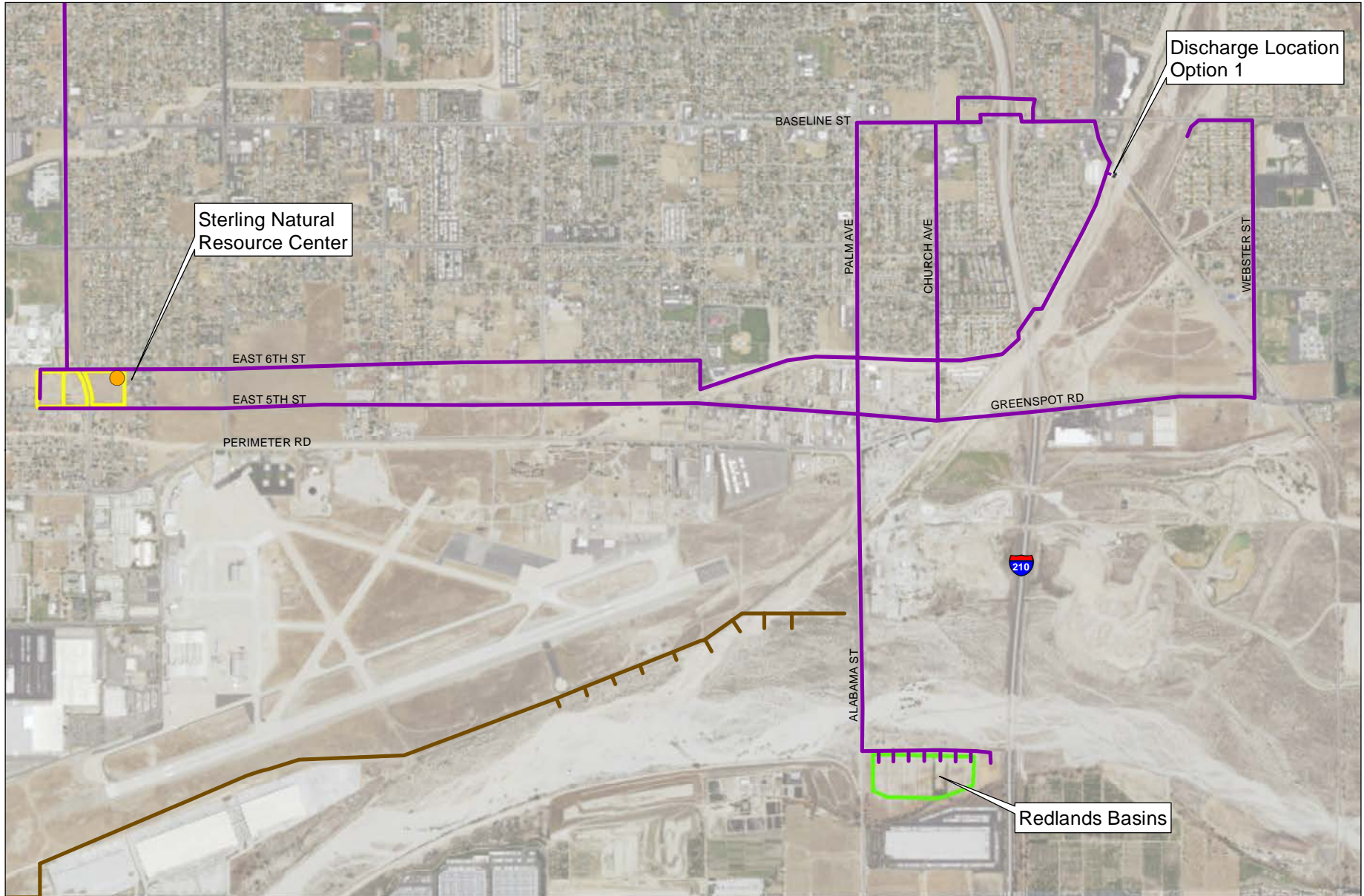
As shown in **Table 2-8** below, it is anticipated that one truck trip per week would be required for screenings removal and one trip per week for grit removal, for a total of 104 truck trips per year. Dewatered biosolids are expected to be hauled offsite daily, and it is estimated that there would be 600 truck trips per year. These operational tasks would contribute approximately 720 truck trips per year.

**TABLE 2-8  
OPERATIONAL TRUCK TRIPS**

<b>Purpose</b>	<b>Number of Truck Trips per Year</b>
Chemical Deliveries	14
Screenings and Grit Disposal	104
Biosolids Removal	<u>600</u>
<u>Total</u>	718 (say 720)

Source: Valley District, 2015





SOURCE: ESRI; San Bernardino County GIS

Sterling Natural Resource Center . 150005

**Figure 2-5**  
Treated Water Conveyance System Pipelines



2-34 Table 2-9 has been modified to include that the use of the supplemental water wells which would require a low-threat discharge permit from the RWQCB. Valley District would be subject to groundwater quality monitoring imposed by the permit.

**TABLE 2-9  
DISCRETIONARY PERMITS POTENTIALLY REQUIRED**

<b>Agency</b>	<b>Permits and Authorizations Potentially Required</b>
Regional Water Quality Control Board (RWQCB)	<ul style="list-style-type: none"> <li>• National Pollutant Discharge Elimination System (NPDES) for discharge to City Creek</li> <li>• Waste Discharge Requirements (WDR) for groundwater replenishment reuse projects under California Title 22</li> <li>• SWPPP for inclusion in General Stormwater NPDES Permit for Construction Activities</li> <li>• General Stormwater NPDES for Industrial Facilities</li> <li>• <u>Low Threat Discharge NPDES for supplemental water discharges</u></li> <li>• 401 Water Quality Certification;</li> </ul>
State Water Resources Control Board	<ul style="list-style-type: none"> <li>• California Water Code Section 1211 Change in Point of Discharge</li> </ul>
SBCFCD	<ul style="list-style-type: none"> <li>• Encroachment permit for discharge facilities</li> <li>• Easement, and/or license agreement for use of recharge facilities</li> </ul>
South Coast Air Quality Management District (SCAQMD)	<ul style="list-style-type: none"> <li>• Permit to operate treatment facility</li> <li>• Permits to operate cogeneration facility and emergency generators</li> </ul>
East Valley Water District	<ul style="list-style-type: none"> <li>• Approval to modify collection system</li> </ul>
City of Highland	<ul style="list-style-type: none"> <li>• Encroachment permit for construction in roadways</li> <li>• Department review permit for Administration Center</li> </ul>
City of Redlands	<ul style="list-style-type: none"> <li>• Encroachment permit for construction in roadways</li> <li>• Approval for use of Redlands Basins</li> </ul>
City of San Bernardino	<ul style="list-style-type: none"> <li>• Encroachment permit for construction in roadways</li> <li>• Approval to re-purpose SAR Pipeline</li> </ul>
City of Rialto	<ul style="list-style-type: none"> <li>• Approval for use of groundwater wells.</li> </ul>
Caltrans	<ul style="list-style-type: none"> <li>• Encroachment permit for construction in roadways and undercrossings</li> </ul>
U.S. Army Corps of Engineers	<ul style="list-style-type: none"> <li>• Clean Water Act Section 404 Permit</li> <li>• 408 Permit (if necessary)</li> </ul>
California Department of Fish and Wildlife	<ul style="list-style-type: none"> <li>• Lake or Streambed Alteration Agreement</li> <li>• Endangered Species Act compliance 2081</li> </ul>
US Fish and Wildlife Service	<ul style="list-style-type: none"> <li>• Endangered Species Act compliance Section 7/Section 10</li> </ul>
Federal Aviation Administration	<ul style="list-style-type: none"> <li>• Notice of Proposed Construction or Alteration</li> </ul>

**Section 3.3 Air Quality****Page Clarification/Revision**

3.3-13 Text that referenced “City of San Highland” included a typographical error and all text that mentioned it were corrected to “City of Highland” The following modifications have been made in the *Air Quality* section.

***City of Highland General Plan***

The City of ~~San~~ Highland General Plan Air Quality Element contains various policies to address citywide air quality issues. The following are relevant to the proposed project:

3.3-14 A similar typographical error about the City of Highland was identified in the *Air Quality* section. The following modifications have been made:

***City of Redlands General Plan***

The City of ~~San Highland~~ Redlands General Plan Air Quality Element contains various policies to address citywide air quality issues. The following are relevant to the proposed project:

3.3-27 The following modifications have been made to Table 3.3-10 to demonstrate more accurate operational emissions. Refer to Appendix B for more details.

**TABLE 3.3-10 REVISED  
PROPOSED PROJECT UNMITIGATED OPERATIONAL EMISSIONS**

Emissions Source	Estimated Emissions (lbs./day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Administration Center						
Area Sources	1.45	0.0001	0.013	0.00	0.00005	0.00005
Energy Sources (Natural Gas)	0.003	0.02	0.02	0.0002	0.002	0.002
Mobile Sources	1.03	3.28	12.06	0.03	1.92	0.54
<i>Subtotal</i>	<i>2.49</i>	<i>3.30</i>	<i>12.10</i>	<i>0.03</i>	<i>1.93</i>	<i>0.54</i>
SNRC						
Area Sources	1.09	0.00004	0.004	0.00	0.00002	0.00002
Cogeneration System Emissions	0.57	15.63	1.66	0.64	1.17	1.13
Mobile - Employee Vehicles	0.07	0.09	1.09	0.003	0.23	0.06
Mobile – Trucks	0.08	<del>2.402</del> 30	<del>0.460</del> 44	0.006	0.07	<del>0.050</del> 04
<i>Subtotal</i>	<i>1.80</i>	<i>18.102</i>	<i>3.223</i> 20	<i>0.64</i>	<i>1.47</i>	<i>1.241</i> 23
<b>Total Emissions</b>	<b><del>4.304</del>29</b>	<b><del>21.422</del>1.43</b>	<b><del>15.321</del>5.30</b>	<b>0.67</b>	<b>3.40</b>	<b>1.78</b>
<i>Regional Significance Threshold</i>	55	55	550	150	100	55
Significant Impact?	No	No	No	No	No	No

NOTE: See Appendix B for CalEEMod model outputs.

3.3-28 The following modifications have been made to Table 3.3-11 to demonstrate more accurate operational emissions. Refer to Appendix B for more details.

**TABLE 3.3-11 REVISED  
ANNUAL UNMITIGATED OPERATIONAL EMISSIONS**

Emissions Source	Estimated Emissions (tons/year)					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Administration Center						
Area Sources	0.27	0.00	0.00	0.00	0.00	0.00
Energy Sources (Natural Gas)	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources	0.13	0.46	1.60	0.00	0.26	0.07
<i>Subtotal</i>	0.40	0.47	1.60	0.00	0.26	0.07
SNRC						
Area Sources	0.20	0.00	0.00	0.00	0.00	0.00
Cogeneration System Emissions	0.10	2.85	0.30	0.12	0.21	0.21
Mobile - Employee Vehicles	0.00	0.00	0.00	0.00	0.00	0.00
Mobile – Trucks	0.02	<u>0.440-43</u>	<u>0.080-21</u>	0.00	<u>0.010-04</u>	<u>0.010-02</u>
<i>Subtotal</i>	0.32	<u>3.293-28</u>	<u>0.380-51</u>	0.12	<u>0.220-26</u>	0.22
<b>Total Emissions</b>	0.72	<u>3.763-75</u>	<u>1.922-11</u>	0.12	<u>0.490-52</u>	<u>0.290-30</u>
<i>Regional Significance Threshold</i>	10	10	100	100	70	100
Significant Impact?	No	No	No	No	No	No

NOTE: See Appendix B for CalEEMod model outputs.

**Section 3.4 Biological Resources**

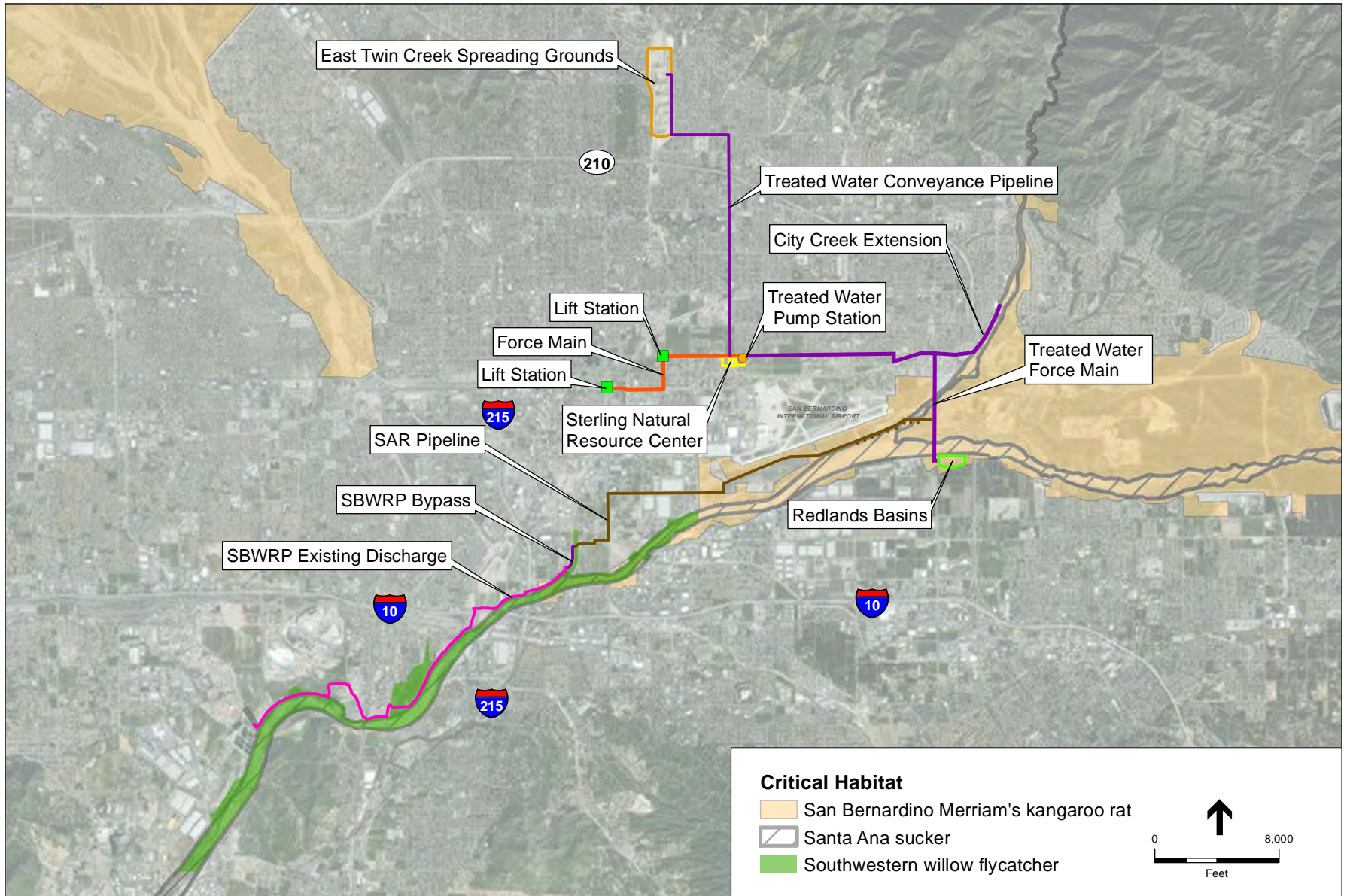
**Page Clarification/Revision**

3.4-23

**TABLE 3.4-4  
POTENTIALLY OCCURRING SENSITIVE WILDLIFE SPECIES**

Common and Scientific Name	Status <sup>1</sup> (Federal/State/ CNDDB)	Habitat	Potential to Occur in Project Impact Area
Arroyo chub <i>Gila orcutti</i>	FSC/SSC/S2	Los Angeles Basin south coastal streams. Slow water stream sections with mud or sand bottoms.	<b>HighMedium.</b> Suitable habitat for this species is present in the <u>Santa Ana River</u> and throughout much of City Creek within the project area when water is present.

3.4-32 Figure 3.4-2 was revised to include the critical habitat of the southwestern willow flycatcher.



SOURCE: ESRI; USFWS

Sterling Natural Resource Center . 150005

**Figure 3.4-2**  
Critical Habitat

- 3.4-45 The second paragraph on page 3.4-45 has been modified to accurately reflect the Reduced Discharge conclusions and to be consistent with the summary on page 3.4-48 as shown below.

The reduction of discharge from RIX will reduce water currently supporting riparian habitats in the Santa Ana River below the RIX discharge point. The reduced discharge study conducted by ESA for the project (ESA 2015b) determined that the diversion of 6 MGD of water from the Santa Ana River will not significantly change the existing conditions within the river pertaining to flow, velocity and sedimentation. As noted on page 8 of the reduced discharge study (**Appendix F**), the reduction of 6 MGD from the RIX discharge would reduce water depth in the channel a maximum of approximately 1.1 inch, reduce the wetted area by 6 percent, and result in an average change in a velocity class of 2 percent (not exceeding 6 percent) of the total channel area. (See Appendix F) and would alter existing flow velocities on average by two percent. This would reduce wetted area by three percent within the upper reach of the reduced discharge study area. The stream width would be reduced by ~~three~~ 6 percent, but the riparian vegetation would continue to encroach and hang over the stream channel as under existing conditions. The small reduction in wetted area in the river channel would not significantly affect the vitality of the riparian corridor currently supported by the perennial surface water discharge.

- 3.4-54 Text has been added regarding the critical habitat and Primary Constituent Estimates for the southwestern willow flycatcher as shown below.

#### **Operational Impacts**

USFW designated critical habitat for southwestern Willow Flycatcher is located within the floodplains of City Creek (refer to Figure 3.4-2). The designation published in the Federal Register on January 3, 2013, lists Primary Constituent Elements (PCE) for the southwestern Willow Flycatcher as follows:

1. Riparian vegetation along a dynamic river or lakeside that is comprised of trees and shrubs with some combination of:
  - a. Dense trees and shrubs that can range in height from 2 to 30 meters
  - b. Areas of dense riparian understory foliage at least from the ground level up to approximately 13 feet.
  - c. Sites for nesting that contain a dense tree and/or shrub canopy
  - d. Dense patches of riparian forests that are interspersed with small openings of open water or marsh
2. Insect Prey Populations

The operational requirements of the project will divert 6 MGD of recycled water that would have been discharged into the Santa Ana River from the RIX facility, and discharge that water into City Creek northeast of the project area, Redlands

Basins, and/or the East Twin Creek Spreading Grounds. The reduction in flow of 6 MGD would not result in a substantial decrease in riparian cover that would restrict the primary constituent elements identified by USFWS for southwestern willow flycatcher including dense understory and insect populations. Sufficient volumes of water would remain in the river channel to support the riparian habitat similar to existing conditions. Furthermore, implementation of Mitigation Measure BIO-3 would provide for management of the riparian habitat including the removal of invasive weeds including *arundo donax* which would increase the acreage of native riparian vegetation compared with existing conditions, as native willows emerge in areas where *arundo donax* has been removed. Additionally, the discharge of water into City Creek or other basins by the proposed project will support the growth of riparian habitat at those locations. Therefore, there will be no adverse modification of Critical Habitat as a result of the operational requirements of the project.

- 3.4-55 Mitigation for sensitive plants will be conducted in consultation with the wildlife agencies either through the Endangered Species Act or other permitting mechanisms such as streambed alteration agreement for non-listed species. The DEIR does not rely on the adoption of the Upper SAR HCP to mitigate impacts to sensitive species in City Creek. Mitigation has been refined to require replacement of permanently impacted RAFSS habitat at a ratio no less than 3:1 in consultation with USFW and CDFW. The appropriate modifications to the mitigation measure are shown below.

**BIO-1: Disturbance to Special-Status Plants.** The following measures will reduce potential project-related impacts to special-status plant species that may occur adjacent to the project site within City Creek to a less than significant level. Potential project-related impacts may result from the construction of the pipeline extension and discharge structure within City Creek, Redlands Basins, and/or the East Twin Creek Spreading Grounds.

- a. Prior to the start of construction within City Creek, Redlands Basins, and/or the East Twin Creek Spreading Grounds, a focused botanical survey will be conducted to determine the presence/absence of any of the special-status species with a moderate or high potential to occur. The focused botanical survey will be conducted by a botanist or qualified biologist knowledgeable in the identification of local special-status plant species, and according to accepted protocol outlined by the CNPS and/or CDFW.
- b. If a special status state or federally listed plant species is discovered in a project impact area, informal consultation with CDFW and/or USFWS will be required prior to the impact occurring to develop an appropriate avoidance strategy. Depending on the sensitivity of the species, relocation, site restoration, or other habitat improvement actions may be

an acceptable option to avoid significant impacts, as determined through consultation with the resource agencies.

- c. If impact avoidance of a state or federally-listed species is not feasible, Valley District shall quantify the impacted acreage supporting state or federally-listed plant species within the construction area and estimated perennial flow area and prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected plants species. Valley District shall implement the conservation measures and compensation requirements identified through consultation by USACE with both CDFW and USFWS.
- d. Permanent impacts to RAFSS habitat from construction and operation of the discharge including within the City Creek channel resulting from perennial flow shall require on-site replacement or off-site compensation at a ratio of at least 3:1 in consultation with CDFW and USFWS.  
Temporary impacts to RAFSS habitat would be mitigated at a ratio of at least 1:1 in consultation with CDFW and USFWS.

3.4-56

The mitigation measure has been expanded to include pre-construction site clearing surveys to remove special status wildlife species from the impact areas prior to construction.

**BIO-2: Disturbance to Special-Status Wildlife.** The following measures will reduce potential project-related impacts to special-status wildlife species that may occur within disturbed and native habitats, to a less than significant level. Potential project-related impacts may result from construction of the SNRC, construction of the discharge structures within City Creek and other discharge locations, and perennial discharges to City Creek or other discharge locations.

- a. Prior to the start of construction within City Creek or other discharge locations, Valley District shall conduct focused surveys within the project impact areas to determine if any state or federally-listed wildlife species (southwestern willow flycatcher, coastal California gnatcatcher, San Bernardino kangaroo rat, and least Bell's vireo) are located within project impact areas. Focused surveys will be conducted by a qualified and/or permitted biologist, following approved survey protocol. Survey results will be forwarded to CDFW and USFWS. If state or federally-listed species are determined to occur on the project site with the potential to be impacted by the project, consultation with CDFW and/or USFWS will be required.
- b. If impact avoidance is not feasible, Valley District shall quantify the impacted acreage supporting state or federally-listed wildlife species within the construction area and estimated perennial flow area and

prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected wildlife species. Valley District shall implement the conservation measures and compensation requirements identified through consultation by USACE with both CDFW and USFWS.

- c. Prior to the start of construction of the SNRC building and the recycled water pipeline along 6th Street, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the CDFW Staff Report on Burrowing Owl Mitigation (2012). If burrowing owl is observed within undeveloped habitat within or immediately adjacent to the project impact area, avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance with the *Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans* of the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW, 2012).
- d. Prior to the start of construction within City Creek, pre-construction site clearing surveys will be conducted of the project impact area within natural habitats. Any special status ground-dwelling wildlife will be removed from the immediate impact area and released in the nearby area.
- e. Permanent impacts to RAFSS habitat from construction and operation of the discharge including within City Creek channel resulting from perennial flow shall require on-site replacement or off-site compensation at a ratio of at least 3:1 in consultation with CDFW and USFWS. Temporary impacts to RAFSS habitat would be mitigated at a ratio of at least 1:1 in consultation with CDFW and USFWS.

3.4-57

The mitigation measure BIO-3 has been modified to include SAS-7 to include hydrologic monitoring of the SAR below RIX to better understand the seasonal and diurnal fluctuations in river flow.

### **BIO-3: Disturbance to Santa Ana Sucker**

- **SAS-7: Monitoring.** The HMMP will outline a monitoring program to collect hydrology data in the segment of river between the RIX discharge and Mission Boulevard. The data will include flow velocity and depth.



3.4-62 The following mitigation measure has been modified to clarify that pre-construction surveys will be conducted 30 days prior to commencement of construction activities and again within 3 days of construction.

**BIO-5: Disturbance to Nesting Birds.** To minimize potential construction-related project impacts to avian species that may be nesting on or immediately adjacent to the project area, the following measures will reduce any potential impact to a less than significant level.

- a. To avoid potential impacts to birds that may be nesting on or immediately adjacent to the project area, construction of the project should avoid the general avian breeding season of February through August.
- b. If construction must occur during the general avian breeding season, a pre-construction clearance survey shall be conducted within 30 days prior to the start of construction, to determine if any active nests or sign of nesting activity is located on or immediately adjacent to the project area, specifically at the proposed SNRC location. An additional survey shall be conducted within 3 days prior to the commencement of construction activities. If no nesting activity is observed during the pre-construction survey, construction may commence without potential impacts to nesting birds.
- c. If an active nest is observed a suitable buffer will be placed around the nest, depending on sensitivity of the nesting species, and onsite monitoring may be required during construction to ensure no disturbance or take of the nest occurs. Construction may continue in other areas of the project and construction activities may only encroach within the buffer at the discretion of the monitoring biologist. The buffer will remain in place until the nestlings have fledged and the nest is no longer considered active.

**Section 3.7 Greenhouse Gases**

**Page Clarification/Revision**

3.7-13 The following modifications have been made to Table 3.7-2 to demonstrate the estimated amount of greenhouse gas emissions from the proposed project using a more accurate calculation of truck trips.

**TABLE 3.7-2 REVISED**  
**ESTIMATED CONSTRUCTION RELATED GREENHOUSE GAS EMISSIONS**

<b>Emission Source</b>	<b>Proposed Program Emissions CO<sub>2</sub>e (MT/yr)</b>
<b>Construction</b>	
Administration Center	139.86
Discharge Structures (3 total)	91.14
Pipelines	1,050.42
SNRC	1,268.61
Construction (Amortized over 30 years)	2,550.03
<b>Total</b>	<b>85.00</b>
<b>Project Operational GHG Emissions:</b>	
Administration Center	423.88
SNRC:	
Area Source	0.01
Worker Vehicle Emissions	24.44
Truck-Only Emissions	<u>94,8490.89</u>
Cogen	450.24
Electricity	5123.36
<b>Total Operational:</b>	<b><u>6,116,786,112.82</u></b>
<b>TOTAL Project Construction and Operational GHG Emissions:</b>	<b><u>6,201,786,197.82</u></b>

NOTES: CO<sub>2</sub>e= carbon dioxide equivalent; MT/yr = metric tons per year; see Appendix E for CalEEMod model outputs.

SOURCE: Modeling performed by ESA, 2015.

**Section 3.14 Public Services, Utilities and Energy**

**Page Clarification/Revision**

3.14-4 The text included an city that is not included within Valley District's service so East Highland was removed, as shown below.

Valley District covers about 353 square miles and serves a population of 660,000 in southwestern San Bernardino County; it includes the cities and communities of San Bernardino, Colton, Loma Linda, Redlands, Rialto, Bloomington, Highland, ~~East Highland~~, Mentone, Grand Terrace, and Yucaipa (Valley District, 2015).

3.14-5 The LAFCO organization was incorrectly identified in the text. The correct identification has been included in Section 3.14, *Utilities and Service Systems*, as shown below.

The City of Redlands provides drinking water to the Redlands and Mentone areas; the water utility service area generally coincides with the area designated

by the Local ~~Agency Area~~ Formation Commission (LAFCO) as the City and its sphere of influence.

**Section 3.15 Transportation and Traffic**

**Page Clarification/Revision**

3.15-7 The text included the incorrect amount of biosolids trips for the facility. The change shown below reflects the accurate number of trips.

~~Approximately 5~~ An average of fewer than 2 biosolids haul trips per day would be generated at the facility.

**Section Chapter 4, Cumulative Impacts**

**Page Clarification/Revision**

4-16 The following has been included in Chapter 4, *Cumulative Impacts*, to further identify cumulative reductions in discharge.

The proposed project would contribute to the cumulative reduction in flows to the SAR that reach Prado Dam and Orange County. As more recycled water projects are implemented in the upper SAR watershed to support local water supply development and sustainable groundwater management practices, less surface water will reach the Prado Basin. However, pursuant to the 1969 Stipulated Judgment, minimum flows to Prado Dam will be maintained to ensure that Orange County receives its appropriate water rights. The cumulative reduction in surface water reaching Prado Dam would not significantly impact local drainage patterns, floodplains, downstream water rights, or surface water or groundwater quality. The cumulative reduction in surface water flows may result in depletion of groundwater levels near Prado that are also subject to local pumping. However, the proposed project would result in increased groundwater levels in subbasins higher in the watershed. The proposed project would support sustainable management of groundwater basins within the entire Upper Santa Ana River Watershed as required under Sustainable Groundwater Management Act and will assist in minimizing long-term cumulative impacts to groundwater.

**Section Chapter 6, Alternatives**

**Page Clarification/Revision**

6-7 The amount of alternatives, three, indicated was incorrect. The change has been included in Chapter 6, Alternatives, as shown below.

~~Three~~ Five alternatives were selected for detailed analysis. The goal for evaluating these alternatives is to identify alternatives that would avoid or lessen the significant environmental effects of the project, while attaining most of the project objectives. Significant impacts of the project include construction air

emissions, construction noise, modification of Santa Ana sucker habitat, and secondary effects of growth.

## Staff Initiated Changes

**Section**        **3.3 Air Quality**

**Page**            **Clarification/Revision**

3.3-23            In Chapter 3.3, the reference to Mitigation Measure AIR-1 was incorrectly written as AQ-1. The change has been included in Chapter 3.3, *Air Quality*, as shown below.

Implementation of **Mitigation Measure AQAIR-1**, which requires all off-road construction equipment that exceeds 50 horsepower to be either certified as EPA Tier 4 where available, would reduce the pollutant emissions from the proposed project's construction equipment. The mitigated construction emissions for the proposed project after implementation of **Mitigation Measure AQAIR-1** are shown in **Table 3.3-7**.

3.3-24            In Chapter 3.3, the reference to Mitigation Measure AIR-1 was incorrectly written as AQ-1. The change has been included in Chapter 3.3, *Air Quality*, as shown below.

As shown in Table 3.3-7, implementation of **Mitigation Measure AQAIR-1** would reduce the pollutant emissions associated with the proposed project's construction activities.

3.3-25            In Chapter 3.3, the reference to Mitigation Measure AIR-1 was incorrectly written as AQ-1. The change has been included in Chapter 3.3, *Air Quality*, as shown below.

However, as shown in **Table 3.3-9**, with **Mitigation Measure AQAIR-1** the project's construction emissions would be below the federal conformity de minimis thresholds for all pollutants, including NO<sub>x</sub>.

**Section**        **3.4 Biological Resources**

**Page**            **Clarification/Revision**

3.4-60            The mitigation measure formatting was corrected to maintain consistency with the rest of the document as shown below:

**BIO-4: Construction Best Management Practices.** The contractor shall implement the following Best Management Practices during construction of the pipeline and discharge structure adjacent to and within City Creek to protect any adjacent sensitive natural communities that provide habitat for special-status species.

- a. The following water quality protection measures shall be implemented during construction. :
  - Stationary engines, such as compressors, generators, light plants, etc., shall have drip pans beneath them to prevent any leakage from entering runoff or receiving waters.
  - All construction equipment shall be inspected for leaks and maintained regularly to avoid soil contamination. Leaks and smears of petroleum products will be wiped clean prior to use.
  - Any grout waste or spills will be cleaned up immediately and disposed of off-site.
  - Spill kits capable of containing hazardous spills will be stored on-site.
  
- b. To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than two-feet deep shall be covered with tarp, plywood or similar materials at the close of each working day to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow for animals to escape, if necessary. Before such holes or trenches are backfilled, they should be thoroughly inspected for trapped animals. If trapped wildlife are observed, escape ramps or structures shall be installed immediately to allow escape.
 

All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods should be thoroughly inspected for burrowing owls and nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved.

**Section**

**3.11 Noise**

**Page**

**Clarification/Revision**

3.11-19

The mitigation measure formatting was corrected to maintain consistency with the rest of the document as shown below:

**NOISE-1:** Valley District shall implement the following measures during construction:

- a. Include design measures necessary to reduce construction noise levels to comply with local noise ordinances. These measures may include noise barriers, curtains, or shields.
  
- b. Place noise-generating construction activities (e.g., operation of compressors and generators, cement mixing, general truck idling) away from the nearest noise-sensitive land uses.

- c. Contiguous properties shall be notified in advance of construction activities. A contact name and number shall be provided to contiguous properties to report excessive construction noise.

**Section 3.15 Traffic and Transportation**

**Page Clarification/Revision**

3.15-8 The mitigation measure formatting was corrected to maintain consistency with the rest of the document as shown below:

**Mitigation Measure TR-1:** Valley District shall require the contractor to prepare a traffic control plan that identifies specific traffic control measures to ensure access and safety on the local roadway network. The traffic control plan will include the following elements at a minimum:

- a. A schedule of lane closures and road closures over the construction period
- b. Measures to maintain traffic flow at all times across the construction zone including requiring flaggers to direct traffic when only one lane of traffic is available
- c. Detour routes and notification procedures if full road closures are needed
- d. Lane closure notifications to the City of Highland, City of San Bernardino and City of Redlands and local emergency services providers
- e. Temporary signalization modifications (if any) for intersection signals
- f. On-road traffic control features and signage compliant with city traffic control requirements
- g. Maintain access to residence and business driveways, public facilities, and recreational resources at all times to the extent feasible; Minimize access disruptions to businesses and residences
- h. Include the requirement that all open trenches be covered with metal plates at the end of each workday to accommodate traffic and access
- i. Identify all roadway locations where special construction techniques (e.g., horizontal boring, directional drilling or night construction) will be used to minimize impacts to traffic flow

**Section Chapter 8, References**

**Page Clarification/Revision**

N/A The following references have been added to support the FEIR:

California Department of Fish and Wildlife, Arroyo Chub, available online here: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=104270&inlinehttps://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=104270&inline>, accessed March 2016.

California Regional Water Quality Control Board Santa Ana Region, Item 10: Renewal of Waste Discharge Requirements for City of San Bernardino Municipal Water Department’s Water Reclamation Facility, Order No. R8-2012-0051, December 14, 2012.

Chino Basin Watermaster, *Depth to Groundwater Contours*, available online at: [http://www.cbwm.org/rep\\_eng\\_maps.htm](http://www.cbwm.org/rep_eng_maps.htm), July 2007.

East Valley Water District, Wastewater Collection System Master Plan, October 2013.

Hupp, Cliff R., W.R. Osterkamp, *Riparian vegetation and fluvial geomorphic processes*, received January 1994; accepted November 1994.

Jericho Systems Incorporated, *Habitat Suitability Assessments San Bernardino Kangaroo Rat and Burrowing Owl East Valley Water District’s Del Rosa Avenue Treatment Plant*, February 25, 2015.

Stetson Engineers Inc., Preliminary Assessment of Hydrologic Conditions Related to Riparian Habitat Health and Vigor in the Prado Basin Management Zone, October 26, 2015.

Santa Ana Watershed Association, *Annual Report*, 2012.

U.S. Government Printing Office, Department of Interior Fish and Wildlife Service Federal Register Volume 78, No.2, January 3, 2013.

Wildermuth Environmental Inc., Prado Basin Daily Discharge Estimates for 2021 and 2071 Using the Wasteload Allocation Model, January 24, 2014.

**Section Appendix A, Notice of Preparation and Comments**

**Page Clarification/Revision**

N/A The following NOP comment letter was omitted in the Draft EIR and has been added to the end of the NOP comment letter table as follows:

<u>Commenter/Date</u>	<u>Summary of Environmental Issues Raised in Comment Letter</u>	<u>Sections Where Addressed</u>
Federal Emergency Management Agency (FEMA) 11/12/2015	Commented that the proposed project should be analyzed using the countywide Flood insurance rater maps (FIRMs) and fulfill the NFIP floodplain management building requirements if: a) a building is constructed within a riverine floodplain b)if a area of	Hydrology and Water Quality

---

<u>Commenter/Date</u>	<u>Summary of Environmental Issues Raised in Comment Letter</u>	<u>Sections Where Addressed</u>
	<u>construction is located within a Regulatory Floodway or c) if a Special Flood Hazard Area is changed, then the appropriate hydrologic data should be submitted.</u>	

---



# **APPENDIX L**

---

## **Draft Mitigation and Monitoring Reporting Program**

# APPENDIX L

---

## Draft Mitigation Monitoring and Reporting Program

### CEQA Requirements

Section 15091(d) and Section 15097 of the CEQA Guidelines require a public agency to adopt a program for monitoring or reporting on the changes it has required in the project or conditions of approval to substantially lessen significant environmental effects. This MMRP summarizes the mitigation commitments identified in the Sterling Natural Resource Center Project Final EIR (State Clearinghouse No. 2015101058). Mitigation measures are presented in the same order as they occur in the Final EIR.

The columns in the MMRP table provide the following information:

- **Mitigation Measure(s):** The action(s) that will be taken to reduce the impact to a less-than-significant level.
- **Implementation, Monitoring, and Reporting Action:** The appropriate steps to implement and document compliance with the mitigation measures.
- **Responsibility:** The agency or private entity responsible for ensuring implementation of the mitigation measure. However, until the mitigation measures are completed, Rosedale, as the CEQA Lead Agency, remains responsible for ensuring that implementation of the mitigation measures occur in accordance with the MMRP (CEQA Guidelines, Section 15097(a)).
- **Monitoring Schedule:** The general schedule for conducting each task, either prior to construction, during construction and/or after construction.

**TABLE L-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STERLING NATURAL RESOURCE CENTER PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<b>Aesthetics</b>			
<b>AES-1:</b> Aboveground buildings/structures associated with the proposed SNRPC shall be designed to be consistent with the aesthetic qualities of existing structures in the surrounding area to minimize contrasting features.	<ul style="list-style-type: none"> <li>Include mitigation measure in project design specifications.</li> </ul>	Valley District	Before Construction
<b>AES-2:</b> During project design, a landscape plan shall be prepared for the SNRC that restores disturbed areas and minimizes effects to local character. Valley District shall implement and maintain the landscape plan.	<ul style="list-style-type: none"> <li>Include mitigation measure in project design specifications.</li> <li>Perform site inspections to ensure mitigation is being implemented during construction.</li> </ul>	Valley District	Before and During Construction
<b>Air Quality</b>			
<b>AIR-1:</b> For off-road construction equipment greater than 50 HP, all engines shall be certified as USEPA Tier 3 at a minimum and Tier 4 where available.	<ul style="list-style-type: none"> <li>Include mitigation measure in construction equipment list.</li> </ul>	Valley District, Construction Contractor	Before Construction
<b>AIR-2:</b> Valley District shall prepare and implement an Odor Impact Minimization Plan that includes a monitoring and reporting plan. The plan shall include the following elements at a minimum: <ul style="list-style-type: none"> <li>Identification of responsible parties</li> <li>Description of odor control system design and performance standards</li> <li>Odor control system operations plan</li> <li>Identification of fence-line odor monitoring and reporting program</li> <li>Achievable odor remediation actions and implementation protocol</li> <li>Local community outreach program</li> </ul>	<ul style="list-style-type: none"> <li>Prepare Odor Impact Minimization Plan prior to project implementation.</li> <li>Retain reporting plan and monitoring logs in project file.</li> </ul>	Valley District	Before Construction
<b>Biological Resources</b>			
<b>BIO-1: Disturbance to Special-Status Plants.</b> The following measures will reduce potential project-related impacts to special-status plant species that may occur adjacent to the project site within City Creek to a less than significant level. Potential project-related impacts may result from the construction of the pipeline extension and discharge structure within City Creek, Redlands Basins, and/or the East Twin Creek Spreading Grounds. <ol style="list-style-type: none"> <li>Prior to the start of construction within City Creek, Redlands Basins, and/or the East Twin Creek Spreading Grounds, a focused botanical survey will be conducted to determine the presence/absence of any of the special-status species with a moderate or high potential to occur. The focused botanical survey will be conducted by a botanist or qualified biologist knowledgeable in the identification of local special-status plant species, and according to accepted protocol outlined by</li> </ol>	<ul style="list-style-type: none"> <li>A qualified biologist will conduct pre-construction botanical survey as defined.</li> <li>Prepare documentation to record results of the pre-construction survey.</li> <li>If a special status plant species is detected, then implement measures as appropriate.</li> <li>If impact avoidance is not feasible, then implement measures as appropriate. Prepare Biological Assessment as suggested.</li> <li>Perform construction site inspections to ensure measures are implemented properly. An inspection log</li> </ul>	Valley District, Construction Contractor	Before and During Construction

**TABLE L-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STERLING NATURAL RESOURCE CENTER PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p>the CNPS and/or CDFW.</p> <p>b) If a special status plant species is discovered in a project impact area, informal consultation with CDFW and/or USFWS will be required prior to the impact occurring to develop an appropriate avoidance strategy. Depending on the sensitivity of the species, relocation, site restoration, or other habitat improvement actions may be an acceptable option to avoid significant impacts, as determined through consultation with the resource agencies.</p> <p>c) If impact avoidance of a state or federally-listed species is not feasible, Valley District shall quantify the impacted acreage supporting state or federally-listed plant species within the construction area and estimated perennial flow area and prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected plants species. Valley District shall implement the conservation measures and compensation requirements identified through consultation by USACE with both CDFW and USFWS.</p> <p>d) Permanent impacts to RAFSS habitat from construction and operation of the discharge including within the City Creek channel resulting from perennial flow shall require on-site replacement or off-site compensation at a ratio of at least 3:1 in consultation with CDFW and USFWS. Temporary impacts to RAFSS habitat would be mitigated at a ratio of at least 1:1 in consultation with CDFW and USFWS.</p>	<p>will be maintained to document results of site inspections.</p> <ul style="list-style-type: none"> <li>Retain copies of pre-construction survey documentation and any subsequent reports in the project file.</li> <li>Consult with USFWS and CDFW to prepare and implement on-site or off-site compensation of 3:1 or 1:1 and mitigate impacts to RAFSS habitat.</li> </ul>		
<p><b>BIO-2: Disturbance to Special-Status Wildlife.</b> The following measures will reduce potential project-related impacts to special-status wildlife species that may occur within disturbed and native habitats, to a less than significant level. Potential project-related impacts may result from construction of the SNRC, construction of the discharge structures within City Creek and other discharge locations, and perennial discharges to City Creek or other discharge locations.</p> <p>a. Prior to the start of construction within City Creek or other discharge locations, Valley District shall conduct focused surveys within the project impact areas to determine if any state or federally-listed wildlife species (southwestern willow flycatcher, coastal California gnatcatcher, San Bernardino kangaroo rat, and least Bell's vireo) are located within project impact areas. Focused surveys will be conducted by a qualified and/or permitted biologist, following approved survey protocol. Survey results will be forwarded to CDFW and USFWS. If state or federally-listed species are determined to occur on the project site with the potential to be impacted by the project, consultation with CDFW and/or USFWS will be required.</p> <p>b. If impact avoidance is not feasible, Valley District shall quantify the impacted acreage supporting state or federally-listed wildlife species within the construction area and estimated perennial flow area and prepare a Biological Assessment</p>	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>A qualified biologist will conduct pre-construction surveys for state or federally-listed wildlife species (southwestern willow flycatcher, coastal California gnatcatcher, San Bernardino kangaroo rat, and least Bell's vireo) as defined.</li> <li>A qualified biologist will conduct pre-construction survey for burrowing owl as defined.</li> <li>A qualified biologist will conduct pre-construction site clearing survey for project impact area of natural habitat within City Creek.</li> <li>Prepare documentation to record results of all of the pre-construction survey.</li> <li>If a state or federally-listed species is detected, then implement measures as appropriate. If impact avoidance is not feasible, implement measures as</li> </ul>	<p>Valley District, Construction Contractor</p>	<p>Before and During Construction</p>

**TABLE L-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STERLING NATURAL RESOURCE CENTER PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p>pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected wildlife species. Valley District shall implement the conservation measures and compensation requirements identified through consultation by USACE with both CDFW and USFWS.</p> <p>c. Prior to the start of construction of the SNRC building and the recycled water pipeline along 6th Street, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the CDFW Staff Report on Burrowing Owl Mitigation (2012). If burrowing owl is observed within undeveloped habitat within or immediately adjacent to the project impact area, avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance with the <i>Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans</i> of the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW, 2012).</p> <p>d. Prior to the start of construction within City Creek, pre-construction site clearing surveys will be conducted of the project impact area within natural habitats. Any special status ground-dwelling wildlife will be removed from the immediate impact area and released in the nearby area.</p> <p>e. Permanent impacts to RAFSS habitat from construction and operation of the discharge including within City Creek channel resulting from perennial flow shall require on-site replacement or off-site compensation at a ratio of at least 3:1 in consultation with CDFW and USFWS. Temporary impacts to RAFSS habitat would be mitigated at a ratio of at least 1:1 in consultation with CDFW and USFWS.</p>	<p>appropriate. Prepare Biological assessment as suggested.</p> <ul style="list-style-type: none"> <li>• If a burrowing owl is detected, then implement measures as appropriate. If burrowing owl avoidance is not feasible, implement measures as appropriate.</li> <li>• If any special status ground-dwelling wildlife are detected, removed immediately from impact area and release to nearby area.</li> <li>• Perform construction site inspections to ensure measures are implemented properly. An inspection log will be maintained to document results of site inspections.</li> <li>• Retain copies of both of the pre-construction surveys documentation in the project file.</li> <li>• Consult with USFWS and CDFW to prepare and implement on-site or off-site compensation of 3:1 or 1:1 and mitigate impacts to RAFSS habitat.</li> </ul>		
<p><b>BIO-3: Disturbance to Santa Ana Sucker.</b> The following measures will reduce potential project-related impacts to avoid, minimize, and compensate for impacts to Santa Ana sucker while contributing to the long-term conservation of the species.</p> <p>a) The diversion of wastewater flow to the new SNRC shall not occur until either the Upper Santa Ana HCP has been fully executed by the USFWS and CDFW or Valley District's SAS HMMP has been approved by the USFWS and CDFW.</p> <p>b) The Valley District will be a signatory to the Upper SAR HCP that will include the proposed project as a covered activity. The HCP will include a menu of projects to be implemented by the signatory agencies that will create habitat, restore habitat, and establish self-sustaining populations in the watershed. The HCP will be approved by the CDFW and USFWS.</p> <p>c) In the event that the Upper Santa Ana River HCP is not approved in time to meet</p>	<ul style="list-style-type: none"> <li>• Verify the Upper Santa Ana HCP is executed and approved before project construction begins.</li> <li>• If Upper Santa Ana HCP is not approved in time, prepare and implement SAS HMMP.</li> <li>• A contracted and qualified entity will implement the HMMP</li> <li>• Verify that the HMMP has been prepared and approved by the applicable entities.</li> <li>• Verify that the agreement for the high pulse flow events has been approved by the City of San Bernardino Municipal Water Department.</li> </ul>	Valley District; Construction Contractor	Before and During Construction

**TABLE L-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STERLING NATURAL RESOURCE CENTER PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p>the project schedule, Valley District shall prepare and implement a SAS Habitat Monitoring and Management Plan (HMMP) that identifies habitat improvement actions, implementation methods, monitoring, and maintenance methods. The HMMP will consist of measures listed below to offset direct and indirect impacts to the Santa Ana sucker and its habitat resulting from the loss of 6 MGD of discharged water. The HMMP will be implemented by a contracted, qualified and permitted entity such as the Riverside-Corona Resource Conservation District (RCRCD) in coordination with the USFWS and CDFW. The HMMP will identify the goals and performance criteria of each conservation measure and will identify annual reporting and work forecasting requirements. The HMMP will be approved by the USFWS and CDFW under their authority to enforce the federal and state Endangered Species Acts. The proposed diversion of 6 MGD from the RIX discharge will not occur until the HMMP has been approved by USFWS and CDFW. The HMMP will include the following elements.</p> <ul style="list-style-type: none"> <li>• <b>SAS-1: Microhabitat Enhancements.</b> The HMMP will identify microhabitat enhancements within the upstream reach of the affected river segment using natural materials to increase scour and pool formation. This could include placement of large boulders and/or large woody debris to increase velocity of flow and gravel bar patches as well as deep pool refugia areas.</li> <li>• <b>SAS-2: Aquatic Predator Control Program.</b> The HMMP will include an Aquatic Predator Control Program to be implemented within the upstream reach of the affected river segment that will target and remove exotic fish, amphibians, and reptiles immediately prior to the SAS spawning season.</li> <li>• <b>SAS-3: Exotic Weed Management Program.</b> The HMMP will include an Exotic Weed Management Program targeting the removal of non-native species such as tamarisk, castor bean, tree of heaven, etc. The HMMP will include an annual maintenance and performance goal for non-native plant removal within the upper reach of the affected river segment.</li> <li>• <b>SAS-4: High Flow Pulse Events.</b> The HMMP will identify means to create high flow pulse events as needed based on substrate conditions, up to 2 times per year. The high flow pulse events would be implemented through a cooperative agreement with the City of San Bernardino Municipal Water Department.</li> <li>• <b>SAS-5: Supplemental Water.</b> Valley District will increase habitat availability in Rialto Channel during the summer months by providing cool supplemental water from nearby groundwater source to lower the water temperature in this tributary. Supplemental water will be added to the Rialto Channel when water temperatures reach 85 degrees. Supplemental water could be pumped groundwater or other water source. The discharge into the Rialto Drain will require a discharge permit from the Regional Water Quality Control Board.</li> <li>• <b>SAS-6: Upper Watershed SAS Population Establishment.</b> The HMMP will</li> </ul>	<ul style="list-style-type: none"> <li>• Verify that the discharge permit has been prepared and approved by the Regional Water Quality Control Board.</li> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Perform construction site inspections to ensure measures are implemented properly and the construction contractor is complying with construction limitations. An inspection log will be maintained to document results of site inspections.</li> <li>• Retain copies of Upper Santa Ana HCP or SAS HMMP documentation and construction site inspection logs in the project file.</li> </ul>		

**TABLE L-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STERLING NATURAL RESOURCE CENTER PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p>outline a plan for establishing a population of Santa Ana sucker in City Creek, or other suitable watershed tributary, in coordination with the Wildlife Agencies. The HMMP will identify measures to directly increase the number of Santa Ana sucker in the SAR population, increase the amount of suitable and occupied habitat in this watershed, and distribute the risk of a catastrophic event between multiple locations. The HMMP will identify the goals and success criteria of the establishment plan and will identify the amount of financial assistance to be provided by Valley District for the regionally-beneficial population establishment program.</p> <ul style="list-style-type: none"> <li> <b>SAS-7: Monitoring.</b> The HMMP will outline a monitoring program to collect hydrology data in the segment of river between the RIX discharge and Mission Boulevard. The data will include flow velocity and depth.         </li> </ul> <p><b>BIO-4: Construction Best Management Practices.</b> The Contractor shall implement the following Best Management Practices during construction of the pipeline and discharge structure adjacent to and within City Creek to protect any adjacent sensitive natural communities that provide habitat for special-status species.</p> <p>a) The following water quality protection measures shall be implemented during construction:</p> <ul style="list-style-type: none"> <li>Stationary engines, such as compressors, generators, light plants, etc., shall have drip pans beneath them to prevent any leakage from entering runoff or receiving waters.</li> <li>All construction equipment shall be inspected for leaks and maintained regularly to avoid soil contamination. Leaks and smears of petroleum products will be wiped clean prior to use.</li> <li>Any grout waste or spills will be cleaned up immediately and disposed of off-site.</li> <li>Spill kits capable of containing hazardous spills will be stored on-site.</li> </ul> <p>b) To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than two-feet deep shall be covered with tarp, plywood or similar materials at the close of each working day to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow for animals to escape, if necessary. Before such holes or trenches are backfilled, they should be thoroughly inspected for trapped animals. If trapped wildlife are observed, escape ramps or structures shall be installed immediately to allow escape.</p> <p>All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods should be thoroughly inspected for burrowing owls and nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved.</p>	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>Conduct evaluation of project area for trapped animals during construction. If trapped animals are found within construction sites, then implement measures as defined.</li> <li>Perform construction site inspections to ensure mitigation measures are implemented properly.</li> <li>Retain copies of survey documentation and construction site inspection logs in the project file.</li> </ul>	<p>Valley District; Construction Contractor</p>	<p>Before and During Construction</p>

**TABLE L-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STERLING NATURAL RESOURCE CENTER PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p><b>BIO-5:</b> To minimize potential construction-related project impacts to avian species that may be nesting on or immediately adjacent to the project area, the following measures will reduce any potential impact to a less than significant level.</p> <ol style="list-style-type: none"> <li>To avoid potential impacts to birds that may be nesting on or immediately adjacent to the project area, construction of the project should avoid the general avian breeding season of February through August.</li> <li>If construction must occur during the general avian breeding season, a pre-construction clearance survey shall be conducted within 30 days prior to the start of construction, to determine if any active nests or sign of nesting activity is located on or immediately adjacent to the project area, specifically at the proposed SNRC location. An additional survey shall be conducted within 3 days prior to the commencement of construction activities. If no nesting activity is observed during the pre-construction survey, construction may commence without potential impacts to nesting birds.</li> <li>If an active nest is observed, a suitable buffer will be placed around the nest, depending on sensitivity of the nesting species, and onsite monitoring may be required during construction to ensure no disturbance or take of the nest occurs. Construction may continue in other areas of the project and construction activities may only encroach within the buffer at the discretion of the monitoring biologist. The buffer will remain in place until the nestlings have fledged and the nest is no longer considered active.</li> </ol>	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>If construction must occur during avian breeding season, a qualified biologist will conduct pre-construction clearance survey for nesting birds as defined.</li> <li>Prepare documentation to record results of the pre-construction survey.</li> <li>If nests are detected, then implement measures as appropriate. Perform construction site inspections to ensure measures are implemented properly. An inspection log will be maintained to document results of site inspections.</li> <li>Retain copies of pre-construction survey documentation and construction site inspection logs in the project file.</li> </ul>	<p>Valley District; Construction Contractor</p>	<p>Before and During Construction</p>
<b>Cultural Resources</b>			
<p><b>CUL-1:</b> Prior to the start of ground-disturbing activities, Valley District shall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior 2008) to carry out all mitigation related to cultural resources. The qualified archaeologist shall conduct a Phase I survey for all areas within the project impact area that have not received a survey within the last five years, including treated conveyance pipeline corridors.</p>	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>A Phase I Cultural Resources Survey shall be completed for all sites within project area that have not been surveyed within the last five years.</li> <li>Perform site inspections to ensure construction contractor is in compliance with any avoidance measures or other mitigation requirements.</li> <li>Retain copies of construction site inspection logs in the project file.</li> </ul>	<p>Valley District; Construction Contractor</p>	<p>Before and During Construction</p>



**TABLE L-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STERLING NATURAL RESOURCE CENTER PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p><b>CUL-2:</b> Prior to start of ground-disturbing activities, the qualified archaeologist shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. Valley District shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.</p>	<ul style="list-style-type: none"> <li>• Perform mitigation measure prior to construction.</li> <li>• Verify all construction personnel have gone through training by retaining login records in project file.</li> </ul>	<p>Valley District; construction contractor</p>	<p>Before Construction</p>
<p><b>CUL-3:</b> In the event of the unanticipated discovery of archaeological materials, Valley District shall immediately cease all work activities within approximately 100 feet of the discovery until it can be evaluated by the qualified archaeologist. Construction shall not resume until the qualified archaeologist has conferred with Valley District on the significance of the resource.</p> <p>If it is determined that a discovered archaeological resource constitutes a historic property under the NHPA or a historical or unique archaeological resource under CEQA, avoidance and preservation in place is the preferred manner of mitigation. Preservation in place maintains the important relationship between artifacts and their archaeological context and also serves to avoid conflict with traditional and religious values of groups who may ascribe meaning to the resource. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, a Treatment Plan shall be prepared and implemented by a qualified archaeologist in consultation with Valley District that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource. Valley District shall consult with appropriate Native American representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond that which is scientifically important, are considered.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• In the event that paleontological resources are discovered, documentation of the assessment of the significance of the find will be prepared and retained in the project file</li> <li>• Perform site inspections to ensure compliance with cultural sensitivity requirements. Retain inspection forms in the project file.</li> <li>• Paleontological monitoring reports and logs will be retained in project file.</li> </ul>	<p>Valley District; Construction Contractor</p>	<p>Before and During Construction</p>
<p><b>CUL-4:</b> Paleontological resources monitoring shall be conducted for the proposed SNRC in areas that are subject to excavations in excess of 15 feet below ground surface. Paleontological monitoring shall be conducted by a qualified paleontological monitor (QPM). The QPM, in consultation with the Valley District, may reduce or increase monitoring based on observations of subsurface soil stratigraphy or other factors. If construction or other project personnel discover any potential fossils during construction, regardless of the depth of work, work at the discovery location shall cease within 50 feet of the find until the QPM has assessed the discovery and made recommendations as to the appropriate treatment.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Retain copies of the paleontological monitoring report and logs in the project file.</li> </ul>	<p>Valley District; Construction Contractor</p>	<p>Before and During Construction</p>

**TABLE L-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STERLING NATURAL RESOURCE CENTER PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p><b>CUL-5:</b> If human remains are encountered, Valley District shall halt work within 100 feet of the find and contact the San Bernardino County Coroner in accordance with PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the County Coroner determines that the remains are Native American, the NAHC shall be notified in accordance with Health and Safety Code Section 7050.5, subdivision (c), and PRC Section 5097.98 (as amended by Assembly Bill 2641). The NAHC shall designate a MLD for the remains per PRC Section 5097.98. Until the landowner has conferred with the MLD, Valley District shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities take into account the possibility of multiple burials.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Perform site inspections to ensure contractor is following procedures outlined in this measure.</li> </ul>	<p>Valley District; Construction Contractor</p>	<p>During Construction</p>
<p><b>Hydrology and Water Quality</b></p>			
<p><b>HYDRO-1:</b> Valley District will prepare a Water Quality Management Plan (WQMP) to ensure that the SNRC facility design complies with stormwater management goals of the MS4.</p>	<ul style="list-style-type: none"> <li>• Prepare the WQMP prior to project implementation.</li> <li>• Retain copies of the plan in the project file.</li> <li>• Retain copies of sampling and analyses conducted in accordance with the WQMP in the project file.</li> <li>• Conduct site inspections in accordance with the WQMP to ensure proper implementation of stormwater management goals.</li> </ul>	<p>Rosedale/IRWD; Construction Contractor</p>	<p>Before and During Construction</p>
<p><b>HYDRO-2:</b> Valley District shall prepare and implement a groundwater monitoring program that includes installation of an array of groundwater monitoring wells sufficient to characterize the effects of the discharge on local groundwater quality. If monitoring shows that beneficial uses of the groundwater may become adversely affected by the discharge, the monitoring program would require either modifications to treatment, modify the well screened area by sealing the affected portion of the screen in the impacted groundwater bearing zone, or compensation for adversely affected groundwater wells through replacement of the affected well or through providing replacement water.</p>	<ul style="list-style-type: none"> <li>• Prepare the groundwater monitoring program prior to project implementation.</li> <li>• Retain copies of the program report in the project file.</li> <li>• During plan implementation, retain copies of the monitoring reports in the project file.</li> <li>• Implement suggested mitigation measure if monitoring shows groundwater is adversely affected.</li> </ul>	<p>Valley District</p>	<p>Before and During Construction</p>
<p><b>HYDRO-3:</b> The City Creek discharge structures shall be designed with velocity dissipation features as needed to prevent scour at the point of discharge. The design and location of these discharge facilities would be approved by the SBC/FCD and USACE to ensure that they do not impede high flow capacity.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in project design specifications.</li> <li>• Retain specifications related to discharge facilities in the project file.</li> </ul>	<p>Valley District</p>	<p>Before Construction</p>

**TABLE L-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STERLING NATURAL RESOURCE CENTER PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p><b>HYDRO-4:</b> Valley District shall prepare a City Creek Channel Vegetation Management Plan in coordination with SBCFCD and CDFW that outlines vegetation management measures to minimize impacts to the flood control function within City Creek. The plan will include periodic vegetation trimming to remove large trees that could impact flood control facilities downstream. The plan will outline schedule, permitting and reporting requirements.</p>	<ul style="list-style-type: none"> <li>• Prepare Vegetation Management Plan prior to project implementation.</li> <li>• Retain Vegetation Management Plan in the project file.</li> </ul>	Valley District	Before Construction
<p><b>HYDRO-5:</b> Valley District shall prepare an Operational Manual for the discharge to City Creek that identifies when discharges would be conveyed to other discharge basins to avoid contributing to flood flows in City Creek during peak flow periods.</p>	<ul style="list-style-type: none"> <li>• Prepare Operational Manual prior to project implementation.</li> <li>• Retain Operation Manual in the project file.</li> </ul>	Valley District	Before Construction
<b>Noise</b>			
<p><b>NOISE-1:</b> Valley District shall implement the following measures during construction:</p> <ol style="list-style-type: none"> <li>Include design measures necessary to reduce construction noise levels to comply with local noise ordinances. These measures may include noise barriers, curtains, or shields.</li> <li>Place noise-generating construction activities (e.g., operation of compressors and generators, cement mixing, general truck idling) away from the nearest noise-sensitive land uses.</li> <li>Contiguous properties shall be notified in advance of construction activities. A contact name and number shall be provided to contiguous properties to report excessive construction noise.</li> </ol>	<ul style="list-style-type: none"> <li>• Include mitigation measure in project design specifications and contractor specifications.</li> <li>• Perform site inspections to ensure contractor is in compliance with noise mitigation measures.</li> <li>• Retain copies of inspection logs in the project file.</li> </ul>	Valley District; Construction Contractor	Before and During Construction
<p><b>NOISE-2:</b> Noise-generating machinery at the proposed SNRC shall be enclosed within structures that are designed with insulation sufficient to comply with applicable nighttime noise standards at the facility fence-line.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in project design specifications.</li> </ul>	Valley District	Before Construction
<p><b>NOISE-3:</b> Valley District shall establish a 24-hour Hot-Line to serve the local community. Valley District shall ensure that neighbor concerns are investigated and addressed immediately. The Hot-Line number shall be provided to the neighboring properties and be posted conspicuously at the entrance to the facility.</p>	<ul style="list-style-type: none"> <li>• Organize and employ staff members for Hot-Line</li> <li>• Record all calls and retain copies of records</li> <li>• Publicize Hot Line number to customers and general public</li> </ul>	Valley District	Post Construction

**TABLE L-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STERLING NATURAL RESOURCE CENTER PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<b>Public Services, Utilities, and Energy</b>			
<p><b>UTIL:</b> During design and prior to construction, Valley District shall verify the nature and location of underground utilities before the start of any construction that would require excavation. Valley District shall notify and coordinate with public and private utility providers at least 48 hours before the commencement of work adjacent to any located utility. The contractor shall be required to notify the service provider in advance of service interruptions to allow the service provider sufficient time to notify customers. The contractor shall be required to coordinate timing of interruptions with the service providers to minimize the frequency and duration of interruptions.</p>	<ul style="list-style-type: none"> <li>Conduct search for underground utilities prior to construction.</li> <li>Include mitigation measure in contractor specifications and construction schedule.</li> </ul>	Valley District, Construction Contractor	Before and During Construction
<p><b>UTIL-2:</b> Valley District shall require the use of energy efficient equipment, including but not limited to, pumps, conveyance features, and lighting for the proposed SNRC and pump stations.</p>	<ul style="list-style-type: none"> <li>Include mitigation measure in project design specifications and construction contractor specifications.</li> </ul>	Valley District, Construction Contractor	During Construction
<b>Traffic and Transportation</b>			
<p><b>TR-1:</b> Valley District shall require the contractor to prepare a traffic control plan that identifies specific traffic control measures to ensure access and safety on the local roadway network. The traffic control plan will include the following elements at a minimum:</p> <ul style="list-style-type: none"> <li>A schedule of lane closures and road closures over the construction period</li> <li>Measures to maintain traffic flow at all times across the construction zone including requiring flaggers to direct traffic when only one lane of traffic is available</li> <li>Detour routes and notification procedures if full road closures are needed</li> <li>Lane closure notifications to the City of Highland, City of San Bernardino and City of Redlands and local emergency services providers</li> <li>Temporary signalization modifications (if any) for intersection signals</li> <li>On-road traffic control features and signage compliant with city traffic control requirements</li> <li>Maintain access to residence and business driveways, public facilities, and recreational resources at all times to the extent feasible; Minimize access disruptions to businesses and residences</li> <li>Include the requirement that all open trenches be covered with metal plates at the end of each workday to accommodate traffic and access.</li> <li>Identify all roadway locations where special construction techniques (e.g., horizontal boring, directional drilling or night construction) will be used to minimize impacts to traffic flow</li> </ul>	<ul style="list-style-type: none"> <li>Include mitigation measure in construction contractor specifications.</li> <li>Verify that the Traffic Control Plan has been prepared and approved by the applicable local jurisdiction(s).</li> <li>Perform site inspections to routinely verify proper implementation of the approved Plan.</li> <li>Perform site inspections to ensure contractor is in compliance with plan.</li> <li>Retain copies of the Plan and inspection records in the project file.</li> </ul>	Valley District, Construction Contractor	Before and During Construction

**TABLE L-1 – MITIGATION MONITORING AND REPORTING PROGRAM FOR THE STERLING NATURAL RESOURCE CENTER PROJECT**

Mitigation Measures	Implementation, Monitoring, and Reporting Action	Responsibility	Monitoring Schedule
<p><b>TR-2:</b> Valley District shall prepare a notification plan for communication with affected residents and businesses prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which lanes and access point/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Verify that the notification plan has been prepared prior to construction.</li> <li>• Retain copies of public notifications in the project file.</li> <li>• Retain copies of questions and complaints received by telephone.</li> </ul>	<p>Rosedale/IRWD; Construction Contractor</p>	<p>Before and During Construction</p>
<p><b>TR-3:</b> Prior to installation of pipelines in East 5th Street, Valley District shall coordinate with the City of Highland to ensure that the proposed East 5th Street curb and drainage improvements are conducted simultaneously with the pipeline installation to avoid impacting the street twice in a short period of time.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Coordinate with City of Highland to schedule construction of pipeline installation.</li> </ul>	<p>Valley District, Construction Contractor</p>	<p>Before Construction</p>
<p><b>TR-4:</b> Valley District shall ensure that deliveries, biosolids haul trips, and worker shift transitions are discouraged during the period of 7:30 to 8:30 AM and 2:30 to 3:30 PM corresponding to peak pick up and drop off times at the high school.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications and instruct construction workers prior to construction.</li> <li>• Verify construction workers are performing deliveries at desired times but periodic site inspections.</li> </ul>	<p>Valley District, Construction Contractor</p>	<p>Before and During Construction</p>
<p><b>TR-5:</b> Valley District shall design turn-in and turn-out ramps adjacent to 5th Street to accommodate solids haul trips and material deliveries ingress and egress in a manner that ensures safe traffic conditions. Roadway improvements including modifications to the curb shall be approved by the City of Highland Department of Transportation.</p>	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Verify that the roadway improvement has been approved by the City of Highland Department of Transportation.</li> </ul>	<p>Valley District</p>	<p>Before Construction</p>

**MEMORANDUM OF UNDERSTANDING**  
**Species and Water Management in the San Bernardino Basin Area**  
**(superseding November 2016 MOU between the parties)**

This Memorandum of Understanding regarding Species and Water Management in the San Bernardino Basin Area (**MOU**) is entered into and effective this 7th day of February, 2017, by and among the Center for Biological Diversity (**Center**), East Valley Water District (**EVWD**), and San Bernardino Valley Municipal Water District (**Valley District**). The Center, EVWD and Valley District are each sometimes referred to herein as a "**Party**" and collectively are sometimes referred to herein as the "**Parties**."

Recitals

- A. Valley District filed Wastewater Change Petition WW0095 (**Petition**), dated September 22, 2016, with the State Water Resources Control Board (**State Water Board**), pursuant to Water Code section 1211. Valley District shares responsibility for managing the San Bernardino Basin Area (**SBBA**) to support the availability of water from the SBBA for municipal purposes.
- B. The Petition involves the reduction of 6 million gallons a day (**MGD**) of discharge from the Rapid Infiltration and Extraction facility (**RIX**) to the Santa Ana River, and the discharge of that 6 MGD into City Creek or the Redlands Basin, or to the Santa Ana River below RIX as needed for environmental mitigation and permitting purposes, via the Sterling Natural Resource Center (**SNRC**) project. The environmental impacts of the SNRC project were fully analyzed and mitigated in a Final EIR that was adopted, together with a statement of overriding considerations, by Valley District, which will construct and operate the SNRC. The Center provided comments during the public comment period on the SNRC EIR. The SNRC project will treat the wastewater generated in the EVWD service area and EVWD is working in collaboration with Valley District on the proposed SNRC.
- C. The Center filed a protest (**Protest**), dated September 27, 2016, with the State Water Board to the Petition. The Protest expresses concern regarding the potential impacts of the reduction of 6 MGD from the Santa Ana River on downstream beneficial uses, including the instream habitat of the Santa Ana sucker, a federally listed threatened species and California Species of Special Concern, and other species. The Protest further notes that the cities of San Bernardino and Rialto have also filed their own unrelated petitions to divert water from the Santa Ana River, to which the Center also filed protests.
- D. Valley District and EVWD seek the Center's withdrawal of its Protest. To achieve this outcome, the Parties wish to collaborate on a series of projects that are not required by CEQA or CEQA-Plus, for the additional benefit of species and water management in the SBBA and to memorialize their understandings by means of this MOU.

1029788.1

MOU for Species and Water Management in SBBA  
Center for Biological Diversity, EVWD and Valley District  
February 2017  
Page 1 of 5

Understandings

1. *Santa Ana Sucker Translocation Program.* Valley District has embarked on a fish translocation program for the benefit of the long-term recovery of the Santa Ana sucker in the SBBA. The Parties agree that it is in their mutual interest to work cooperatively on this effort in order to maximize the likelihood of success of the translocation program, as follows:

a. *The SNRC HCP Obligation.* As one component of a broader Santa Ana Sucker mitigation strategy, the Final EIR for the SNRC requires Valley District to implement conservation measure SAS-6, to locate a SAS population in the upper reaches of the SAR watershed within the San Bernardino Mountains. The fish translocation is to be conducted in consultation with USFWS under the authority of Section 7 of the Endangered Species Act. It is anticipated that this translocation will be complementary to the efforts underway by Valley District in support of the Upper Santa Ana River Habitat Conservation Plan (HCP), and the HCP will articulate success criteria for the translocation.

b. *The Alternative SNRC HMMP Obligation.* If the Upper Santa Ana River HCP is not approved in time to meet the SNRC project schedule, the SNRC Final EIR requires Valley District to prepare a SAS Habitat Monitoring and Management Plan (HMMP), which shall also include SAS-6, Upper Watershed SAS Population Establishment, a plan for translocating a population of Santa Ana sucker into City Creek or other suitable watershed tributary. The HMMP will be implemented by a contracted, qualified and permitted entity such as the Riverside-Corona Resource Conservation District (RCRCD), in coordination with the USFWS and CDFW. The HMMP will be approved by the USFWS and CDFW under their authority to enforce the federal and state Endangered Species Acts. The proposed diversion of 6 MGD from the RIX discharge will not occur until the HCP has been approved by USFWS or the HMMP has been approved by USFWS and CDFW.

c. *Current Translocation Planning.* Within the HCP and/or HMMP translocation framework described above, Valley District has committed to establish, monitor and manage a population of translocated Santa Ana sucker in the upper reaches of City Creek or within the boundaries of the San Bernardino National Forest within the Santa Ana River watershed. The source fish for this population will be primarily from the RCRCD captive propagation program, although, if needed, and approved by the USFWS, this source may be augmented with wild fish from the Santa Ana River. The translocation plans are currently under review by the USFWS, CDFW, and U.S. Forest Service. Once approved by these responsible agencies, it is Valley District's current intent to implement translocation immediately in an effort to establish one translocated Santa Ana sucker population in the upper reaches of City Creek in 2017. Valley District anticipates that augmentation to the population, through translocation of additional individuals, will occur for several subsequent years following year-1 activities in order to maximize chances of success. A robust monitoring and reporting program will be implemented as detailed in the HCP or HMMP.

d. *Two Translocations.* The Center has asked Valley District to implement a second translocated Santa Ana sucker population within a second tributary within the boundaries of the

1029788.1



San Bernardino National Forest. Subject to the availability of sufficient source fish, and so long as the second translocation is not inconsistent with the HCP and/or HMMP or other approvals of the USFWS, CDFW, or the U.S. Forest Service, Valley District agrees that it will include a second translocation in its habitat conservation planning proposal which is currently being reviewed by the USFWS. If the USFWS concurs with the concept of a second translocation, Valley District will develop the details of such a proposal and prepare the necessary environmental documentation that would allow Valley District to undertake efforts to translocate Santa Ana sucker to one location in the upper reaches of City Creek in 2017 and to a second watershed tributary within the boundaries of the San Bernardino National Forest in 2017, such as potentially Hemlock Creek, if enough fish are available for translocation during the same year. If insufficient source fish are available in 2017 for two sites, then Valley District agrees that the proposal will include an effort to translocate Santa Ana Sucker into a second watershed tributary within the boundaries of the San Bernardino National Forest no later than 2018. Planning for the proposal and the environmental document will begin upon completion of the Biological Opinion for the SNRC, which will provide the most up-to-date example of the regulatory requirements for such translocation; the environmental document is likely to be completed in mid-to-late 2017. As part of the second translocation, if that planning proposal is approved by USFWS, CDFW and the U.S. Forest Service, Valley District shall consult quarterly with the Center regarding the translocation site to ensure that the selected tributary for the second translocation site bears sufficient and reasonable indicia of success to sustain the relocated fish population, until the second translocation site is selected and the population is established. Once approved by these responsible agencies, Valley District would follow the same protocol as for the City Creek translocation, including potential augmentation to the population, through translocation of additional individuals, for several subsequent years following year-1 activities in order to maximize chances of success. A robust monitoring and reporting program will be implemented as detailed in the HCP or HMMP.

2. *San Bernardino Kangaroo Rat Mitigation.* The Parties additionally agree that it is in their mutual interest to work cooperatively in order to maximize the benefit of the efforts of Valley District to mitigate permanent impacts to the habitat of the San Bernardino Kangaroo Rat (SBKR) within City Creek, as follows:

a. *The SNRC Mitigation Obligation.* The SNRC biological resources site survey conducted over the summer of 2015 (and summarized in Appendix C of the SNRC DEIR) identified limited SBKR habitat and historic sightings within the City Creek impact areas. The DEIR concluded that SBKR may be displaced from a small area of marginal quality alluvial fan scrub habitat that will be permanently type converted to riparian forest habitat by the addition of perennial water to the inset channel (thalweg) within City Creek. To address potential impacts to the SBKR, the Final EIR includes Mitigation Measure BIO-2, which commits Valley District to direct consultation with CDFW and USFWS for potential impacts to SBKR and its habitat along with other listed species in City Creek. Valley District is committed to conduct additional future site-specific surveys and appropriate consultation with CDFW and USFWS, the results of which will be used to determine proper mitigation for impacted species. The SNRC Final EIR commits Valley District to a 1:1 mitigation ratio for temporary habitat impacts resulting from construction, and a 3:1 ratio for permanent impacts to species associated with affected alluvial fan habitat, including the SBKR.

1029788.1



b. *The Current SBKR Goal.* Valley District's current operating goal, in coordination with the USFWS and CDFW, has been to provide enhancement of SBKR habitat within City Creek, near the area of impact, to achieve maximum ecological value to the species near its impacted location, which is in a highly degraded state. However, if onsite enhancement proves not to be possible, Valley District has then committed to obtain and manage high-quality habitat or an area with the potential to become high quality habitat through additional management adjacent to the impact area and within designated critical habitat.

c. *The Modified SBKR Goal.* The Center has expressed a concern that provision of permanent mitigation habitat for the SBKR within City Creek could have reduced long term benefit to the species if newly created habitat is subjected to future flood control efforts. Accordingly, consistent with the SNRC Final EIR, Valley District agrees to permanently conserve, monitor and manage suitable SBKR upland habitat, preferably adjacent to City Creek or the Santa Ana River, at a 3:1 ratio for permanent impacts related to the project, estimated at approximately 15 acres. The conserved habitat would be located in an area outside the ongoing impacts from flood control activities and other stressors currently affecting City Creek habitat for SBKR. To accomplish this modified SBKR goal, Valley District shall update the Center quarterly regarding the selection of the permanent SBKR conserved habitat site until the permanent site is selected and acquired.

3. *Rialto Tank Proposal.* As a component of the Upper Santa Ana River HCP, and as part of the technical assistance and consultation process with the U.S. Fish and Wildlife Service (USFWS) for the SNRC, Valley District has begun investigating the feasibility of constructing a reservoir tank at the top of Rialto Channel that would store water to supply supplemental flow to the Santa Ana River during RIX shutdowns. Subject to all necessary agreements, approval and environmental documentation, the planning of the tank is expected to contemplate that it be built underground to hold enough water to flow at 21 cfs for up to 5 hours, which is anticipated to be the maximum duration of planned RIX shutdowns based on public records. During such times as the RIX facility discontinues flow to the Santa Ana River, whether planned or unplanned, the tank would discharge water at 21 cfs in order to ensure hydraulic continuity throughout the chief area occupied by the Santa Ana sucker in the Santa Ana River mainstem. The tank could also be used for additional environmental benefits such as flushing sand off of gravel beds in Rialto Channel and/or the River mainstem immediately preceding sucker spawning season, and/or storing cool groundwater from existing or newly constructed wells for discharge into the Rialto Channel, as may be needed based on real-time Rialto Channel water temperature monitoring, to maintain temperatures suitable to the sucker in the Santa Ana River mainstem. Should the feasibility and planning efforts recommend moving forward with the Rialto tank proposal, Valley District shall use its good faith efforts to construct, implement and operate the Rialto tank. Valley District shall provide quarterly updates to the Center on the progress of the Rialto tank feasibility, planning, and implementation until its operation commences.

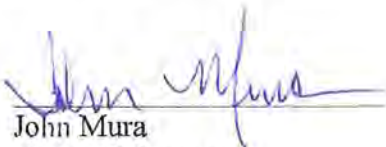
4. *General Terms and Conditions.* Upon the signing of this MOU by all Parties, the Center shall submit a letter withdrawing its Protest to the State Water Board. Nothing in this MOU shall be construed to require: (a) Valley District and/or EVWD to take any action that would be inconsistent or in conflict with government permits and/or approvals issued for the SNRC; or (b)

any Party to provide information to any other Party that is privileged, confidential or otherwise not subject to disclosure pursuant to the California Public Records Act or the Federal Freedom of Information Act. Any summaries of the SNRC Final EIR requirements and mitigation measures as set forth herein are provided for context and shall not be deemed or construed to alter the Final EIR's requirements or components.

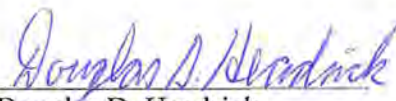
**CENTER FOR BIOLOGICAL DIVERSITY**

By: \_\_\_\_\_  
Lisa T. Belenky  
Senior Counsel

**EAST VALLEY WATER DISTRICT**

By:   
John Mura  
General Manager

**SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT**

By:   
Douglas D. Headrick  
General Manager and Chief Engineer



United States Department of the Interior  
FISH AND WILDLIFE SERVICE  
Ecological Services  
Carlsbad Fish and Wildlife Office  
2177 Salk Avenue, Suite 250  
Carlsbad, California 92008



In Reply Refer To:  
FWS-SB-16B0182-17F0387

March 9, 2017  
*Sent by Email*

Doug Eberhardt  
Section Chief (W-3-3)  
Infrastructure Section  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street  
San Francisco, California 94105

Attention: Elizabeth Borowiec

Subject: Formal Section 7 Opinion on the Proposed Sterling Natural Resource Center, San Bernardino County, California

Dear Mr. Eberhardt:

This letter transmits our, the U.S. Fish and Wildlife Service (USFWS), biological opinion on the proposed issuance of federal funding [Clean Water State Revolving Fund (CWSRF)] by the U.S. Environmental Protection Agency (USEPA) for the construction and operation of the proposed Sterling Natural Resources Center (SNRC or Project). The USEPA has delegated the administration of the CWSRF program to states, including California, under the federal Clean Water Act (CWA), to assist in funding projects intended to improve water quality. The Division of Financial Assistance of the State Water Resources Control Board (State Water Board) administers the CWSRF program in California pursuant to 40 Code of Federal Regulations (CFR) Part 35, Subpart K. The USEPA is the lead Federal agency and the U.S. Army Corps of Engineers (USACE) is a cooperating agency for this consultation. The action of the USACE includes the issuance of a Clean Water Act Section 404 permit for City Creek and the Santa Ana River. East Valley Water District (EVWD), in cooperation with the San Bernardino Valley Municipal Water District (Valley District), is the non-Federal applicant (Valley District).

This biological opinion addresses the effects of the SNRC on the federally endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*; SBKR) and its designated critical habitat and the federally threatened Santa Ana sucker (*Catostomus santaanae*; SAS) and its designated critical habitat in accordance with Section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). There are four other federally listed species in the larger Project area, four of which have designated critical habitat. You have requested our concurrence with your determination that the proposed action is not likely to adversely affect these species including the endangered Santa Ana River woolly-star (*Eriastrum densifolium* ssp. *sanctorum*; woolly-star), southwestern willow flycatcher (*Empidonax traillii extimus*; flycatcher), least Bell's vireo (*Vireo*

*bellii pusillus*; vireo), and the federally threatened coastal California gnatcatcher (*Polioptila californica californica*; gnatcatcher). You have also concluded that the proposed action will have no effect to the designated critical habitat of mountain yellow-legged frog [southern California DPS (*Rana muscosa*)], SAS, SBKR, or flycatcher. We concur with your determination that the proposed action is not likely to adversely affect woolly-star, vireo, flycatcher, or gnatcatcher.

#### Santa Ana River Woolly-star

The woolly-star is an endemic to the Santa Ana River Watershed. Historically this species ranged from the upstream reaches of the Santa Ana River alluvial fan and into the foothills of the San Bernardino Mountain Range in San Bernardino County downstream to the Santa Ana Canyon in Orange County. It is found only within open washes and early-successional scalebroom scrub on fluvial deposits where flooding and scouring occur at a frequency that allows the persistence of open shrublands (USFWS 2010a). The species occurs in the upper mainstem of the Santa Ana River, from the City of Riverside to just upstream of Seven Oaks Dam, with additional occurrences in Mill Creek, City Creek, Plunge Creek, Lytle Creek, and Cajon Creek (USFWS 2010a).

Woolly-star has been documented within the floodplain of City Creek, the San Bernardino International Airport property, and the Santa Ana River floodplain both upstream and downstream of the confluence of the Rialto channel and the Santa Ana River (ESA 2016a). In summer 2016 the City Creek rare plant survey (ESA 2016a) did not find any woolly-star plants in the footprint of the construction area or any plants within the single dry braid of the creek thalweg. The semi-perennial discharge of effluent from the Project would result in the conversion of xeric riparian and/or scalebroom scrub vegetation to riparian woodland vegetation from downstream of the outfall in City Creek (Boulder Avenue) to near Alabama Street. Where this occurs in City Creek, conversion of scrub vegetation to woodland vegetation will limit the potential of woolly-star to exist. Although this limits the potential habitat area for this species it represents an insignificant decrease in available habitat across the species' range and does not constitute an impact that would affect species' recovery.

Within the mainstem of the Santa Ana River downstream of the City Creek confluence, the species becomes less common. Downstream of the Rialto Channel in the mainstem river woolly-star exists patchily in the channelized floodplain. A decrease to the discharge of the total flow volume from Rapid Infiltration and Extraction (RIX) facility, as proposed as a Project-related action, may positively affect the distribution of woolly-star located downstream in the river floodplain by reducing the width of wetted channel and its associated riparian corridor and increasing the area of habitat suitable for woolly-star. Preconstruction surveys will be conducted to avoid any individual woolly-star that may be affected by Project activities. Given the lack of positive occurrence records in the proposed footprint of the direct impact area and proposed conservation measures that will avoid impacts to woolly-star, we concur with your determination that the proposed Project is not likely to adversely affect the species. No critical habitat for the species is present in the Project area.

### Southwestern Willow Flycatcher

Flycatchers are migratory, spending the winter in locations such as southern Mexico, Central America, and probably South America, and nesting in the southwestern United States from about May to September (USFWS 2014a). Surveys conducted for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) have recorded flycatcher on the Santa Ana River in the area of indirect effect at Hidden Valley in 2007 (4 detections) and in 2015 (1 detection) (ESA 2016a). In most years one or more flycatcher territories have been documented in Prado Basin (Hoffman *et al.* 2014). The most recent flycatcher record in the area of indirect effect is of a single adult male observed just upstream of Mission Boulevard Bridge on the Santa Ana River (observation date June 18, 2016; ESA 2016b).

Upstream of the Mission Boulevard Bridge to the RIX outlet is a reach of the river that has falling groundwater (ESA 2016a). Riparian vegetation in this portion of the river is dependent on infiltrated effluent surface flow for survival during the dry season when the groundwater is below the rooting depth of most of the shallow-rooted native riparian plant species. Project effects are expected to have a permanent reduction in the total amount of riparian habitat in this reach of the river due to channel constriction from reduced surface flow. The wetted channel is expected to constrict by an estimated 8 percent resulting in an equivalent constriction of the riparian corridor and loss of up to 1.21 acres of riparian vegetation. Riparian vegetation will be lost on the outer margins of the current riparian corridor from soil drying and type conversion to scalebroom scrub vegetation. Rising groundwater near Mission Boulevard was confirmed by the U.S. Geological Survey (USGS) during RIX shutdown monitoring in 2015 (ESA 2016a). This condition, rising groundwater, is expected to persist unaffected with Project reduced discharge from RIX, continuing downstream to Prado Basin.

Of the 1.21 acres anticipated to be lost, approximately 0.5 acres of the wetted channel is expected to be lost within designated critical habitat for flycatcher, from the RIX outlet to the Riverside County line located just downstream of Riverside Avenue Bridge. Although not a precise measure of riparian vegetation, the 0.5 acres within designated critical habitat, or 1.21 acres of wetted channel anticipated being lost, is spread along a 4.2 mile river reach (RIX facility to Mission Boulevard Bridge). The portion of the riparian corridor that is expected to be lost, outer margin of riparian corridor, does not provide the ecological values important to flycatcher (i.e. large riparian canopy overhanging water or wetter soils). Mowing of the riparian corridor is conducted by Riverside County Flood Control and Water Conservation District (RCFCWCD) downstream of Riverside Avenue to below Mission Boulevard for the purposes of maintaining channel capacity (as required by the USACE manual for maintaining the levee system). This activity temporarily limits the amount of riparian habitat to 10 feet on either side of the stream corridor for the period of time it takes for the habitat to regrow (generally 2 to 5 years).

Wastewater added to City Creek will create additional riparian habitat in the Santa Ana River watershed beyond the current terminus of the riparian corridor. The amount and extent of riparian habitat created will be dependent on a variety of factors, including environmental conditions, depth to groundwater, and long-term management by San Bernardino County Flood

Control District. It is anticipated that up to 8.2 acres of riparian habitat will be created in City Creek. Since flycatcher currently use most of the lowland riparian habitats as migratory corridors, the extension of continuous riparian habitat from the San Bernardino Mountain Range to other downstream riparian habitats is considered a long-term benefit to the species.

Conservation Measure 17b.i has been included in the Project description to enhance portions of the perennial stream habitat for SAS in the mainstem of the Santa Ana River. This activity may temporarily remove riparian vegetation in ingress, egress, and work areas at six locations downstream of the RCFCWCD-maintained USACE levee system, but will be conducted in areas not occupied by flycatcher. This activity will minimize impacts to riparian vegetation in coordination with the USFWS to avoid incidental take of flycatcher.

Given the infrequent occurrence records of this species in the lowland floodplain of the Santa Ana River outside of Prado Basin, abundant suitable habitat that will remain unaffected by the Project, low potential for losses of riparian habitat to effect the species in the proposed Project impact area by reducing the potential foraging and/or nesting habitat for the species, no proposed impact to ecological function of designated critical habitat, and potential benefit to the species with the creation of riparian habitat in City Creek, we concur with your determination that the proposed Project is not likely to adversely affect flycatcher or its designated critical habitat.

#### Least Bell's Vireo

The vireo is an obligate riparian species during the breeding season and is characterized as preferring early successional habitat (USFWS 1998a). It is a subtropical migrant, traveling 2,000 miles annually between breeding and wintering grounds. It arrives in southern California breeding grounds in mid-March to early April, and is generally present until late September. Males establish and defend territories through counter-singing, chasing and sometimes physically confronting neighboring males. Territory size ranges from 0.5 to 7.5 acres.

The vireo population in the U.S. has increased 10-fold since its listing in 1986, from 291 to 2,968 known territories (USFWS 2006). The population has grown during each 5-year period since the original listing, although the rate of increase has slowed over the last 10 years. Most of the vireo breeding sites are located in southern California between the Tehachapi Mountains in Kern and Ventura counties south to northwestern Baja California, Mexico (USFWS 2006). Thus, despite a significant increase in overall population numbers, the population remains restricted to the southern portion of its historic range.

The overall positive population trend for vireo since its listing is primarily due to efforts to reduce threats such as loss and degradation of riparian habitat, and cowbird parasitism. The control of giant reed (*Arundo donax*) has been important in improving vireo habitat. Brood parasitism by cowbirds remains the primary threat to vireo recovery. Cowbird trapping has proven to be an effective technique for recovering vireo populations in areas it is implemented.

A recent and developing threat to vireo is the shot hole borer (*Euwallacea* sp.), an invasive ambrosia beetle that forms a symbiosis with a fungus (*Fusarium* sp.) that causes Fusarium dieback, a disease that induces branch or whole tree death (Eskalen *et al.* 2013). Molecular, morphometric, and chemical testing have found that the more common tea shot hole borer (*Euwallacea fornicatus*), native to tropical southeastern Asia and naturalized in Florida and Hawaii, is different from the newly named Polyphagous (PSHB) and Kuroshio (KSHB) shot hole borers found invading southern California woodlands (Eskalen *et al.* 2013; Chen *et al.* 2016). In 2013 there were 19 confirmed reproductive host trees species located in Los Angeles and Orange counties (Eskalen *et al.* 2013). This number has increased to 49 host species, including most native riparian trees and shrubs (Eskalen 2017). The two species have invaded new areas of southern California riparian habitats, north from coastal San Diego to Santa Barbara counties and east to western Riverside and San Bernardino counties (Eskalen 2017). Although the maximum extent of damage and result of this invasion is yet unknown, early monitoring suggests that riparian forests are especially vulnerable to Fusarium dieback with tree death observed (Boland 2016). Long-term management, monitoring, and research into control methods are needed to combat this threat to vireo and other obligate riparian species.

Vireo is relatively common in the continuous riparian corridor found along the Santa Ana River, from Rialto Channel downstream to Prado Basin. Upstream, vireo is generally restricted to patches of riparian habitat near the Santa Ana River confluence with San Timoteo Creek and further upstream near the foothills of the San Bernardino Mountain Range in City Creek. It is anticipated that up to 1.21 acres (8 percent) of wetted habitat will be permanently lost with Project related reduced discharge [6 million gallons per day (MGD)] into the Santa Ana River. Associated losses of riparian habitat are expected to be small and may be undetectable. Losses will be spread from the RIX outlet downstream to Mission Boulevard Bridge (4.2 miles) and will vary by location, depending on river depth. With flow reduction, channel constriction was modeled at between 4 and 7 percent (ESA 2016a), but we used 8 percent reduction when assessing changes to the wetted channel (see Indirect Effects section for SAS).

Conservation Measure 17b.i has been included in the Project description to enhance portions of the perennial stream habitat for SAS in the mainstem of the Santa Ana River. This activity may temporarily remove riparian vegetation in ingress, egress, and work areas at six locations downstream of the RCFCWCD-maintained USACE levee system, but will be conducted in areas not occupied by vireo. This activity will minimize to the maximum extent practicable impacts to riparian vegetation in coordination with the USFWS to avoid incidental take of vireo.

Project-induced indirect changes to riparian vegetation downstream of Riverside Avenue are not expected to reduce the ecological value of the habitat for use by vireo or reduce the amount of habitat in any specific location that may rise to the level of take of this species. Creation of riparian habitat (8.2 acres) in City Creek will more than offset any loss of riparian habitat in the mainstem of the Santa Ana River. Project impacts are expected to occur upstream and effects of reduced discharge on the amount and function of the riparian habitat is anticipated to diminish moving downstream, with measureable changes to surface flow in the stream (wetted channel) subsiding at approximately Mission Boulevard Bridge. This is approximately 1 mile upstream of

the start of the designated critical habitat for vireo in the mainstem Santa Ana River which continues downstream into Prado Basin. Designated critical habitat for vireo is located in the defined action area (described in the Action Area section below). Because we do not expect Project-related reductions in riparian habitat to cause take of individual vireo or reduce the distribution of vireo in the river, and no change in the amount or function of critical habitat is expected, we concur with your determination that the proposed Project is not likely to adversely affect the vireo or its designated critical habitat.

#### Coastal California Gnatcatcher

Gnatcatchers range from coastal southern California to Baja California, Mexico. The inland metapopulation, which is distributed around the Project area and east and north to the foothills of the San Bernardino Mountain Range, is relatively isolated from the coastal metapopulations. There is no suitable nesting habitat in the discharge footprint in City Creek and suitable breeding habitat (minimum of 15 – 20 percent native shrub cover) is patchily distributed downstream (ESA 2016a). The species could utilize the scalebroom scrub vegetation in City Creek for foraging and dispersal, but the lack of records and sparsity of habitat within City Creek and its confluence with Santa Ana River, indicate that gnatcatcher presence is likely ephemeral.

Discharge of effluent into City Creek is expected to result in the conversion of a narrow strip of early seral-stage scalebroom scrub vegetation to riparian vegetation. This would not reduce the available gnatcatcher foraging habitat as riparian vegetation also provides this function (foraging habitat) for the species. The nearest gnatcatcher record is approximately 2 miles to the east of City Creek within the Woolly-Star Preserve Area. Project type conversion of scalebroom scrub to riparian habitat is not expected to result in direct effects on gnatcatcher breeding habitat.

Downstream in the mainstem of the Santa Ana River there are gnatcatcher occurrence records on either side of the river near the RIX outfall in upland coastal sage scrub habitat, less than 0.5 miles from the area proposed for Project discharge reduction. These records suggest that gnatcatcher may use the river on a limited basis for foraging and dispersal. Flow reduction and non-native vegetation management in the Santa Ana River will not reduce the available amount of scalebroom scrub or native riparian habitat that gnatcatchers may be using for foraging habitat. It is anticipated that gnatcatcher foraging and/or breeding habitat (scalebroom scrub habitat) will increase as part of flow reduction from the RIX facility, benefitting the species. Designated critical habitat for gnatcatcher occurs east of the RIX facility, adjacent to the river in upland areas, and will not be affected by this Project.

Given the lack of gnatcatcher occurrence records near the Project footprint in City Creek, the lack of mature scalebroom scrub habitat (breeding habitat) that will be affected from water discharge into City Creek, and the absence of effects to designated critical habitat, we concur with your determination that the proposed Project is not likely to adversely affect the gnatcatcher, or its designated critical habitat. Additionally, the proposed conservation of scalebroom scrub to mitigate impacts to SBKR and/or woolly-star as part of the Project, as described below, may benefit the gnatcatcher.



Avoidance measures to benefit woolly-star, vireo, flycatcher, and gnatcatcher have been included in the Project description below. Beyond the identification of those measures, woolly-star, vireo, flycatcher, or gnatcatcher will not be further discussed in this document.

This biological opinion is based on information provided in the following documents and communications: biological assessment (ESA 2016a; BA) and an amendment to the BA (Valley District 2017); *Habitat Maintenance and Monitoring Plan* (ESA 2016c; HMMP) and an amendment to the HMMP (Valley District 2017); *Sterling Natural Resource Center Draft Environmental Impact Report* (ESA 2015a); Reduced Flow Model (ESA 2015b), GIS layers provided for Project features including federally listed plant and animal locations; survey reports; information provided during meetings and phone calls; site visits; email correspondence; and information in the Palm Springs Fish and Wildlife Office (PSFWO) files. The Project file for this consultation is located at the PSFWO.

### CONSULTATION HISTORY

Informal discussion between the applicant and the USFWS began on March 5, 2015. We had a conference call on June 14, 2016 with USEPA, USACE, and State Water Board. We received the BA on August 8, 2016. On November 20, 2016 we received a letter from you dated November 18, 2016, requesting initiation of formal consultation. The BA had incorporated previous comments on the draft EIR and comments during many meetings and conversations between Valley District and the USFWS in regard to the Sterling Natural Resource Center proposed covered activity within the Upper Santa Ana River Habitat Conservation Plan. After further review of the BA, the USFWS and Valley District met on January 24, 2017 to discuss conservation measures included in the BA. This discussion led to an amendment of the BA (received February 6, 2017). Consultation was initiated on November 20, 2016, the date we received your request.

*Santa Ana River Pipeline (removed from Project description, February 6, 2017)*

On February 6, 2017 the USFWS received a document revising the BA (Valley District 2017). In this document, Valley District removed the Santa Ana River component of the Project description, which would have connected the SNRC with the discharge pipeline of the San Bernardino Water Reclamation Plant. A new pipeline segment would have been constructed along Alabama Street to the existing Santa Ana River pipeline by proceeding west from Alabama Street (along the boundary between the cities of San Bernardino and Redlands) for at least 1,000 feet and tying in near the east bank of City Creek. Associated impacts to 2.39 acres of SBKR designated critical habitat, scalebroom scrub vegetation, and up to 850 woolly-star plants near the San Bernardino International Airport Authority property and within the confluence of City Creek and the Santa Ana River were removed from the Project description.

## BIOLOGICAL OPINION

### DESCRIPTION OF THE PROPOSED ACTION

Valley District is proposing to construct the SNRC facility in the City of Highland to treat wastewater generated in the EVWD service area for groundwater recharge in the upper Santa Ana River watershed. EVWD currently conveys its wastewater to the City of San Bernardino for secondary treatment at the San Bernardino Water Reclamation Plant (SBWRP) and tertiary treatment at the RIX facility which discharges to the Santa Ana River. The proposed Project would instead treat, recycle and reuse the wastewater for multiple beneficial uses within the upper Santa Ana River watershed. Six MGD of water would be diverted from the RIX facility and will not be discharged into the Santa Ana River. The diverted 6 MGD would be treated at the SNRC and discharged higher in the watershed either into City Creek, or into existing basins in the City of Redlands, California (Redlands Basins, operated by the City of Redlands) (Figure 1). The purpose of diverting the 6 MGD from the Rix facility for treatment at the SNRC is to provide the local community with greater control over the cost and method of wastewater treatment while producing a new supply of recycled water for local groundwater replenishment in the Bunker Hill Groundwater Basin. In addition, the proposed Project would provide an opportunity to create and/or enhance riparian and aquatic habitats in City Creek that would contribute to the regional conservation goals being developed through the Upper Santa Ana River Habitat Conservation Plan (HCP).

#### Project Area

The proposed Project is located within three municipalities: City of Highland, City of San Bernardino, and City of Redlands. Portions of the treated water conveyance pipelines for the City Creek and Redlands Basins alternatives would also traverse unincorporated areas within the County of San Bernardino. The SNRC would be constructed on a 14-acre parcel of land, located at North Del Rosa Drive between East 5th Street and East 6th Street in the City of Highland. The SNRC recycled water treatment facility would be located on the 8-acre parcel east of North Del Rosa Drive. Offices for the operations of the SNRC would be located in administrative buildings that would be constructed on the 6-acre parcel to the west of North Del Rosa Drive.

The SNRC would produce tertiary-treated water for reuse. A conveyance system including a pumping station and pipeline would be constructed to convey treated water from the SNRC to discharge locations in City Creek and/or the Redlands Basins.

Most of the wastewater reaching the new treatment facility would be conveyed by gravity within the existing collection system. However, some modifications would be necessary to connect the existing collection system with the new treatment plant. Two lift stations and approximately 11,000 linear feet of forcemain would be installed within city streets west of the SNRC.

## **Project Components**

### **Sterling Natural Resource Center**

The SNRC would be constructed on two parcels in the City of Highland. The parcel to the west of North Del Rosa Drive is owned by EVWD and would support the Administration Center.

### **Treatment Facility**

The SNRC would provide tertiary treatment of wastewater generated within the EVWD service area. The SNRC would have a maximum capacity of 10 MGD and produce tertiary treated water in compliance with California Code of Regulations Title 22 recycled water quality requirements for unrestricted use. The plant design includes primary treatment, a membrane bio-reactor, ultraviolet light disinfection, and anaerobic solids processing with off-site solids disposal. The proposed SNRC would consist of multiple buildings, to house the process components, equipment, and offices.

### **Administration Center**

The 6-acre parcel west of North Del Rosa Drive would be developed into the SNRC Administration Center. The Administration Center would consist of administration buildings and pavilions housing administrative offices needed for the treatment plant, surrounded by publicly accessible open space. The Administration Center would be designed to serve the community with an interpretive center with community gardens and community pavilions. It would also act as an Emergency Operations Center during emergencies.

### **Construction**

The Project would take approximately 18 months to construct; including 18 months for the SNRC, 16 months for the conveyance facilities, 6 months for the discharge structures, and 6 months for equipping the existing Rialto wells. Excavated soils would be reused onsite to the extent feasible and otherwise deposited offsite. Approximately 21,000 cubic yards (CY) of soil would need to be hauled off site for the Treatment Facility and Administration Center. This assumes 20 CY per truck load on average, approximately 1,050 dump truck trips would be needed for removal of the excavated material. In addition, structural fill material (aggregate) would need to be hauled onto the site. An additional 1,000 truck trips may be required for aggregate deliveries.

### **Discharge Locations and Groundwater Recharge Areas**

The treated water will be conveyed by pipelines to discharge structures at City Creek and Redlands Basins.

*City Creek*

To connect the SNRC to the City Creek discharge facility, approximately 38,700 linear feet of 24-inch diameter pipeline would be installed in existing city streets. The pipeline alignment runs east from the SNRC property in East 6th Street or East 5th Street heading east from the SNRC for approximately 2 miles to Central Avenue and south to the City Creek channel crossing, then north to the City Creek discharge structure. The pipeline would cross under the SR-210 freeway using trenchless construction methods and would be installed within paved street rights-of way and San Bernardino County Flood Control District (SBCFCD) right-of-way along City Creek. Within City Creek, the discharge structure would have a permanent footprint of up to 30-foot by 30-foot and be constructed of concrete with a partially buried energy dissipation structure. The facility would include flow control valves, metering, and telemetry. Construction methods may include trenchless methods under the flood control levee, daylighting within the creek channel, or trenching through the levee.

Construction zones in roadways would be approximately 20 feet wide across one or two traffic lanes. Open trenches would be between approximately 10 and 15 feet wide. The construction corridor would be 30 feet wide, which is enough to accommodate the trench and to allow for staging areas and vehicle access. Offsite construction staging areas would be identified by contractors for pipe lay-down, soil stockpiling, and equipment storage. On average, 150 feet of pipeline would be installed per day. Trenches would be backfilled at the end of each work day or temporarily closed by covering with steel trench plates.

The construction equipment needed for pipeline installations generally includes: backhoes, excavators, dump trucks, shoring equipment, steam rollers, and plate compactors. Typically, 15 to 20 workers would be required for pipeline installations. Excavated suitable soils would be reused as backfill and other disposed offsite.

Trenchless construction methods would be employed to install pipelines under sensitive drainages, highways, and creek levees. Trenchless installation could include either directional drilling or jack and bore methods. All trenchless installations would require an approximately 50-foot by 100-foot temporary construction area on each side of the crossing for installation shafts (pits), materials, and equipment. Trenchless crossings would be designed to avoid physical impacts to the flood control levee. Construction of the discharge structure is estimated to take about 2 months, with construction of one structure overlapping with pipeline installation at any given time. In general, construction activities would occur between 7:00 a.m. and 7:00 p.m., Monday through Friday.

*Redlands Basins*

A 24-inch diameter conveyance pipeline would be installed within Alabama Street from East 6th Street or East 5th Street for approximately 1.3 miles south to the existing City of Redlands' basins (Redlands Basins). The conveyance pipeline would cross the Santa Ana River within an existing conduit attached to the Alabama Street Bridge. Valley District owns an existing 30-inch

diameter pipe within the bridge deck, and the existing pipeline would act as a casing for the proposed 24-inch pipeline. No trenching within sensitive habitat will be necessary when crossing the Santa Ana River.

A discharge structure would be constructed at the Redlands Basins to convey flows into multiple basins. The discharge structure would be partially buried with a less than 30-foot by 30-foot permanent footprint. Alternatively, a pipeline manifold would be installed in the basin with multiple valves at a predetermined spacing that can be opened or closed at different times based on the incoming flow. The facility would include flow control valves, metering and telemetry. Construction of the discharge structure would occur between 7:00 am and 7:00 pm and is estimated to take about 2 months. The construction corridor along Alabama Street would be 30 feet wide until it connects to the discharge structure in the Redlands Basins and reduces to a 20-foot wide corridor.

### **Conservation Measures**

General and species-specific conservation measures (CM) are listed below that are designed to avoid and minimize impacts to federally listed species and their designated critical habitats, and to offset impacts that may otherwise adversely affect a listed species. General measures are to be implemented in all areas where sensitive resources may occur (i.e., City Creek or Redlands Basins).

#### General Measures

- CM 1. Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) will be provided to work crews by a qualified biologist(s) prior to the commencement of construction activities. Each worker will receive the WEAP training prior to beginning work on the Project. Training materials and briefings will include but not be limited to, discussion of the federal and state Endangered Species Acts, the consequences of noncompliance with Project permitting requirements, identification of special-status plant and wildlife species and sensitive natural plant community habitats present in or adjacent to the work areas, a contact person in the event of the discovery of dead or injured wildlife, and review of construction-related avoidance and minimization requirements. Maps showing the location of special-status plants and wildlife, exclusion areas, or other construction limitations (i.e., limited operating periods) will be provided to the environmental monitors and work crews prior to ground disturbance.
- CM 2. Limits of Disturbance. Prior to construction in or adjacent to sensitive habitat areas and under the direction of a qualified biologist, Valley District will clearly delineate the construction right-of-way (stake, flag, fence, etc.) that restricts the limits of construction to the minimum necessary to implement the Project.
- CM 3. Biological Monitoring. Prior to the start of construction, Valley District will retain a USFWS-authorized biological monitor on site during the initial ground

disturbance and during construction activities to monitor habitat conditions and impacts. The biological monitor will ensure compliance with the Project description evaluated in the biological opinion, including all CMs and terms and conditions, and will have the authority to halt or suspend all activities until appropriate corrective measures have been taken. The biological monitor will report any non-compliance immediately to the USFWS. The biological monitor will be a qualified biologist/botanist with species expertise appropriate for this Project. The USFWS will approve all biological monitors before Project activities can begin.

- CM 4. Construction Best Management Practices. The Contractor will implement the following Best Management Practices during construction of pipelines and discharge structures to protect any adjacent sensitive natural communities that provide habitat for special-status species.
- a. The following water quality protection measures will be implemented during construction:
    - i. Stationary engines, such as compressors, generators, light plants, etc., will have drip pans beneath them to prevent any leakage from entering runoff or receiving waters.
    - ii. All construction equipment will be inspected for leaks and maintained regularly to avoid soil contamination. Leaks and smears of petroleum products will be wiped clean prior to use.
    - iii. Any grout waste or spills will be cleaned up immediately and disposed of off-site.
    - iv. Spill kits capable of containing hazardous spills will be stored on-site.
  - b. To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered with tarp, plywood or similar materials at the close of each working day and will be inspected visually to confirm animals would be excluded, to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow for animals to escape, if necessary. Before such holes or trenches are backfilled, they should be thoroughly inspected for trapped animals. If trapped wildlife is observed, escape ramps or structures will be installed immediately to allow escape.
- CM 5. On Site Overnight Storage. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods should be

thoroughly inspected for birds and other wildlife before the pipe is subsequently buried, capped, or otherwise used or moved.

### Species-Specific Conservation Measures

#### San Bernardino Kangaroo Rat

- CM 6. Exclusionary fencing will be erected in construction areas known to be occupied by SBKR or containing kangaroo rat sign (e.g., burrows, scat, tail drags, or dust baths) as determined by a preconstruction survey by a qualified biologist (i.e., City Creek or Redlands Basins). The fencing configuration and materials will meet the specifications found in Appendix A. An alternative fence design or material may be used upon approval of the USFWS. Proposed fence installations will be submitted to the USFWS for review and approval. No ground disturbance may occur prior to approval of the design.
- a. A qualified biologist or approved biological monitor will be present on site when the fence is installed to minimize disturbance of SBKR burrows from fence installation.
  - b. The integrity of the fencing will be checked by a qualified biologist at the end of each work day. Any gaps greater than 0.5 inch will be repaired immediately.
  - c. Construction access openings will be closed and secured at the end of each work day using the at-grade fencing method.
  - d. The fence will remain in place for the duration of construction activities and removed at the completion of the relevant Project activity.
- CM 7. A qualified biologist will initiate preconstruction trapping within each fenced construction zone the evening of the day on which the fence is installed to remove as many SBKR as possible from within each fenced area.
- a. Trapping will be conducted for 5 consecutive nights or until no SBKR are captured for 2 consecutive nights.
  - b. Any SBKR removed from within the construction zone will be relocated outside of the fenced area to an area which is safely away from the construction activities.
  - c. Monthly reporting will occur during Project construction in SBKR habitat areas and include all sensitive species detected in the vicinity of the work areas, and all construction-related actions that may have directly affected SBKR.

- CM 8. Handling and relocating SBKR will be conducted as follows:
- a. Individual SBKR will be held for no longer than 1 hour before releasing them, and they will be relocated as quickly as possible.
  - b. Animals will not be held in plastic bags; they will be transferred in a clean, structurally sound, breathable container with adequate ventilation.
  - c. Animals will be handled and temporarily held in a manner and conditions which will prevent them from becoming stressed due to temperature extremes (either hot or cold) at any time.
- CM 9. Construction within fenced areas will begin no more than 5 days after fence placement (i.e., at the conclusion of maximum number of days in which trapping is conducted); or if this is not possible, the preconstruction trapping will be extended or repeated.
- CM 10. The qualified biologist or approved biological monitor will visually inspect trenches and steep-walled holes, as in Measure 4b above, before the onset of daily construction for the presence of SBKR. If SBKR are discovered, the biologist will supervise the movement or relocation of the equipment until the animal has left the area on its own or capture the animal and release it outside the exclusionary fence in suitable habitat as close as possible to where it was discovered.
- CM 11. To the extent feasible, soil stockpiles in SBKR habitat will be located within the construction area inside the exclusionary fence. If soil stockpiles must be located in SBKR habitat outside the main construction area, they will be located in areas where there is no kangaroo rat sign, as determined by a qualified biologist. Exclusionary fencing will be placed around soil stockpiles outside the main construction area to minimize the potential for SBKR to access them. They will be inspected prior to daily construction for evidence of kangaroo rat sign by a qualified biologist. If sign is detected trapping and relocation of SBKR will be conducted as described above.
- CM 12. Nighttime construction and night lighting will not be allowed.
- CM 13. Valley District will prepare and implement a revegetation plan to replace temporarily impacted habitat in proposed impact areas (i.e., City Creek and Redlands Basins) or lands conserved as compensatory mitigation. The revegetation plan will be submitted to the USFWS a minimum of 60 days prior to commencing construction activities in native habitat. At minimum, the revegetation plan will include the following elements:
- a. Relevant conditions of Project permits and this biological opinion.



- b. Clear guidelines and quantifiable success criteria to measure progress toward fulfilling relevant conditions and to determine that implementation has been successfully completed.
  - c. Performance standards to set appropriate quantitative and qualitative measurements of coverage and diversity of the scalebroom scrub vegetation and non-native vegetation to assure that the effort is progressing toward replacement of habitat to pre-Project levels of cover and diversity, or high quality as approved by the USFWS. Within 5 years after commencing revegetation efforts, cover and diversity should have progressed toward an intermediate phase of scalebroom scrub. Both early and intermediate stages of scalebroom scrub (native perennial plant cover 30 to 50 percent) and limited non-native plant species cover (less than 10 percent) provide suitable habitat for SBKR and woolly-star.
  - d. Guidelines and specifications for salvage and redistribution of topsoil, vegetative debris, and organic material (“duff”), as well as other pertinent planting specifications.
  - e. Guidelines for controlling and monitoring invasive, non-native plants.
  - f. Specifications for seed application including guidance for materials and source material, rates of application, and appropriate application methods and timing specifications, and methods will be based on locally successful SBKR habitat restoration projects within the watershed.
  - g. Descriptions of maintenance and monitoring methods to promote successful implementation of the plan.
- CM 14. All Project-related impacts to scalebroom scrub habitat in City Creek and the Redlands Basins are within the designated critical habitat for SBKR (Table 1; see section on Direct Effects to SBKR). Permanent impacts to designated critical habitat in City Creek (outlet structure, 0.02 acres; habitat type conversion, 8.2 acres) and in Redlands Basins (outlet structure, 0.02 acres), will require off-site compensation at a ratio of 3:1 acres (occupied, 4.12 acres) or a ratio of 2:1 acres (unoccupied, 4.12 acres). Temporary impacts to designated critical habitat in City Creek and Redlands Basins will be compensated at a ratio of 2:1 acres (occupied, 0.48 acre) or a ratio of 1:1 acres (unoccupied, 0.18 acres). All SBKR habitat temporarily impacted during construction will be restored in accordance with the approved revegetation plan. Compensatory mitigation of 21.74 acres may be provided through: (1) the conservation and management of scalebroom scrub habitat (at least 13.32 acres of which are occupied), (2) the purchase of equivalent credits from a Conservation Bank approved by the USFWS, or another equivalent

compensatory mitigation option approved by the PSFWO in writing prior to initiation of Project construction.

Santa Ana River Woolly-Star

- CM 15. Prior to ground disturbance, a qualified botanist will conduct preconstruction surveys for woolly-star in areas of suitable habitat where disturbance will occur as a result of construction (excluding paved roads and road shoulders) using the California Department of Fish and Wildlife's [CDFW, formerly the California Department of Fish and Game (CDFG)] November 2009 guidance for *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations*, as appropriate.
- CM 16. If a woolly-star plant is found occurring in a Project work area and it may be impacted by the Project, the USFWS will be notified within 3 working days of the finding. If occupied habitat cannot be avoided all work will stop in occupied areas. If it is determined that avoidance is not feasible consultation with the USFWS will be reinitiated.

Santa Ana Sucker

- CM 17. The following measures will avoid, minimize, and offset Project-related impacts to SAS associated with up to 1.21 acres of permanent degradation of occupied designated critical habitat in the mainstem of the Santa Ana River from the RIX outfall downstream to approximately Mission Boulevard.
- a. Valley District will prepare and implement the HMMP which will identify habitat improvement actions and methods for implementation, monitoring, and maintenance. The diversion of wastewater flow from the RIX Facility to the SNRC will not occur until Valley District's Santa Ana Sucker HMMP has been approved by the USFWS and the actions proposed in this measure have been completed or show evidence of significant progress toward successful implementation such as engineering design(s) and/or other regulatory compliance such as the California Environmental Quality Act, or consultation with the USFWS will be reinitiated.
  - b. The HMMP will include the measures listed below to offset direct and indirect impacts to SAS and its habitat resulting from the loss of up to 22.3 percent (6.43 MGD of 28.4 MGD calculated from the November 2014 to May 2016 discharge) discharge from the RIX outfall into the Santa Ana River. The HMMP will contain measures to increase the number of individual SAS in the Santa Ana River, increase the area of suitable and occupied habitat in this watershed, and establish two new populations in the watershed. It will be implemented by a contracted, qualified, and permitted

entity in coordination with the USFWS. The HMMP will specify goals and performance criteria for each conservation measure and include the following elements:

- i. Habitat Node Creation (microhabitat enhancements) to offset the potential reduction of suitable habitat available to sucker, including the above listed habitat features, resulting from decreased flow, decreased water velocity, and decreased sand transport.

Objective: Increase the total area of suitable habitat available to sucker, including riffles, small scour pools, and exposed patches of gravel/cobble substrate by strategically placing a series of structures within the stream flow to manipulate water movement and create these microhabitat areas.

This measure is expected to enhance perennial stream habitat within at least 1.5 acres of occupied habitat along about 2.5 miles of river, as measured by the area of pools created, gravel/cobble substrates exposed, and other functional SAS habitat features created/enhanced. The creation of all 6 habitat nodes will occur prior to any water diversions. If future data suggests that impacts to the species are either greater than expected or habitat nodes cannot be created to functionally offset Project impacts, the Project will obtain technical assistance from the USFWS to develop a new or revised CM that will achieve the biological objective(s) as analyzed in this opinion, or consultation with the USFWS will be reinitiated.

The Project will implement microhabitat enhancements (habitat nodes) within ecologically valuable segments of the Santa Ana River downstream of the RIX discharge location to improve the abundance and distribution of the above mentioned SAS habitat features. Enhancements will include the use of natural materials to increase scour and pool formation. Substrate augmentation (e.g., river gravel and cobble) may also occur in the same area to enhance perennial stream habitat function. Examples may include placement of large boulders and/or large woody debris to increase velocity of flow and gravel bar patches as well as deep pool refugia areas. A minimum of six habitat nodes will be created.

One naturally occurring riffle/pool feature (natural node) in the Santa Ana River was observed to enhance the stream habitat for SAS for approximately 330 feet (100 meters, 0.25 acres). Between 2015 and 2016 the USGS Native Fishes Survey found that the relative abundance of exposed gravels increased in this area suggesting that the size of the

affected area associated with the node is subject to fluctuate based upon environmental conditions and the abundance of fine sediment in the inset channel (SAS occupied stream) (Brown and May 2016, 2017). Although all nodes will be unique in design, each will serve to replicate the scale and provide similar ecological functions as the natural node discussed above.

The nodes will be located in the Santa Ana River mainstem between the RIX outfall and River Road Bridge. To maximize habitat value and function locations should be associated with mainstem tributaries (Evan's Lake, Arroyo Tequesquite, Sunnyslope Drain, Anza Drain, Hole Creek, etc.). Locations will need to be further refined by field survey data.

Habitat nodes will be monitored annually and the survey data will be used to assess the need for corrective measures. Annual monitoring will include, at minimum, water quality, visual estimates of substrate cover types, and fish surveys. When the cumulative cover of boulder, cobble, and gravel is found to be less than 35 percent for any habitat node (mean cover measured over a 0.25 acre reach associated with a node), maintenance and/or reinstallation of nodes will be conducted to maintain a minimum of 0.25 acres of habitat enhancement for every node or a cumulative enhancement of 1.5 acres for all six nodes. All work conducted in the Santa Ana River will be done in coordination with the USFWS and CDFW.

If vegetation removal is required for ingress, egress, or other work areas associated with Habitat Node creation and maintenance it will be revegetated. Quantitative and qualitative performance standards addressing vegetation cover and diversity will be included in the HMMP. Within 3 and at most 5 years after commencing revegetation efforts, cover and diversity should have progressed toward pre-Project levels of cover and diversity, or higher quality for the benefit of vireo and SAS. It is not anticipated that maintenance work, requiring vegetation removal, will be needed more frequently than every 5 years.

- ii. Aquatic Predator Control Program to offset the potential increase in non-native predator habitat (pools or other microhabitats that provide relatively deep and slow velocity water flow) resulting from reduced discharge volume.

Objective: Reduce the abundance of non-native predators in the reach of river affected by the Project so as to maximize native fish survival.

The non-native predator removal program will be focused on reducing the abundance of non-native aquatic predators immediately preceding the start of the sucker spawning season (approximately March 1). Species to be removed may include non-native fish, amphibians, and reptiles such as mosquitofish, largemouth bass, black bullhead catfish, green sunfish, red-eared slider, African clawed frog, and American bullfrog. This activity will occur at minimum of one time per year outside of the SAS spawning season (August 1 to February 28). The most recent fish and/or other surveys conducted upstream of Prado Basin in the Santa Ana River will provide the locations of where to conduct electroshocking. Electroshocking will be carried out by a USFWS-approved SAS biologist authorized to use electroshock sampling methods. Pre-spawning predator removal will occur annually prior to February 15 in areas of highest ecological value to SAS reproduction, currently from Rialto Channel downstream to approximately Mission Boulevard and in mainstem tributaries. If aquatic predators are found in abundance after pre-spawning predator removal, a second predator removal will be conducted after August 1.

- iii. Exotic Weed Management Program to reduce competitive stress for native vegetation within the riparian community in order to offset the impacts associated with reduced water availability resulting from the Project.

Objective: Maintain a low abundance and cover of non-native vegetation along the Santa Ana River and in City Creek within the Project impact area (RIX outlet to Mission Boulevard and Boulder Avenue to Alabama Street, respectively), focusing on the removal of giant reed, tamarisk, and castor bean.

The exotic weed management program will be carried out by a qualified and experienced entity and will focus on controlling the non-native vegetation within the riparian corridor between the Rialto Channel and the Mission Boulevard Bridge (approximately 4.2 miles). This measure will establish and maintain weed control in one-third of the area (approximately 1.4 miles) per year, so as to complete the weeding of the entire area once every 3 years. Annual work plan meetings between the USFWS, Valley District staff, and contractor will identify areas of concern and focus work efforts on those areas. A successful program will maintain total cover of non-native riparian species to less than 25 percent and total cover of giant reed, tamarisk, and castor bean to less than 5 percent. Percent cover will be assessed relative the total area of the weeded riparian corridor for that year.

Although they are native species, cattails (*Typha* spp.) and bulrush (*Schoenoplectus* spp.) may increase in abundance over time as their preferred habitat type (slow, shallow water or marsh) is expected to increase due to Project reductions of flow. These plant species may degrade sucker habitat by further reducing water velocity and trapping fine sediment. Problem areas will be identified as part of the Riverwalk survey (see below for more on Riverwalk survey) and if certain areas have become problematic they will be managed in coordination with the USFWS and CDFW.

- iv. Rialto Channel Water Temperature Management to offset the potential loss of suitable habitat downstream in the Project impact area during times of the year when habitat will be most affected from the cumulative impacts from reduced discharge and drought effects, particularly in summer and fall.

Objective: Reduce water temperatures in Rialto Channel to tolerable levels (less than 86 degrees Fahrenheit) during summer months.

In recent years the temperatures within the natural bottom reach of Rialto Channel (not concrete lined section) were found to be generally greater than 80 degrees Fahrenheit in summer and fall (USGS 2015) and often warm enough to be outside of the tolerable range for sucker (USFWS 2010b). In order to decrease the water temperature in Rialto Channel to tolerable levels for SAS relatively cool groundwater (67 – 70 degrees Fahrenheit, temperature range derived from local nearby well operators), from up to 4 wells or other water sources will be added to the flows in Rialto channel.

In order to implement this measure most effectively, two water quality monitoring stations will be established in Rialto Channel. An upstream, real-time gage will measure the water temperature at the well input location (plunge pool downstream of Agua Mansa Bridge). At 85 degrees Fahrenheit the groundwater wells will automatically turn on and release directly into the plunge pool. Another real-time gage will be installed downstream of the plunge pool Rialto Channel just before the confluence with the Santa Ana River and. Once the water temperature at this downstream gage is less than 82 degrees Fahrenheit the well input will be turned off. Initiation and cessation of well water input (discharge) will be phased over a period of time to reduce sudden changes in flow and temperature in Rialto Channel. The well input and controls will be constructed and tested prior to diversion of flows from the RIX facility to the SNRC. This program will be deemed successful if there are 5 or fewer days between June 22

and September 21 that the daily maximum water temperature exceeds 82 degrees Fahrenheit and SAS are present in the channel during the same period. Water temperature will be measured in Rialto Channel upstream of the RIX outfall. If success criteria are not met within 2 years of signing the biological opinion, the Project will obtain technical assistance from the USFWS to develop a new or revised CM that will achieve the biological objective(s) as analyzed in this opinion.

- v. Upper Watershed SAS Population Establishment to offset potential losses of suitable habitat in the Project's impact area, and to offset unknown and/or cumulative impacts to the species and its habitat that may be associated with the reduction of flow to the Santa Ana River.

Objective: Increase the abundance, distribution and resilience of the sucker population in the Santa Ana River Watershed by establishing redundant populations in upper watershed tributaries.

Subject to the availability of sufficient source fish, the Project will establish two new locations of sucker within City Creek and Hemlock Creek, or another suitable unoccupied location within the former range of the species within the Santa Ana River watershed as approved by the USFWS. Both City and Hemlock creeks have been analyzed as part of the Santa Ana Sucker Translocation Plan (Dudek 2016a, 2017). Valley District has assessed the habitat availability and appropriateness for SAS in City and Hemlock creeks (Dudek 2016b). These documents show that portions of each of these streams have the necessary primary constituent elements (PCEs) to support SAS, as well as additional factors found to be important to SAS (Aspen 2016). The Translocation Plan is currently under review by the USFWS, CDFW, and U.S. Forest Service (USFS).

Prior to Project flow reduction to the Santa Ana River, at least one translocation of SAS will have occurred and Valley District will provide data indicating that the nascent population is healthy, reproducing, and appears to be successfully establishing. Successful establishment of SAS will have occurred when there are surviving and reproducing fish in at least two size classes, the population of SAS is stable or increasing in population as averaged over 5 years, and the translocated population is distributed throughout the appropriate habitat in the translocation stream<sup>1</sup>.

---

<sup>1</sup> Based upon recent surveys conducted by the HCP (Dudek 2016b, 2017) more than 5 miles of potential SAS habitat occurs on City Creek, upstream of Highland Avenue, and approximately 1.5 miles exist on Hemlock Creek (see also RCRC 2016).

If success criteria are not met in both translocation tributaries within 5 years of signing the biological opinion, the Project will obtain technical assistance from the USFWS to develop a new or revised CM that will achieve the biological objective(s) as analyzed in this opinion.

The HMMP will identify and further detail the goals and success criteria of SAS re-establishment and include the amount of financial assistance to be provided by Valley District for the regionally-beneficial population establishment program, including additional measures found below.

- A. Valley District will contract with a USFWS-approved entity that can demonstrate the ability to re-introduce captively-bred SAS to a suitable unoccupied location with the intent of establishing a new self-sustaining population within the former range of the species on the Santa Ana River. The Contract requirements will include the following: (1) rearing and maintaining a sufficient number of breeding adults to support re-introduction of a minimum of 500 juvenile SAS into the target area per year (or alternate numbers agreed to by the USFWS); (2) annual relocations for the first 3 years, then as needed to maintain a stable population size and genetic diversity; and (3) monitoring, adaptive management, and annual reporting.
- B. Valley District may reintroduce captive-bred SAS if (1) captive breeding documentation has been approved by the USFWS and CDFW and (2) the captive breeding facility has adequate numbers of appropriate sized SAS. If these conditions are not met or if additional fish are needed for translocation purposes SAS may be translocated from the Santa Ana River to the west fork of City Creek and one other historic tributary in the Santa Ana River watershed<sup>2</sup>.
- C. If, at any time, SAS are found located downstream Highland Avenue Bridge, Valley District will be responsible for relocating all SAS back upstream within the boundaries of the San Bernardino National Forest or out of locations that where their presence might affect other entities who do not have incidental take exemptions for this species. This measure will be implemented for the life of the Project or until another entity, such as the HCP, takes over this responsibility.

---

<sup>2</sup> Guidelines for take of SAS for recovery actions are addressed in the 2015 programmatic biological opinion for SAS recovery permits (USFWS 2015a).



- vi. Annual Monitoring of the Santa Ana River to track the suitability and habitat for SAS following implementation of the Project and its conservation measures.

Objective: Identify any key effects to the hydrology or biology of the River that may result from reduced flow due to this Project.

The HMMP will outline a monitoring program to collect hydrology data in the segment of river between the RIX outlet and Mission Boulevard and within the habitat node creation reaches. Hydrology data will include water quality (flow velocity, temperature, and depth), visual observations of substrate, and other surface topography, and fish surveys. Annual reporting will include summaries of the non-native plant and aquatic predator removals and any adaptive management actions taken in the past year, and will be submitted to the USEPA, State Water Board, and USFWS by April 30 for review and comment. All long-term monitoring and management activities will be completed by the Project proponent per the commitments included in the HMMP and required by this biological opinion until the HCP is finalized and permitted or until incidental take associated with the Project becomes covered by another mechanism.

In order to make best use of the existing Riverwalk habitat survey dataset, (Riverwalk which has been conducted annually in the fall for the past 11 years), the Project will provide support to Riverwalk organizers, whether financial or in-kind services and develop the long-term monitoring methodology to be complementary to the Riverwalk survey data collection to provide a greater understanding of habitat availability throughout the entire system. The locations of the habitat nodes, as described above, will be added to the Riverwalk survey area as non-random transects. At least one year's worth of baseline data that captures the entire river corridor (Riverwalk points 9 to 118) will be recorded prior to a reduction in discharge flow from RIX.

## ACTION AREA

The implementing regulations to section 7(a)(2) of the Act describe the action area to be all areas affected directly or indirectly by the Federal action and not merely the immediate area affected by the Project (50 CFR § 402.02). The action area is the area of potential direct or indirect effects of the proposed action and any interrelated or interdependent human activities; the direct and indirect effects of these activities include associated physical, chemical, and/or biological effects of considerable likelihood (USFWS and NMFS 1998). Indirect effects are those that are caused by the proposed action and are later in time but are still reasonably certain to occur (50 CFR §

402.02, USFWS and NMFS 1986). Analyses of the environmental baseline, effects of the action on the species and designated critical habitat, cumulative effects, and the impacts of the incidental taking, are based upon the action area as determined by the USFWS (USFWS and NMFS 1998).

We have defined the action area to include the collective Project components (SNRC, pipeline corridor along City Creek, and discharge locations) and the potential areas of direct and indirect effects to the listed species addressed in this consultation, including the Santa Ana River from Rialto Channel downstream to River Road Bridge, and the west fork of City Creek downstream to Alabama Street, excluding the reach of the creek from Highland Avenue to Boulder Avenue (approximately 3,282 acres within the Santa Ana River watershed) (Figure 1).

1. San Bernardino kangaroo rat. Direct effects to SBKR are expected in the 100 feet on either side of the centerline of the proposed 24-inch pipeline along City Creek, at the discharge structure in City Creek, at the Redlands Basins, and in the thalweg of City Creek where direct effects to SBKR may occur (approximately 58 acres). All access roads are included in the 100-foot buffer areas above. The area of indirect effects is the reach of City Creek that is expected to contain 6 to 10 MGD of discharge flow where type conversion of scalebroom scrub to riparian woodland is expected to occur (approximately 8.2 acres).
2. Santa Ana sucker: Direct effects to SAS are from the reduced river flow are expected to cause a re-sorting or redistribution of individuals as changes to water depth and flow velocity alter the stream habitat. Direct and indirect effects to SAS are expected in the Santa Ana River extending for approximately 18.5 miles; including and downstream of Rialto Channel (earthen portion starting downstream of Agua Mansa Road) to near the upstream terminus of the Prado Basin at River Road Bridge where direct beneficial effects to SAS may occur (approximately 3,132 acres). This area will be affected by the reduction in discharge from the RIX outfall and by the proposed CMs located in the mainstem of the Santa Ana River. We anticipate Project-related effects to the perennial aquatic environment (the river) to include reduced abundance of high velocity aquatic microhabitats, reduced area of exposed gravel beds, reduced area of wetted channel (channel constriction), and reduced area of riparian vegetation, as well as increased abundance of slow velocity aquatic microhabitats (marsh habitat), increased area of fine-grained sediment (sand or silt), and increased abundance of aquatic predators, once SNRC initiates wastewater diversion. This area encompasses the range of SAS upstream of Prado Basin where permanent reductions in the amount and quality of appropriate habitat of the species may occur in association with the Project. Habitat enhancement (creation of six habitat nodes, non-native vegetation removal, and non-native aquatic predator control) is also proposed in this area.

SAS captive propagation activities will be carried out in disturbed/developed locations and existing facilities.

Direct effects to SAS are expected in City Creek extending for approximately 4.6 miles upstream of Highland Avenue Bridge in City Creek to the west Fork of City Creek (approximately 28 acres). SAS do not currently occur in City Creek but the reintroduction of the species is proposed as Conservation Measure 17b.v. The footprint for these activities will be small, not involve ground disturbance, and will only use hand-carried equipment. The entire reach of City Creek that may be occupied by SAS is included in the action area. In addition to City Creek, a second Santa Ana River tributary, presumably Hemlock Creek, will be selected for SAS reintroduction. Disturbance to this tributary will be similar to that analyzed for City Creek. Long-term monitoring of all of the current and new SAS populations (Santa Ana River, City Creek, and one other tributary) will temporarily disturb the aquatic habitat as part of the annual monitoring.

## STATUS OF THE SPECIES/CRITICAL HABITAT

### San Bernardino Kangaroo Rat

#### *Listing Status*

The San Bernardino kangaroo rat is a subspecies of Merriam's kangaroo rat (*Dipodomys merriami*). SBKR was emergency listed as endangered on January 27, 1998 (USFWS 1998b), and listed as endangered on September 24, 1998 (USFWS 1998c). Critical habitat for SBKR was first proposed on December 8, 2000 (USFWS 2000a), and designated on April 22, 2002 (USFWS 2002a). Critical habitat for SBKR was subsequently re-proposed on June 19, 2007, and a revised designation of the critical habitat was made final on October 17, 2008 (USFWS 2007 and USFWS 2008, respectively). Following a 2009 lawsuit challenging the 2008 critical habitat designation, the court ruled and vacated the 2008 designation and reinstated the 2002 critical habitat designation on January 8, 2011. We completed a 5-year review of the status of SBKR in August 2009 (USFWS 2009). The 5-year review recommended no change in the listing status of SBKR. Please see the 5-year review for more specific information on the subspecies description, habitat affinities, life history, status and distribution, threats, and conservation needs of SBKR across its current range (USFWS 2009). Additional information is also available in the 2002 final rule to designate critical habitat (USFWS 2002a). Both documents are available at: <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=A0G8>

#### *Habitat Affinities*

Soil texture is a primary factor in determining species distribution in most heteromyid rodents, which include kangaroo rats and pocket mice (Brown and Harney 1993). In general, SBKR appear to prefer well-drained, sandy substrates associated with alluvial systems, where they are able to dig simple, shallow burrow systems (McKernan 1997). Soil texture and vegetation are influenced by periodic flood events within the alluvial floodplains which confine the range of this species. SBKR are most frequently found within scalebroom scrub (*Lepidospartum*

*squamatum*) shrub alliance (Sawyer *et al.* 2009), which contains the appropriate mix of sandy soils and low density shrub cover SBKR prefer.

### *Status and Distribution*

The primary factor influencing the decline of SBKR is habitat loss throughout the species' range. Historically, SBKR occupied alluvial floodplains and adjacent upland habitats within the San Bernardino, Menifee, and San Jacinto Valleys of San Bernardino and Riverside Counties in California (USFWS 1998c). These areas have been under intense development pressure for the past century which has reduced the range of suitable habitat for SBKR. Currently, the Santa Ana River and its tributaries, Lytle Creek and Cajon Creek, and the San Jacinto River and its tributary, Bautista Creek support the largest areas of occupied habitat.

The largest remaining population of SBKR is thought to reside within the Santa Ana River basin. The Santa Ana River critical habitat unit encompasses approximately 8,935 acres and includes the Santa Ana River, and portions of City, Plunge, and Mill Creeks (USFWS 2002a). SBKR is known to occur within the upper reaches of the Santa Ana River from approximately 3.5 miles above the confluence of Mill Creek and the Santa Ana River to approximately 0.5 miles downstream of Tippecanoe Avenue in the city of San Bernardino. Operation of the Seven Oaks Dam has altered natural fluvial processes downstream within the Santa Ana River for flood control purposes. The USACE established the 764-acre Santa Ana River Woolly-star Preserve Area to offset impacts associated with the operation of this dam (USFWS 2002b), and its boundary was expanded to approximately 804 acres in 2009. Within the Santa Ana River floodplain, SBKR occupy habitat within a mosaic of undisturbed habitat and developed areas, often utilizing less suitable habitats such as water spreading grounds, airports, sand and aggregate mining operations, and citrus groves (USFWS 2009). A small yet dense population was recently found in marginal habitat surrounded by urban development (USFWS 2015b, 2016).

City Creek is often manipulated by the local flood control district and contains drop structures that alter flow dynamics and restrict SBKR movement within the drainage. Plunge Creek has been channelized and re-directed into a detention basin to avoid mining operations, thus this habitat is fragmented and largely isolated from other areas within the Santa Ana River population (USFWS 2009). The Santa Ana River population of SBKR, as well as the Lytle/Cajon Creek population, will be covered under the proposed Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan) and the HCP.

### *Threats to the Species in the Vicinity of the Action Area*

Range-wide threats to the species include habitat destruction, degradation, and fragmentation resulting from urbanization, mining operations, flood control projects, groundwater recharge operations (spreading basins), bridges, recreational off-highway vehicle (OHV) use, and agriculture (USFWS 2009). These activities are associated with an increasing human population within San Bernardino and Riverside Counties, with the majority of the population living in the western portions of these counties.

In the Santa Ana River system, development of the historic floodplain, flood control facilities, water management activities (ground water recharge), surface mining and habitat loss, destruction and/or degradation pose the largest threats to SBKR and its habitat. Additionally, activities such as dumping and recreational activities continue to threaten SBKR and the ecological value of its critical habitat in the vicinity of the action area. OHV use destroys and degrades many acres of alluvial fan scrub occupied by SBKR in the Santa Ana River by directly damaging plant communities, the soil crust, and burrow systems of SBKR (USFWS 2009).

SBKR habitat in City Creek has been constrained by channelization. Channel maintenance for flood control purposes has limited and fragmented patches of suitable alluvial fan scrub in the Creek, and has eliminated most of the upland refugia habitat associated with the Creek.

Groundwater recharge occurs by percolating either imported or local water supplies into groundwater basins or within the natural channel. It is a long-standing and ongoing activity in the Santa Ana River watershed. Groundwater recharge areas are generally unsuitable for SBKR because of the periodic presence of standing water and the degradation of alluvial fan scrub (USFWS 2009). The existing Redlands Basins, located adjacent to the Santa Ana River, were created for the purpose of groundwater recharge.

#### *Conservation Needs in the Vicinity of the Action Area*

Conservation and recovery of SBKR near the action area will depend upon the same sort of actions required to conserve and recover the species across its extant range (USFWS 2002a). The natural ecosystem processes necessary to maintain a dynamic mosaic of habitats for SBKR should be maintained or improved to restore the natural fluvial regime, or alternatively management should be provided to replace natural scour, sand transport and deposition, and the associated plant community responses.

Long-term viability for all SBKR populations also depends on maintaining occupied refugia habitat adjacent to active floodplains to serve as sources of animals to recolonize river wash habitat after major flood events. Ameliorating the threats to the species' survival (such as hydrologic alteration from flood control and water management) would benefit the conservation of the SBKR in the area. In addition, the establishment and restoration of upland refugia habitat, and instituting protection and management of additional suitable habitat locations throughout its range, would help conserve this species.

In some areas, maintenance of appropriate habitat conditions may require active management to sustain SBKR over time, like periodic removal of nonnative plants, particularly annual grasses, and thinning of shrubs and overall vegetative cover. To conserve and recover SBKR, additional occupied areas should be protected and managed to increase the local abundance of animals and to secure existing populations.

### *Critical Habitat*

Designated critical habitat for SBKR encompasses approximately 33,295 acres in San Bernardino and Riverside Counties. A detailed description of each critical habitat unit can be found within the 2002 final rule designating critical habitat (USFWS 2002a). PCEs, which have recently been renamed Physical and Biological Features, are used to designate critical habitat in accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12. The PCEs for SBKR designated critical habitat are: (1) Soil series consisting predominantly of sand, loamy sand, sandy loam, or loam; (2) Alluvial sage scrub and associated vegetation, such as coastal sage scrub and chamise chaparral, with a moderately open canopy; (3) River, creek, stream, and wash channels; alluvial fans; floodplains; floodplain benches and terraces; and historic braided channels that are subject to dynamic geomorphological and hydrological processes typical of fluvial systems within the historic range of SBKR. These areas may include a mosaic of suitable and unsuitable soils and vegetation that either (a) occur at a scale smaller than the home range of the animal, or (b) form a series of core areas and linkages between them; and (4) Upland areas proximal to floodplains with suitable habitat (e.g., floodplains that support the soils, vegetation, geomorphological, and hydrological and aeolian processes essential to this species). These areas are essential due to their geographic proximity to suitable habitat and the functions they serve during flooding events. These areas may include marginal habitats such as agricultural lands that are disced annually, out-of-production vineyards, margins of orchards, areas of active or inactive industrial or resource extraction activities, and urban/wildland interfaces (USFWS 2002a).

Long-term conservation of SBKR within each unit of critical habitat depends on the protection and management of occupied habitat on alluvial fans, washes, and associated floodplains; the protection of linkages between core areas to maintain gene flow and minimize the loss of genetic diversity (Lande 1988); the protection of upland areas adjacent to more suitable habitat that serve as refugia from lower portions of the floodplain during large scale flooding events and/or provide source populations for recolonization of the lower floodplain after the flooding has subsided; and the protection of geomorphological, hydrological, and aeolian (wind-driven) processes essential to the continued existence and conservation of suitable habitat. The location and dynamic nature of the alluvial habitat occupied by this species makes it especially vulnerable to flood control activities through the drainages in which it occurs (USFWS 2002a).

City Creek and the Redlands Basins, the two areas where the Project is expected to affect SBKR, are within Critical Habitat Unit (Santa Ana River). Both City Creek and the Redlands Basins are at risk of becoming isolated from the larger distribution of SBKR in the Santa Ana River Critical Habitat Unit by habitat fragmentation from surface mining, flood control and groundwater management activities.

### Santa Ana Sucker

The following section summarizes information about the legal status and biology of sucker. This information is drawn from the following documents which provide more-detailed information on the range-wide status, threats, and conservation needs of this species, please refer to the final rule

on listing SAS (USFWS 2000b), the final rule designation of critical habitat for SAS (USFWS 2010b) at <https://www.gpo.gov/fdsys/pkg/FR-2010-12-14/pdf/2010-30447.pdf#page=2>, the *Santa Ana sucker (Catostomus santaanae) 5-Year Review: Summary and Evaluation* (USFWS 2011) at [http://ecos.fws.gov/docs/five\\_year\\_review/doc3616.pdf](http://ecos.fws.gov/docs/five_year_review/doc3616.pdf), and the *Draft Recovery Plan for Santa Ana sucker (Catostomus santaanae)* (USFWS 2014b) at [https://www.fws.gov/carlsbad/SpeciesStatusList/RP/201411xx\\_Draft%20RP\\_SASU.pdf](https://www.fws.gov/carlsbad/SpeciesStatusList/RP/201411xx_Draft%20RP_SASU.pdf).

### *Listing Status*

The sucker was listed as threatened on April 12, 2000 (USFWS 2000b). In our most recent 5-Year Review we recommended no change in listing status (USFWS 2011).

### *Habitat Affinities*

The sucker generally inhabits perennial streams that are naturally subject to periodic, severe flooding. Water-depth can range from a few inches to several feet and with currents from slight to swift; in-stream gradient is typically less than 7 degrees. The presence of coarse substrates (gravel and cobble) is important to create suitable foraging habitat for suckers and a combination of shallow riffle areas and deeper runs and pools provides optimal stream conditions for these fish.

Suckers use different substrate types as they develop through each life stage (i.e., from eggs to larval, young-of-the-year, juvenile, and adult fish) with the presence of some rock, cobble, and/or gravel being important to egg-laying and development of the algae upon which suckers feed. Suckers prefer areas with in-stream or bank-side riparian vegetation to provide shade and cover especially for larvae and juvenile fish; vegetation cover is less important for larger, adult fish when deeper pools and riffles are present. Open, unvegetated stream-reaches with shifting, sandy substrates are typically less suitable habitat for sucker as little, if any forage will develop there and water typically slows, becomes more shallow, and hence, warmer in these areas. Suckers are most abundant in unpolluted, clear water at temperatures that are typically less than 72 degrees Fahrenheit (Moyle 2002), although they tolerate water quality variables that are outside of the preferred range (e.g., wastewater-dominated river and water temperatures in excess of 86 degrees Fahrenheit).

### *Life History*

SAS feed on algae, diatoms, and detritus scraped from rocks and other hard surfaces. Aquatic insects are also a small component of their diet (Greenfield *et al.* 1970, Haglund and Baskin 2003). The relative abundance of the SAS appears to decrease with increasing numbers of exotic fish including tilapia, green sunfish, largemouth bass, common carp, channel catfish, and others which are potential predators and competitors of the SAS (Swift 2001, Saiki 2000).

They typically spawn in the first spring following hatching. Spawning generally begins in mid-March, peaks in April, and concludes by early July, although spawning has been noted as early as February and as late as August in the Santa Ana River. Spawning takes place over gravel riffles where fertilized eggs adhere to substrate and hatch within 360 hours. Female fecundity is

linearly related to body weight and ranged from 4,423 to 16,151 eggs (Greenfield *et al.* 1970). The demersal (on the stream bottom) and adhesive eggs hatch larva approximately 7 millimeters in total length after 15 days (360 hours). At approximately 16 millimeters in size the mouth becomes subterminal (oriented down) and the larva transform to juveniles.

### *Status and Distribution*

The listed entity of SAS is confined to three watersheds in Southern California: (1) Santa Ana River in San Bernardino, Riverside, and Orange counties; (2) San Gabriel River in Los Angeles County; and (3) Big Tujunga Creek, a tributary to the Los Angeles River in Los Angeles County (USFWS 2000b). Historically, suitable streams have been subject to periods of severe flooding as well as extended drought conditions typical of southern California weather (USFWS 2014b). At the time of listing we estimated that the historical range of the species had been reduced by at least 70 percent in each watershed and that the range and distribution of SAS was primarily limited by habitat modifications attributed to urbanization (e.g., dams, road crossings, cement-lined channels) (USFWS 2000b). The threats identified at the time of listing have not abated but have continued to increase, thereby making the species more vulnerable to extinction (USFWS 2011). The primary threat to SAS is habitat loss, degradation, and modification through hydrological modifications rangewide. Additionally, isolation by impassable barriers or unsuitable habitat limits gene flow within and between watersheds, thus increasing the vulnerability of small populations to a range of stochastic environmental and genetic factors (USFWS 2014b).

SAS was historically documented throughout the upper and lower portions of the Santa Ana River watershed, including the mainstem from near the current location of Seven Oaks Dam to approximately 14 miles below Prado Dam and multiple tributaries including upper tributaries (e.g., City Creek), and lowland tributaries (e.g., Warm Creek, Lytle Creek, Rialto Channel, Evans Lake drain, Tequesquite Arroyo, Sunnyslope Creek, Anza Park drain, and Chino Creek) (USFWS 2014b). In contrast to the species' range in the Los Angeles and San Gabriel Rivers, where the extant populations are in the upper portions of the watershed, the species is confined to the lowlands of the Santa Ana River watershed. Barriers to migration restrict the range of SAS to approximately 34 miles from South La Cadena Drive to near Imperial Highway (California State Route 90). The extent of habitat suitable for spawning in the mainstem varies from year to year but ranged from approximately 2.0 miles (measured in 2014) to 8.2 miles (measured in 2016) above Prado Dam between 2006 and 2016 (USFWS 2017). Few occurrence records since 2000 and no evidence of spawning suggest the species is doing extremely poorly downstream of Prado Dam (USFWS 2014b). The species is also known to occupy tributaries within this range, including Rialto Channel, Tequesquite Arroyo, Sunnyslope Creek, and Anza Park drain.

### *Threats to the Species*

The final rule listing the species (USFWS 2000b) identified the following threats to SAS: habitat destruction, natural and human-induced changes in stream-flow, urban development and related land-use practices, intensive recreation, introduction of nonnative competitors and predators, and



demographics associated with small population size. The 5-year review for SAS (USFWS 2011) and the SAS recovery outline (USFWS 2012) identified the following threats to SAS: (1) modification, fragmentation, and loss of habitat attributable to (a) dams, (b) changes in water allocations, and (c) other hydrological modifications; (2) water quality degradation; (3) impacts to habitat due to recreation; (4) wildfire; and (5) potential effects of nonnative vegetation and predators. We believe the primary threat to SAS is rangewide modification, fragmentation, and loss of habitat through hydrological modifications. A detailed evaluation of all threats is included in the 2011 5-year review and in the SAS draft recovery plan (USFWS 2011, and 2014b, respectively).

Wastewater-dominated rivers, like the Santa Ana River, are subject to increased inputs of regulated contaminants including inorganics (e.g., chlorine, nitrates, ammonia, sulfides and metals), plasticizers, organochlorine insecticides, polynuclear aromatic hydrocarbons, solvents, and non-ionic detergent metabolites. Wastewater-dominated rivers are also subject to inputs of as yet unregulated "emerging" contaminants including new generation pesticides, steroids and hormones, personal care products, prescription and non-prescription drugs, antibiotics, household disinfectants, insect repellants, fire retardants and others (USFWS 2011). Additionally, chemicals that are released may be regulated or unregulated pollutants and some may have detrimental impacts on water (habitat) quality and sublethal or lethal impacts on SAS.

#### *Conservation Needs*

Since listing, surveys for SAS have been conducted in various portions of its range. Species-specific projects have also been conducted in each of the three watersheds where SAS occur. There have been studies exploring life history parameters, population dynamics and demographics, habitat assessments, environmental conditions, possible restoration sites, and potential reintroduction opportunities. These studies have been important for making decisions regarding the status of the species and the current conditions within each of the watersheds. Other activities have also occurred for the benefit of SAS, such as removal of nonnative vegetation and nonnative predators. Examples of these activities and past research are listed in the SAS draft recovery plan (USFWS 2014b). Recovery of SAS is being achieved in part through on-the-ground recovery actions, implementation of management plans, and through active cooperation with partners through sections 7 and 10 of the Act.

#### *Critical habitat*

In 2010, we designated three critical habitat units that include approximately 9,331 acres of Federal, State, local, and private land in the Santa Ana River (Unit 1; San Bernardino, Riverside, and Orange counties), the San Gabriel River (Unit 2; Los Angeles County) and Big Tujunga Creek (Unit 3; Los Angeles County) (USFWS 2010b). Individual units are each intended to independently support a population of SAS in a functioning hydrologic system that provides suitable water quality, water supply, and coarse sediments. The designation lists the following PCE's for SAS: (1) a functioning hydrological system within the historical geographic range of SAS that experiences peaks and ebbs in the water volume (either naturally or regulated) that encompasses areas that provide or contain sources of water and coarse sediment necessary to

maintain all life stages of the species, including adults, juveniles, larvae, and eggs, in the riverine environment; (2) stream channel substrate consisting of a mosaic of loose sand, gravel, cobble, and boulder substrates in a series of riffles, runs, pools, and shallow sandy stream margins necessary to maintain various life stages of the species, including adults, juveniles, larvae, and eggs, in the riverine environment; (3) water depths greater than 1.2 inches (3 centimeters) and bottom water velocities greater than 0.01 feet per second (0.03 meters per second); (4) clear or only occasionally turbid water; (5) water temperatures less than 86 degrees Fahrenheit (30 degrees Centigrade); (6) instream habitat that includes food sources (such as zooplankton, phytoplankton, and aquatic invertebrates), and associated vegetation such as aquatic emergent vegetation and adjacent riparian vegetation to provide shading to reduce water temperature when ambient temperatures are high, shelter during periods of high water velocity, and protective cover from predators; and (7) areas within perennial stream courses that may be periodically dewatered, but that serve as connective corridors between occupied or seasonally occupied habitat and through which the species may move when the habitat is wetted.

## ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 Federal Register §402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal projects in the action area that have undergone section 7 consultation and the impacts of State and private actions that are contemporaneous with the consultation in progress.

### **Climate Change**

As defined by the Intergovernmental Panel on Climate Change (IPCC), the term “climate” refers to the mean and variability of different types of weather conditions over time, with 30 years being a typical period for such measurements (IPCC 2013a, p. 1450). The term “climate change” thus refers to a change in the mean or variability of one or more measures of climate (for example, temperature or precipitation) that persists for an extended period, whether the change is due to natural variability or human activity (IPCC 2013a, p. 1450).

Scientific measurements spanning several decades demonstrate that changes in climate are occurring, and that the rate of change has increased since the 1950s. Examples include warming of the global climate system, and substantial increases in precipitation in some regions of the world and decreases in other regions (for these and other examples, see Solomon *et al.* 2007, pp. 35–54, 82–85; IPCC 2013b, pp. 3–29; IPCC 2014, pp. 1–32). Results of scientific analyses presented by the IPCC show that most of the observed increase in global average temperature since the mid-20th century cannot be explained by natural variability in climate and is “very likely” (defined by the IPCC as 90 percent or higher probability) due to the observed increase in greenhouse gas (GHG) concentrations in the atmosphere as a result of human activities, particularly carbon dioxide emissions from use of fossil fuels (Solomon *et al.* 2007, pp. 21–35; IPCC 2013b, pp. 11–12 and figures SPM.4 and SPM.5). Further confirmation of the role of GHGs comes from

analyses by Huber and Knutti (2011, p. 4), who concluded it is extremely likely that approximately 75 percent of global warming since 1950 has been caused by human activities.

Scientists use a variety of climate models, which include consideration of natural processes and variability, as well as various scenarios of potential levels and timing of GHG emissions, to evaluate the causes of changes already observed and to project future changes in temperature and other climate conditions (Meehl *et al.* 2007, entire; Ganguly *et al.* 2009, pp. 11555, 15558; Prinn *et al.* 2011, pp. 527, 529). All combinations of models and emissions scenarios yield very similar projections of increases in the most common measure of climate change, average global surface temperature (commonly known as global warming), until about 2030. Although projections of the magnitude and rate of warming differ after about 2030, the overall trajectory of all the projections is one of increasing global warming through the end of this century, even for the projections based on scenarios that assume that GHG emissions will stabilize or decline. Thus, there is strong scientific support for projections that warming will continue through the 21st century, and that the magnitude and rate of change will be influenced substantially by the extent of GHG emissions (Meehl *et al.* 2007, pp. 760–764, 797–811; Ganguly *et al.* 2009, pp. 15555–15558; Prinn *et al.* 2011, pp. 527, 529; IPCC 2013b, pp. 19–23). See IPCC 2013b (entire), for a summary of other global projections of climate-related changes, such as frequency of heat waves and changes in precipitation.

Various changes in climate may have direct or indirect effects on species. These effects may be positive, neutral, or negative, and they may change over time, depending on the species and other relevant considerations, such as threats in combination and interactions of climate with other variables (for example, habitat fragmentation) (IPCC 2014, pp. 4–11). Identifying likely effects often involves aspects of climate change vulnerability analysis. Vulnerability refers to the degree to which a species (or system) is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the type, magnitude, and rate of climate change and variation to which a species is exposed, its sensitivity, and its adaptive capacity (Glick *et al.* 2011, pp. 19–22; IPCC 2014, p. 5). There is no single method for conducting such analyses that applies to all situations (Glick *et al.* 2011, p. 3). We use our expert judgment and appropriate analytical approaches to weigh relevant information, including uncertainty, in our consideration of the best scientific information available regarding various aspects of climate change.

Global climate projections are informative, and, in some cases, the only or the best scientific information available for us to use. However, projected changes in climate and related impacts can vary across and within different regions of the world (IPCC 2013b, pp. 15–16). Therefore, we use “downscaled” projections when they are available and have been developed through appropriate scientific procedures, because such projections provide higher resolution information that is more relevant to spatial scales used for analyses of a given species (see Glick *et al.* 2011, pp. 58–61, for a discussion of downscaling).

We reviewed projections from Cal-Adapt, a web-based, climate adaptation planning tool provided by the California Energy Commission, which synthesizes existing downscaled climate

change scenarios and climate impact research, and presents the predictions in an interactive, graphical layout. Projections of changes in annual averages in temperature for the area of the proposed Project in the San Bernardino Basin (Inland Empire) and western foothills of the San Bernardino Mountain Range (City Creek and other potential reintroduction creeks for SAS in the Santa Ana River watershed) using the Cal-Adapt Climate tool indicate an increase in temperature. For the Inland Empire area to the western foothills of the San Bernardino Mountain Range it ranged from about 3.7–4.0 °F (2.1–2.3 °C) under the IPCC low emissions scenario (B1), to an increase in temperature ranging from 6.4–7.1 °F (3.6–4.0 °C) under the IPCC higher emissions scenario (A2) (CEC 2017). Both the B1 and A2 scenarios represent comparisons between the baseline period (1961–1990) and the end-of-century period (2070–2090).

In summary, the best available data indicate that climate change effects will add to the destruction and modification of habitat for the species addressed in this biological opinion, both currently and in the future. Although, we are unable to assess in specific quantitative terms the magnitude of the impact due to the uncertainty relative to climate change effects that will occur, the best available data indicate long-term climate change effects will continue to have an overall negative effect on the available habitat throughout the range of these species.

Species specific discussions may be found in the Species by Species Evaluations and Conclusions, Threats to the Species in the Vicinity of the Action Area.

### **Species by Species evaluation and conclusions**

Effects of the action refer to the direct and indirect effects of an action on the species, together with the effects of other activities that are interrelated and interdependent with that action, which will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action, are later in time, and still reasonably certain to occur.

#### San Bernardino Kangaroo Rat

##### *Status of the Species in the Action Area*

A habitat assessment of the Project area (i.e., City Creek and Redlands Basins) was conducted by an SBKR biologist. A number of areas were determined to be suitable habitat. Trapping surveys were conducted in 2015 to determine presence/absence along City Creek (ESA 2015b).

Subsequent to the habitat assessment, a visit was made to further characterize the amount and extent of SBKR habitat that would be affected by the Project in and around the Redlands Basins. During this visit it was agreed, that due to the combined presence of suitable alluvial soils (PCE 1), poor habitat conditions (e.g., abundant non-native grasses and disturbed soils), a positive historic record, and close proximity of the Redlands Basins to occupied habitat in the Santa Ana River all areas where ground disturbance is proposed to occur could be assumed to be occupied by SBKR at low density.

Based on a review of SBKR occurrence data, the habitat assessment, vegetation maps (BA), and aerial photographs, we estimate that SBKR inhabit City Creek and Redlands Basins area in densities ranging from unoccupied to low and that the acreage of each category is: low density, 4.6 acres, and unoccupied, 4.3 acres. McKernan (1997) categorized the relative abundance of SBKR in different habitat types as low (1 to 5 SBKR per hectare), moderate (5 to 15 SBKR per hectare), or high (20 to 30 SBKR per hectare), and attributed these differences in SBKR abundance to differences in vegetation cover and type, and to proportional variations in sand, gravel, and cobble substrate components. Using McKernan's relative abundance estimates, we expect no SBKR will be affected by the construction of the outlet structure at City Creek (0.2 acres footprint), up to 3 SBKR may be affected by the construction of the outlet structure at the Redlands Basins (0.5 acres), and a range between 5 and 21 SBKR may be affected by the discharge of up to 10 MGD of effluent into City Creek.

The potential exists for the thalweg of City Creek to become rewetted after a period of dry down. This action may harm additional SBKR not represented above. No past data exists to estimate future take for these actions but it is assumed that the conversion from scalebroom scrub to riparian habitat within the thalweg of City Creek reduces potential for reoccupation during dry periods (no discharge and no natural flow). Dry periods will allow for SBKR occupying City Creek outside of the thalweg to disperse across the channel as well as providing temporary forage habitat. SBKR reoccupying this area will be subject to harm from natural storm flows. We have analyzed the conversion of 8.2 acres of SBKR habitat in City Creek as a permanent impact to the species.

#### *Habitat Characteristics in the Action Area*

The alluvial fan of City Creek is the result of periodic deposition by flood events. The soil is composed of boulders, cobbles, sands, and fine silts, which are washed down from higher elevations in the San Bernardino Mountain Range and deposited in the alluvial fan and floodplain. Scalebroom scrub on the alluvial fan develops into pioneer, intermediate, and mature phases, depending on the magnitude and frequency of hydrologic events. In a natural system, floodwaters periodically break from the main flood channel, forming a complex pattern of braided channels and subsequently create a mosaic of vegetation phases within the floodplain. The natural processes which maintain these communities have been substantially altered due to the presence of flood control levees, infrastructural berms (pipeline protection), roads and freeways, and aggregate mines. However, fluvial processes in the City Creek continue to maintain SBKR habitat, although in a much more limited area than was present historically.

The portion of the Project containing SBKR and its critical habitat in City Creek is between the Boulder Avenue and Alabama Street bridges. The creek is narrowly constrained by mountainous terrain in its upper watershed. When it reaches the base of the mountains, at Highland Avenue Bridge, it is further constrained between earthen levees that widen moving downstream and allow for limited braiding. The creek historically formed an alluvial fan in excess of 1 mile wide before reaching the Santa Ana River. Today, much of the alluvial fan has been developed. Most of the remaining SBKR habitat is located just outside of the active channel or on small upper

terraces, from where the stream channel leaves the constrained mountainous terrain (near Highland Avenue Bridge) downstream approximately 3.5 miles to the confluence of the Santa Ana River.

The vegetation in and around the City Creek action area consists of a mixture of annual grassland and all successional stages of scalebroom scrub (i.e., pioneer, intermediate, and mature). The soils within the City Creek outlet structure are soil types indicative of alluvium deposits (Soboba Stony Loamy Sand, Soboba Gravelly Loamy Sand, and Tujunga Gravelly Loamy Sand) which are suitable for use by SBKR. SBKR are usually associated with scalebroom scrub, with the highest densities of animals typically found in the intermediate growth stage and generally low densities found in mature scalebroom scrub. However, SBKR use of mature scalebroom scrub is disproportionately important because higher terraces where mature scrub occurs, serve as refugia during periods of heavy flooding, and thus a source of animals to repopulate previously flooded areas once the vegetation becomes re-established.

#### *Threats to the Species in the Action Area*

The proposed Project will affect SBKR in City Creek, a sub area within the Santa Ana River population. Flood control levees have altered flows and narrowed the active channel and floodplains of City Creek. This has resulted in a reduction in channel braiding and an increase channel erosion, incising, and proportion of mature scalebroom scrub within the species' distribution in City Creek. Steep embankments, rip-rap levees, drop structures, and bridge constrictions limit or preclude SBKR movement to upland areas. Vegetation senescence and changes in substrate composition in the absence of major flood events are a primary cause of habitat degradation (Burk *et al.* 2007, McKernan 1997). Additionally, within-channel flood control berms and infrastructural protection (boulder piles) preclude movement of SBKR within portions of City Creek and may have effectively fragmented the area into isolated pockets of habitat.

Some of the undeveloped land in and around the action area is dominated by nonnative annual grasses and other ruderal plant species. The spread of nonnative grasses and the reduction or elimination of natural drainage patterns has caused the areas adjacent to the active channel to become increasingly unsuitable for SBKR use and occupation over time (USFWS 2009).

Residential, commercial, and industrial development; aggregate mining, and clearing of native vegetation from undeveloped sites have gradually eliminated large areas of upland refugia habitat (i.e., mature scalebroom scrub) outside of the active floodplains. Upland areas adjacent to suitable habitat serve as refugia from lower portions of the floodplain during large storm flows. Protection of upland refugia habitat is important to the long-term survival of SBKR populations as animals occupying the uplands following a flood event provide source populations for recolonization of the lower floodplain after the flooding has subsided (USFWS 2002a).

#### *Conservation Needs in the Action Area*

Conservation and recovery of SBKR within the vicinity of the action area will depend upon the same sort of actions required to conserve and recover the subspecies within its extant range

(USFWS 2002a). Long-term conservation of SBKR within the City Creek area will require maintenance of existing fluvial dynamics and habitat connectivity, as well as protection of upland terrace habitat to provide refugia for SBKR in the event of catastrophic flooding. No current or anticipated regional planning effort is underway or proposed to address the multiple threats to SBKR or its habitat in the vicinity of the action area.

One conservation area has been established within the larger Santa Ana River population. The Woolly-Star Preserve Area is 804 acres in size, located between the mainstem of the Santa Ana River and City Creek and was established to offset impacts, reduced flooding potential, from the creation of Seven Oaks Dam. The Wash Plan is a habitat conservation plan that is nearing completion. It proposes to conserve more of the surrounding lands around the Woolly-Star Preserve Area and in the Plunge Creek watershed (tributary to the Santa Ana River) for SBKR, woolly-star, gnatcatcher, and other trust species to offset impacts from mining and water conservation (creation of new groundwater basins).

Ameliorating threats such as channel incising, non-native species, and connectivity with refugia habitats would benefit conservation of SBKR in the area. Preservation of alluvial processes, habitat restoration, protection, and management of additional areas throughout its range would also help conserve this animal.

#### *Status of Critical Habitat in the Action Area*

The SBKR habitat affected by the Project is in critical habitat Unit 1, which includes the largest remaining distribution of SBKR and supports one of three major populations of SBKR. Unit 1 encompasses approximately 13,970 acres of floodplain, upland alluvial terrace habitat and upstream areas that are essential for maintenance of fluvial processes within and between the Santa Ana River and its major tributaries; City Creek, Plunge Creek, and Mill Creek. The unit contains all of the features (PCEs) essential to SBKR life history. This unit contains habitat along all of the Santa Ana River tributaries from the point that the drainages emanate from canyons within San Bernardino National Forest (SBNF) to where the Santa Ana River is maintained as a flood control channel downstream in San Bernardino (USFWS 2002a). Numerous flood control levees and groins have altered the flow patterns and narrowed the active floodplain, which has increased the proportion of open channel and mature scalebroom scrub and decreased the area of intermediate scalebroom scrub that is preferred by SBKR. Existing and proposed out-of-stream aggregate mining operations, water conservation basins, dikes, and conveyance channels, and other development have eliminated or degraded SBKR habitat and reduced population connectivity within the upper Santa Ana River floodplain.

Flood control structures and urban development have degraded or eliminated much of the upland refugia habitat in Unit 1. Conservation of SBKR within Unit 1, including the portion of the population in the Project action area, will require maintenance of hydrologic processes that support the habitat structure required by SBKR including the development of relatively open intermediate scalebroom scrub. This habitat is typically found on benches between the active channel and mature floodplain terraces and is created by periodic flood waters breaking out of

the main channel in a complex pattern. Conservation of SBKR in Unit 1 will also require preservation and creation of upland refugia habitat (habitat above the 100-year floodplain) to ensure that animals are available to repopulate areas scoured out during heaving storms.

There is a habitat conservation planning effort that is near completion which would provide conservation and management of SBKR habitat in the Santa Ana River wash area at the confluence of the Santa Ana River, and Mill, Plunge, and Elder Creeks. Existing conservation efforts within Unit 1 are described in Conservation Needs in the Vicinity of the Action Area section above.

#### *Past Consultations in the Action Area*

The USFWS has issued the following biological opinions for actions that have occurred within the action area for this consultation. In all cases, the USFWS determined that the proposed action was not likely to jeopardize the continued existence of SBKR or destroy or adversely modify its critical habitat.

#### **5<sup>th</sup> Street Bridge Widening**

The USFWS issued a biological opinion on June 13, 2001, (FWS-SB-1162.4) to the Federal Highway Administration for the improvement of 5<sup>th</sup> Street which crosses City Creek. The action area contained SBKR habitat. Approximately 4.43 acres of occupied SBKR habitat were identified in the Project footprint, all of which was within designated critical habitat for the species. Take was exempted for all SBKR that could be killed or injured as a result of the Project. To offset permanent (0.43 acres) and temporary (4 acres) impacts to SBKR habitat, the City of Highland agreed to purchase 10 acres of conservation credits at the Cajon Creek Conservation Bank for SBKR.

#### **Reinitiation for Improvement to State Route 210 (Formerly State Route 30)**

The USFWS issued a revision to the original 1994 biological opinion (FWS-1-6-93-F-49) on July 20, 2004, (FWS-SB-3915.2) to the Federal Highway Administration for improvements to State Route 210, a portion of which crosses City Creek. The action area contained SBKR habitat at multiple locations. Approximately 29.2 acres of occupied SBKR habitat were identified in the Project footprint, all of which was within designated critical habitat for the species. Take was exempted for all SBKR that could be killed or injured as a result of the Project. To offset permanent (18.6 acres) and temporary (10.6 acres) impacts to SBKR habitat, the California Department of Transportation (CalTrans) agreed to purchase 112 acres of conservation credits at the Cajon Creek Conservation Bank for SBKR.

#### **Boulder Street Bridge Widening**

The USFWS issued a biological opinion on January 21, 2010, (FWS-SB-08B0342-09F0799) to CalTrans who assumed Federal Highway Administration's responsibilities as the non-Federal



designee for this consultation for the purpose improvements to Boulder Avenue which crosses City Creek. The action area contained SBKR habitat. Approximately 4.5 acres of occupied SBKR habitat and 4 acres of unoccupied habitat were identified in the Project footprint. The Project footprint included 4 acres within designated critical habitat for the species. Take was exempted for up to 9 SBKR that could be harmed, killed, or injured as a result of the Project. To offset permanent (1.23 acres) and temporary (4 acres) impacts to SBKR habitat, the City of Highland agreed to non-native grass removal in 6 acres of adjacent alluvial fan terrace habitat owned by San Bernardino County Flood Control District and purchase 6 acres of conservation credits at the Cajon Creek Conservation Bank for SBKR.

In sum the biological opinions listed above have authorized a relatively small amount of take within the areas that they cover. Implementation of conservation measures similar to those included in this biological opinion minimizes the associated adverse effects and impacts of the taking of SBKR and impacts to critical habitat. Because the action areas defined for these projects narrowly intersect that which is analyzed for the Project in this biological opinion, only a relatively small portion of the total take associated with these projects would coincide geographically with the Project.

#### Santa Ana sucker

##### *Status of the species in the Action Area*

The last record of SAS in City Creek is from 1982 (CDFW 2017). This species is believed to be extirpated from all upper Santa Ana River tributaries. Rialto Channel and Santa Ana River below their confluence provide much of the remaining SAS breeding and foraging habitat in the watershed. Upstream of the Rialto Channel, the Santa Ana River is a dry wash for several miles except during, and immediately following, storm events. The existing discharge from the RIX facility currently provides habitat (perennial stream) and is contributing to the maintenance of suitable habitat spawning and foraging habitat (USFWS 2010b). SAS are commonly found from Rialto Channel downstream to Mission Boulevard. After Mission Boulevard, the species becomes progressively scarcer with fish rarely observed downstream near Prado Basin. Despite numerous survey efforts only a few SAS have been found below Prado Dam since 2001 (USFWS 2014b). We have no information to indicate that spawning is occurring below Prado Dam.

In 2015 and 2016 the USGS conducted a Native Fishes Survey of the Santa Ana River, focusing on the upper 4 miles of the perennial stream (Brown and May 2016, 2017). These surveys provide population estimates of SAS from Rialto Channel downstream, to near Mission Boulevard. In 2015 the reach of the river from the RIX outflow to Riverside Avenue contained the largest population of SAS within the entire watershed. Over 90 percent of the 6,802 fish estimated in that survey were found in one riffle/pool complex located approximately one mile downstream from the RIX outfall. In 2016 SAS were found to be more abundant (8,971 SAS) and spread more evenly across the available habitat with 42 percent located upstream and 58 percent found downstream of Riverside Avenue. The area and distribution of SAS habitat increased from 2015 and 2016 to levels never before recorded during the Riverwalk survey

(USFWS 2017). This was in part due to the record low rainfall the region experienced in 2016, where no surface flow (storm flow) from upstream of Rialto Channel occurred between mid-January and the Riverwalk survey in October (Brown and May 2017). The absence of new sediment deposition during storm flows, and steady clear-water discharge from two wastewater treatment plants (Rialto and RIX facility) transported a majority of the fine sediment to below Mission Boulevard, exposing over 8.2 miles of fairly continuous gravel beds (USFWS 2017).

The 2015 Native Fishes Survey also found SAS commonly utilizing depths between approximately 1.1 and 2 feet (35 and 60 centimeters) and most fish were found in mean water column velocities between approximately 1.6 and 3.3 feet per second (0.5 and 1 meters per second), with minimum and maximum fish usage measured between 1 and 4 feet (30 and 120 centimeters) in depth and 0.66 and 5.2 feet per second (0.2 and 1.6 meters per second) flow velocity (Brown and May 2016). Current conditions indicate the species is generally limited by a low abundance of patchily distributed appropriate microhabitat (gravel/cobble substrate). Microhabitats with deeper areas of scour and associated structure (vegetation, woody debris, or boulder) tended to be more densely populated than other sections of stream (Brown and May 2016).

#### *Threats to the Species in the Action Area*

Downstream of the RIX outlet, threats include, introduction of nonnative competitors and aquatic predators, human-induced changes in stream-flow (periodic dewatering), OHV traffic, homeless encampments (associated water quality impacts and fishing), elevated water temperatures associated with diminished flows and effluent discharge, and demographic risks associated with small population size (USFWS 2014b).

A majority of the existing surface flow in the Santa Ana River is derived from wastewater sources. A significant threat to the Santa Ana River population of SAS is poor water quality, including perennially warm surface flow. The artificially warm aquatic environment has led to the naturalization of several warm water aquatic predators and one highly invasive algal species.

Drought conditions and reduction in surface flows due to water capture for ground water recharge and extraction for human use have reduced the duration and amount of surface flows in the upper portion of the river. Recent observations of fish deaths in the Santa Ana River have been attributed to dry down of the river when effluent from the RIX facility shuts off for facility maintenance or other reasons. The RIX facility, from January 2014 to November 2016, had 69 incidences of plant shutdowns, 35 of which lasted over an hour (RWQCB 2016). The river was monitored during 5 planned shutdowns associated with facility maintenance, between January 2015 and November 2016. During river monitoring most SAS (2,287 fish, 95 percent) were salvaged and returned to the river alive. The lack of surface water in the river and its vulnerability to dry down in the reach upstream of Riverside Avenue is currently the most critical threat to the species in the action area. The increase in SAS numbers from 2015 to 2016 was in part due to increased habitat availability but also due to fish salvage work that minimized the effect river dry downs on SAS.

*Conservation Needs in the Vicinity of the Action Area*

The Draft Recovery Plan for SAS (USFWS 2014b) identified the following objectives in the recovery strategy for the species, all of which are applicable the Santa Ana River population of SAS. Work with landowners and other stakeholders to: (1) Develop and implement a rangewide monitoring protocol to accurately and consistently document populations, occupied habitat, and threats, (2) Conduct research projects specifically designed to inform management actions and recovery, (3) Increase the abundance and develop a more even distribution of SAS within its current range by reducing threats to the species and its habitat, (4) Expand the range of SAS by restoring habitat (if needed), and reestablishing occurrences within its historical range.

Reducing threats from poor water quality, reduced natural and effluent flow, and extreme fluctuations in water supply will improve the status of SAS in the Santa Ana River.

The City of San Bernardino is working to reduce impacts from the dry down of portions of the Santa Ana River during RIX facility shutdowns. In January 2015 the City started providing funding to the Riverside-Corona Resource Conservation District (RCRCD) for the monitoring and salvage of native fishes, including SAS, during planned shutdowns. It is also completing a planned upgrade to its ultraviolet lighting system. This is expected to significantly reduce the number of unplanned shutdowns. The City is also constructing and/or retrofitting four groundwater wells adjacent the RIX facility to supply water to the river during future shutdown events to prevent or ameliorate the risk of dry down. Wells are planned to be completed by July 2017 (RWQCB 2016). With these measures in place the population of SAS in the action area is expected to continue to expand as this threat is reduced.

Valley District has funded the writing of the Draft Translocation Plan for Santa Ana Sucker (Dudek 2016a), as well as initiated surveys to assess stream habitat for SAS in four historic tributaries in the Santa Ana River watershed noted in the draft recovery plan for the species (USFWS 2014b) as part of the HCP. The Draft Translocation Plan is currently being reviewed by the USFWS and CDFW, National Environmental Policy Act (NEPA) review and documentation has been initiated, and coordination with the USFS is ongoing. All required approvals will be obtained prior to conducting any translocation/relocation of SAS into portions of its historic range.

In 2016, Valley District provided funding to the RCRCD for the construction and operation of two large (approximately 20 feet wide by 300 feet long) artificial streams that will be used for captive propagation of SAS for purposes of relocation into the historic tributaries. The RCRCD estimates each artificial stream will be able to sustain approximately 1,000 SAS of multiple age classes. The RCRCD has submitted a Draft Captive Breeding Plan (Dudek 2016a) to the USFWS for review and approval.

*Status of Critical Habitat in the Action Area*

The Santa Ana River unit is the largest of the three SAS critical habitat units, 7,097 acres. A majority of this area was designated in support of sediment transport to downstream occupied

reaches of the river. The action area includes a large portion of this unit, from upstream of Prado Basin to Rialto Channel along the mainstem of the river and in the mountain and lowland portions of City Creek. The species is currently only occupies the critical habitat in the low-flow mainstem river and its tributaries within and downstream of the unlined portion of Rialto Channel. The area occupied by the species within Santa Ana River critical habitat unit is a very small portion of the total designated critical habitat area. Anything that degrades the function of critical habitat in the occupied reaches of the river is of significant concern.

The proposed Project is located in Subunits 1A and 1B (Upper Santa Ana River and Santa Ana River, respectively) of designated SAS critical habitat. This area extends approximately 34 miles from Prado Dam upstream to the West Fork of City Creek (USFWS 2010b). Together these subunits constitute approximately 89 percent of designated critical habitat in Unit 1. The final rule recognizes that Subunit 1A provides stream and storm waters necessary to transport essential coarse sediments to maintain preferred substrate conditions in occupied portions in the Santa Ana River (PCEs 1 and 2), whereas Subunit 1B includes the majority of the currently occupied range of the species in Unit 1 and contains all SAS PCEs. Special management considerations or protection may be required in Subunit 1B to address habitat degradation associated with water diversion, dams, water quality impacts from non-point source and point source pollution (including untreated urban run-off and discharge of treated wastewater), and altered hydrology throughout the watershed (including alterations from instream barriers, construction of bridges, channelization, and other flood control structures) (USFWS 2010b). The majority of Subunits 1A and 1B are located within the action area and will benefit from management actions that will be implemented by the USEPA and Valley District as part of the Project to ensure the baseline acreage of SAS suitable aquatic habitat is maintained within the mainstem portion of the action area and through reintroduction of SAS to portions of its historic range, including City Creek.

#### *Past Consultations in the Action Area*

#### **Prado Mainstem and Santa Ana River Reach 9 Flood Control Projects and Norco Bluffs Stabilization Project**

The Santa Ana River Mainstem Project includes modifications to the Santa Ana River and its tributaries in San Bernardino, Riverside, and Orange counties. We issued the first biological opinion on the project in 1980 (1-1-80-F-75). There have been multiple amendments since then. On December 5, 2001, we issued a revision (FWS-SB-909.6) to the USACE for the purposes of construction of flood control projects in the Santa Ana River watershed. This revision analyzed potential effects to SAS not included in the original consultation. At the time this consultation occurred no critical habitat had been designated for SAS. Multiple components of the larger project including the Norco Bluffs stabilization, River Road floodwall, and River Road dike are within the SNRC Project action area. Permanent impacts from the flood control projects included loss of 52.5 acres of riparian habitat and 9 acres of aquatic habitat, and temporary impacts to 4.2 acres of aquatic habitat, most of which was located downstream of the action area. It was estimated that 45 SAS would be incidentally taken, in addition to 10 or more SAS taken per each

trap haul, when fish were captured and relocated out of work areas. Most measures to offset project impacts were placed downstream of Prado Dam. Near the action area in Prado Basin just downstream of River Road, the USACE agreed to create a bi-directional fish passage through an existing dike in the river.

### **Emergency River Road Sand Mining Operation and amendment**

We issued biological opinions FWS-SB-2371.2 and FWS-SB-2371.4 on April 30, 2002, and May 15, 2002, respectively, to the USACE for the purposes of River Road Bridge sand mining operations. The Section 7 consultation and later amendment analyzed the temporary loss of 22.5 acres of habitat in the river and 4.8 acres of temporary disturbance along the river bank. At the time this consultation occurred no critical habitat had been designated for SAS. Incidental take of SAS was assessed to be 20 fish captured per relocation event in the original consultation and was increased to 315 fish to account for take associated the construction of Basin 1. In order to offset project impacts to SAS, Riverside County Transportation Department was required to participate in the sucker program and sand berm construction was limited to between September 15 and April 30.

### **Study Examining Effects of Shutdowns at RIX Facility**

The USFWS issued an intra-USFWS biological opinion (FWS-SB-3057.1) on August 23, 2002, for the purposes of conducting a study to determine the effects of wastewater discharge stoppage from the RIX facility on SAS. This study was designed to monitor and evaluate changes to the amount of effected wetted habitat, change in water temperature, effect to pools, and potential for stranding. Temporal loss/degradation of critical habitat was anticipated from the RIX outlet to Riverside Avenue Bridge with an unquantifiable number of SAS affected. SAS were not observed to be injured or killed during the study.

### **Western Riverside Multiple Species Habitat Management Plan**

The USFWS issued an intra-USFWS biological opinion (FWS-WRIV-0870.19) on June 22, 2004, for a regional habitat conservation plan (MSHCP) that covered 146 species, including SAS, within the western portion of Riverside County. The MSHCP covers a wide range of public and private land uses. Up to 443 acres of modeled SAS habitat were anticipated to become unsuitable as a result of the MSHCP. At the time this consultation occurred no critical habitat had been designated for SAS. A small, but undeterminable, number of SAS were anticipated to be incidentally harmed as a result of long-term management and monitoring activities. To minimize and mitigate MSHCP impacts to SAS and other covered species, the 22 permittees conserved 3,480 acres of suitable SAS habitat within the plan boundary and provided long-term management and monitoring. Long-term management and monitoring were to be conducted by reserve managers who would assess and restore connectivity when potential barriers to SAS movement are found, restore habitat, improve water quality, protect critical areas to SAS life history needs, remove non-native aquatic predators, and remove vegetation within the plan area. We issued an amendment FWS-WRIV-11IB0266-11F0413 on September 22, 2011 which

addressed the effects of the MSHCP on designated SAS critical habitat. We determined that the MSHCP would not adversely modify SAS critical habitat.

### **River Road Bridge Replacement**

The USFWS issued a biological opinion (FWS-WRIV-2669.2) on March 11, 2005, to the Federal Highway Administration for the purposes of replacing River Road Bridge. The River Road Bridge was widened and lengthened to minimize the potential for flood-related damage. Riparian habitat was temporarily disturbed (0.99 acres) and SAS designated critical habitat was permanent impacted (1.83 acres). In order to offset project impacts to SAS Riverside County Transportation Department agreed to conserve 8.17 acres of riparian habitat in the Santa Ana River watershed.

### **Van Buren Bridge Replacement Project**

The USFWS issued a biological opinion (FWS-WRIV-3035.3) on May 5, 2005, to the Federal Highway Administration for the purposes of replacing Van Buren Bridge. The Van Buren Bridge was widened and realigned to minimize the potential for flood-related damage. Riparian habitat was temporarily disturbed (5.5 acres) and SAS designated critical habitat was permanent impacted (0.5 acres). This project was consistent with the MSHCP and all take of SAS and impacts to riparian habitat was accounted for in that consultation.

### **Forest Service Land Management Plans**

The USFWS issued a biological opinion (FWS-SB-773.9) on September 15, 2005, to the USFS or the purposes of revising land and resource management plans within four Southern California National Forests. This Section 7 consultation covered all of the proposed actions that forest plans to implement and their potential affects to listed species. All potential impacts to SAS critical habitat (City Creek) were minimized. The species does not currently occur within the San Bernardino National Forest so no incidental take of the species was anticipated. Reintroduction of the species to City Creek and one other Forest tributary is expected to occur. Forest management, culverts, in-stream road crossing, etc. are not expected to significantly affect the establishment and success of SAS to streams in the San Bernardino National Forest.

### **Reinitiation of River Road Bridge Sediment Removal Project**

The USFWS issued a revision to the original April 30, 2002 biological opinion (FWS-SB-2371.2) in 2010, (FWS-09B0283-10F0846) to the USACE for the purposes of continuing sand mining operations. Due to project delays in the construction timeframe, new unanticipated effects to SAS, and the designation of critical habitat in the interim, there was a need to reinitiate consultation. Dewatering of a 33-acre area of aquatic habitat was anticipated in order to conduct sediment removal activities. Incidental take, in the form of harm or harassment, was issued for up to 70 SAS for the capture and relocation to outside of the work area. In order to offset project

impacts to SAS Riverside County Transportation Department agreed to supply cool groundwater to the river below the work area in addition to measures included in the previous consultations.

### **Seven Oaks Dam Gate Testing Project**

The USFWS issued a biological opinion (FWS-SB/WRIV-08B0408-10F0825) on July 12, 2010, to the USACE for the purposes of testing the flood gates at Seven Oaks Dam. The Gate testing is a component of the Santa Ana River Mainstem Project. It was anticipated that by testing the dam gates the associated high flow event would achieve a 2,500 cubic feet per second (cfs) discharge rate at the dam. Flows were predicted to be up to 750 cfs at Rialto Channel. Take was authorized for the stranding of up to 20 SAS over 3 days of gate testing. No conservation was included in this consultation.

### **Reinitiation of Prado Mainstem and Santa Ana River Reach 9 Flood Protection and Norco Bluffs Stabilization Project**

The USFWS issued this revision on March 28, 2012, (FWS-SB/WRIV/OR-08B0408-11F0551) to the USACE for the purposes of construction of flood control projects in the Santa Ana River watershed. This revision analyzed potential effects to SAS not included in the original consultation including effect to SAS critical habitat that was designated in 2010. Conservation measures were amended to increase their conservation values for SAS, as well as riparian habitat in general. Two of the measures included a Trust Fund of \$1,000,000 to manage previously restored habitat in the Santa Ana River watershed free of giant reed for the life of the project and create 10.9 acres of aquatic habitat for SAS below Prado Dam.

### **Santa Ana River Bridge Seismic Retrofit and Routine Maintenance Project**

The USFWS issued a biological opinion on February 17, 2015, (FWS-WRIV-15B0116-15F0180) to the USACE for the seismic retrofit of the Santa Ana River Bridge that supports the Metropolitan Water District Upper Feeder pipeline. Temporary impacts to 0.07 acres of in-stream habitat was authorized. In order to offset project impacts to SAS, Metropolitan Water District agreed restore and maintain 1.22 acres of native riparian habitat in the Santa Ana River watershed.

### **Reinitiation of Santa Ana River Mainstem Project**

The USFWS issued a revision on July 23, 2015, (FWS-OR-08B0408-15F0592) to the USACE for the purposes of adding bank and bridge protection to portions of the Santa Ana River downstream of Prado Dam. These protections were needed to prevent undercutting or erosion of Santa Ana River embankments and railroad bridge piers during up to 30,000 cfs discharge from Prado Dam. All impacts to stream habitat are located outside of the SNRC action area. The USACE agreed to place offsetting compensatory measures for the temporary impact of 1.22 acres of perennial stream habitat upstream within the SNRC action area.

Temporary enhancement of perennial stream habitat of at least 2.54 acres was required and has yet to be constructed. The USACE and Valley District anticipate both restoration/enhancement projects will occur at approximately the same time resulting in the cumulative enhancement of at least 4.04 acres of perennial stream habitat. In addition, the USACE is required to either reintroduce SAS to a suitable unoccupied habitat within its historic range in the Santa Ana River watershed or enhance 2 acres of SAS habitat below Prado Dam through gravel/cobble augmentation of the substrate. In discussion with the USACE, they are pursuing the reintroduction alternative along with SNRC and the HCP. If the reintroduction option is pursued, this will bring the cumulative number of SAS-occupied streams to four in the Santa Ana River watershed, (including the two proposed by SNRC).

### **Programmatic Consultation on SAS Recovery Permits**

The USFWS issued an intra-USFWS programmatic consultation (USFWS 2015a) on December 22, 2015 to analyze various recovery actions for SAS across its range and set limits on incidental take associated with specific recovery actions. In this case take was considered mortally wounding an individual.

1. Survey, capture, and handling activities throughout species' range – up to 30 adults and 60 juveniles per year;
2. Electrofishing – up to 1 percent per year;
3. Voucher specimens – up to 5 individuals per new or rediscovered populations;
4. Translocations – up to 25 percent of a population within a given pool/sampling area or up to 400 individuals per year per watershed;
5. Removal from the wild and release of captive SAS – up to 10 percent of the individual SAS observed per year per watershed and up to 100 juveniles per watershed and 50 adults per watershed overall; and/or
6. Removal for recovery and/or research purposes to salvage individuals from drying habitat or other natural threats that subject them to imminent mortality – no limit.

### **EFFECTS OF THE ACTION**

Effects of the action refer to the direct and indirect effects of an action on the species, together with the effects of other activities that are interrelated and interdependent with that action, which will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action, are later in time, and still reasonably certain to occur.



San Bernardino Kangaroo Rat*Direct Effects*

## Habitat Destruction

Project construction activities will permanently impact approximately 0.04 acres (combined footprint of outlet structure and energy dissipater at both City Creek and Redlands Basins) and temporarily impact 0.66 acres of SBKR habitat at the outlet structures and at the Redlands Basins (Table 1, see below). These impacts will be offset by the conservation and management of 1.24 acres of SBKR habitat. CMs have been included to restore and revegetate habitat disturbed by construction activities which should minimize the duration of habitat loss. It is expected that appropriate SBKR habitat (same or better quality as pre-Project condition) will be reestablished within 3 years and at most 5 years from the start of the Project.

## Death/Injury

Any SBKR within ground disturbance areas of the Project, 0.7 acres of initial construction, may be crushed or buried within their burrows as a result of Project-related disturbance. To minimize the number of SBKR injured or killed by construction activities, the contractor will install exclusionary fencing to prevent SBKR from entering any construction areas adjacent to occupied habitat. Any SBKR found during fence installation, and subsequently found within the fenced area throughout the course of construction activities, will be captured and released in nearby suitable habitat by an approved biologist. Trenching completed to install the exclusionary fence may directly injure and/or kill SBKR through crushing of the burrows by movement of personnel, vehicles, and equipment. Indirect injury and death may result from the effects of trapping and relocation to maintain the SBKR-free enclosed action area, as discussed below in the Indirect Effects section below. Despite risks associated with the exclusionary fencing, trapping, and release of SBKR to adjacent habitat, we believe these activities will minimize the number of animals that otherwise would be killed by construction activities. Moreover, though captured SBKR may be injured or killed during live-trapping or relocation, such take rarely occurs during trapping conducted by biologists approved by our agency.

We expect that SBKR will be prevented from entering construction areas after initial clearing and grading due to the presence of the exclusionary fence. However, there is some possibility that SBKR may burrow under the fence or enter through a temporary breach in it. To minimize injury to these SBKR, all trenches will be backfilled or covered or temporary escape ramps will be constructed at the end of the work day; any stockpiled soils, if outside the exclusionary fence, will be covered or fenced. An Authorized Biologist or Biological Monitor will inspect these sites daily to locate and make any needed repairs to the exclusionary fence and to remove any stranded SBKR from the construction area and release them into nearby suitable habitat.

*Indirect Effects*

## Habitat Degradation/Type Conversion

Although the topsoil will be segregated and placed back in the temporary excavation sites, and revegetated in as near to its original condition as possible, the soil profile will be disrupted and this may affect the quality of the habitat and its ability to support SBKR long term.

Continuous or semi-continuous discharge of up to 10 MGD of effluent into City Creek will alter the habitat within approximately 8.4 acres of the deepest braid (thalweg) of City Creek from Boulder Avenue to approximately Alabama Street. It is expected that the current habitat (scalebroom scrub) will be converted to riparian habitat (southern willow woodland or equivalent) and cause the permanent loss of one or more biological features necessary for SBKR occupation. A trapping survey conducted in 2016 indicated that approximately half of the length of the affected reach of City Creek (4.1 acres) is occupied by SBKR (ESA 2016d). To offset this impact, 20.5 acres of SBKR habitat will be conserved and managed; loss of occupied designated critical habitat offset at a ratio of 3 to 1 and loss of unoccupied designated critical habitat offset at ratio of 2 to 1 (Table 1).

**Table 1.** Impacts and conservation of scalebroom scrub habitat

Project Feature	Permanent Effects		Temporary Effects		Proposed Conservation (acres)
	occupied	unoccupied	occupied	unoccupied	
City Creek (outlet Structure)	0	0.02	0	0.18	0.22
City Creek (type conversion)	4.10	4.10	0	0	20.5
Redlands Basins	0.02	0	0.48	0	1.02
<b>Total</b>	<b>4.12</b>	<b>4.12</b>	<b>0.48</b>	<b>0.18</b>	<b>21.74</b>

## Trapping and Relocation

Adverse impacts to SBKR may result from trap and release activities. After release some animals likely will not survive displacement owing to increased vulnerability to predation, while others will suffer from reduced fitness resulting from competitive exclusion by SBKR or other small mammals already established within the release area. Physiological stress associated with inability to successfully reestablish a new home range for obtaining food and shelter will result in reduced individual fitness, as manifested by reduced survival or reproduction after release. Individual SBKR now inhabiting the adjacent habitat also may suffer from these competition-related stresses, including reduced reproduction, for some time after new animals are released into their territories. The early successional stages vegetation and/or degraded conditions of the habitat in the affected Project area suggests that up to two SBKR would be captured and relocated during construction of the 24-inch pipeline and associated outlet structures, assuming less than a 100 percent capture rate. It is expected that capture and translocation will subject captured SBKR to risk of decreased survival, fitness, and reproduction.

*Effect on Recovery*

While the USFWS has not developed a recovery plan for SBKR, our latest 5-year review for the subspecies recommended that as much remaining habitat as possible be conserved and managed according to (USFWS 2009). The 5-year review also recommends that the USFWS work with partners to identify opportunities for habitat management, restoration, and enhancement, and to protect additional SBKR habitat. Habitat protection must include upland refugia to support SBKR during floods, and occupied floodplains and adjacent upland habitats should be conserved to ensure protection of populations large enough to remain viable in the long term (USFWS 2009). However, owing to the lack of adequate demographic data, we do not know how large a sustainable SBKR population must be or how large a habitat area is needed to support a viable population.

Overall, implementation of the proposed action will result in a gain of up to 21.74 acres of permanently conserved and managed habitat for SBKR, which provides a net gain in the long term function of critical habitat containing PCE/PCRs to support the ecological functions needed to support SBKR in this area. The 4.6 acres of occupied and 4.3 acres of unoccupied suitable habitat which will be impacted by Project construction constitutes a small portion of Unit 1. We do not expect the combined permanent loss of 0.04 acres (total footprint of structures), the permanent replacement of scalebroom scrub with riparian habitat (PCE 2) of 8.2 acres, and the temporary loss of 0.66 acres to impede the recovery of SBKR. We expect the conservation and management of 21.74 acres for the benefit of SBKR to contribute to the function of critical habitat in Unit 1 and recovery of the species.

*Effect on Critical Habitat*

The Project will result in 8.24 acres of permanent (0.04 acres developed and 8.2 acres converted to riparian woodland) and 0.66 acres of temporary impacts to SBKR critical habitat as a result of Project construction. SBKR occupy 4.6 of those acres. The affected critical habitat supports the appropriate soil types and provides habitat in and adjacent to the 100-year floodplain (PCE/PCRs 1, 2, 3, and 4). To offset the effects of the Project's impacts on SBKR critical habitat, permanent conservation and management of scalebroom scrub habitat (at least 13.32 acres of which must be occupied) including a conservation easement, the purchase of equivalent credits from a Conservation Bank approved by the USFWS, or another equivalent compensatory mitigation option approved by the PSFWO will occur prior to initiation of Project construction. Conservation of habitat linkages between City Creek and the larger Santa Ana River population and/or connectivity between the lower elevations of the creek and upper terrace refugia habitats should be prioritized.

## Santa Ana Sucker

### *Direct Effects*

#### Habitat Node Creation

Construction is expected to occur in the wetted channel as part of the initial establishment of the habitat nodes (Conservation Measure 17b.i) in the mainstem of the Santa Ana River. Although this action is not anticipated to kill SAS, the clearing of the stream using electrofishing (capture and relocation of SAS to outside the work area) will harm or harass all fish that are found inhabiting construction areas. Due to the initial selection of poor quality habitat (sandy substrate with little habitat complexity) the take of SAS associated with each habitat node is expected to be no more than one fish per node, or six SAS in total. Subsequent work will likely encounter higher numbers of SAS as the intent of the node creation is to increase fish numbers. Habitat node re-establishment or enhancement would only occur if a node failed to perform (amount of habitat enhance was less than 0.25 acres) or the structure of the node was significantly degraded due to storm flows.

Assuming a 10-year storm event will degrade or destroy all habitat nodes to a degree that they need replacement and a 5-year storm flow will degrade 50 percent of the nodes to a degree where enhancement is needed, all nodes will need replacing or significant enhancement approximately three times in 20 years. Habitat node enhancement will likely impact a higher number of SAS than node re-establishment since a greater proportion of the node is functional and maintaining SAS habitat at the time of repair. We estimate that up to 100 SAS will be relocated per habitat node during repairs (3 nodes equals 600 SAS) and up to 20 SAS relocated during node replacement (12 nodes equals 240 SAS), or up to 840 SAS relocated in a 20 year period. No more than six SAS are anticipated to be injured or killed per year associated with habitat node construction or future maintenance activities, or up to one fish per node per year.

#### Long-term Monitoring

Although the potential for injury or mortally wounding SAS during long-term monitoring in the mainstem of the Santa Ana River or in reintroduced populations is low, it is likely to occur. Recovery permits issued to USFWS permitted SAS biologists allow up to 10 SAS per calendar year to be incidentally injured or killed. We anticipate that a cumulative amount of no more than six SAS will be incidentally injured or killed by electroshocking and handling per calendar year as part of the long-term monitoring for the six habitat nodes and the two reintroduced SAS populations in the Santa Ana River watershed, or two SAS per population.

*Indirect Effects*

## Permanent Habitat Loss and Degradation – Reduced Effluent Discharge

1. Reduced Area of Wetted Channel

A study was conducted as part of the BA to estimate the changes in depth and velocity that could be expected from a 6 MGD discharge reduction at the RIX outfall. The study concluded that a reduction of 6 MGD of discharge from RIX would reduce the wetted habitat in the Santa Ana River channel by 4 to 7 percent between the RIX outlet and approximately Mission Boulevard Bridge (ESA 2015b). The existing wetted area of this reach is approximately 15.6 acres; therefore, the 4-7 percent reduction in the wetted channel of the Santa Ana River would equate to 0.6 to 1.1 acres of reduced wetted habitat throughout the affected area. The incremental effect of any flow reduction could degrade the already compromised aquatic habitat, and would result in a gradual decline in the ecological function of the riverine system for SAS within this area (i.e., reduced forage and spawning area). The reduction in aquatic habitat would likely adversely affect SAS at all life stages.

The reduced discharge study used 6 MGD as the value of flow reduction to the Santa Ana River. To ensure use of the best available information when evaluating the change to the wetted environment, the USFWS requested up-to-date data from Valley District. A representative data set from November 2014 to December 2016 (monthly mean) indicated that EVWD supplied 6.01 MGD as influent to the RIX facility for tertiary processing (Valley District 2017). The RIX facility processed to tertiary standards and discharged a mean effluent flow of 28.88 MGD over the same time period (SWRCB 2017).

To ensure that all effluent is removed from the local groundwater, the RIX facility extracts more water than they infiltrate. The rate of over extraction was unaccounted for in the low-flow study, meaning that the effect of the diversion of 6 MGD is loss of more than 6 MGD from the RIX outfall.

Reported values of influent and effluent indicate that RIX over extracted by approximately 10 percent during the studied period (SWRCB 2017). A conservative estimate for Project-related discharge reduction at the RIX outfall is approximately 6.43 MGD, or 22.3 percent of current RIX discharge (6.43 of 28.88 MGD). We estimate that the wetted channel between the RIX outlet downstream to Mission Boulevard will be permanently reduced by approximately 1.21 acres, or 8 percent of the current wetted channel, slightly greater than the 0.6 to 1.1 acres estimated in the reduce flow study.

## 2. **Reduced Habitat Quality and Function**

### a. **Reduced Depth of Aquatic Habitat**

The reduced discharge study concluded that a diversion of 6 MGD from the Santa Ana River at the RIX outlet would lower water depth in the channel by approximately 1.1 inches, resulting in more shallow pools (and fewer deep pools) and therefore less available habitat for adult SAS. Shallower habitat increases the incidence of avian predation and water warming.

### b. **Channel Constriction**

Discharge reduction will cause channel constriction where the proportion of open water habitat is reduced as the riparian canopy covers more of the channel. Although canopy shade benefits SAS by reducing warming from the sun, excess shading has recently been shown to negatively affect SAS presence in the Big Tujunga population of SAS (Aspen 2016). The amount of riparian cover is highly variable in the Santa Ana River. The increase in the relative percentage of riparian cover with Project reduced flow is not anticipated to have a negative impact on SAS since the change in any given reach of stream will be small (approximately 8 percent).

### c. **Reduced Flow Velocity**

The reduced flow study modeled flow velocity and found that velocities would decrease with reduced flow volume. Using estimates of moderate (1.2 to 3.6 feet per second) and high flow (3.6 to 6.0 feet per second) as surrogates for suitable SAS habitat, approximately 9.8 percent of this habitat will be replaced with low velocity habitat (less than 1.2 feet per second) from downstream of the RIX outfall to Mission Boulevard. A flow of 1.2 feet per second is approximately twice the velocity needed to transport sand (2 millimeters in size or smaller) and it is expected that sandy substrate will dominate these flow velocity areas of the stream. A permanent loss (degradation) of 9.8 percent of the suitable SAS habitat in this reach of the Santa Ana River is a significant loss as this portion of the river supports a majority of the SAS in the watershed.

### d. **Reduced Sediment Transport**

The reduced flow study modeled sand transport (particles up to 2 millimeters in size) (ESA 2015b). As flow velocity was reduced the amount and ability of water to transport sediment was reduced proportionately. With a 6 MGD reduction in flow the area of suitable SAS habitat is expected to be reduced by approximately 7 percent upstream of Riverside Avenue as sand buildup covers existing gravel beds.

Flow reduction will also affect the rate of sediment transport downstream, which controls the rate of re-exposure after sand is deposited over existing gravel beds by storm flows. The Santa Ana River bottom is regularly observed to be mostly covered in sand (USFWS 2017). Because wastewater discharge provides all surface flow outside of infrequent and short-lived storm flows, sand is flushed downstream at a rate that is proportionate to the volume of wastewater discharged. A reduction in effluent discharge will slow the rate of sand transport downstream and lengthen the time required to re-establish suitable SAS (gravel bed re-exposure). Although not quantified, this is an important factor that negatively affects the health, fecundity, and overall viability of SAS in the mainstem Santa Ana River.

#### Increased Abundance of Aquatic Predators

The reduction in wetted habitat, depth, and velocity as result of the Project would generally create more shallow and slow moving waters within the Santa Ana River downstream of the RIX facility, which could increase habitat suitability for non-native aquatic predators such as bullfrog, sunfish, largemouth bass, and catfish. An increase in the non-native aquatic predator population negatively affects all SAS size classes and reduces recruitment and survival.

#### Death/Injury

It is not anticipated that SAS will be injured or killed at the onset of flow reduction. SAS are expected to redistribute themselves in the river.

#### *Amount or Extent of Take*

USGS estimated that 6,761 suckers occupied the river reach between the RIX outflow and Mission Boulevard in September 2015 (Brown and May 2016). As stated in the BA the diversion of 6 MGD from the Santa Ana River at the RIX discharge would reduce the wetted habitat of the Santa Ana River channel from 4 to 7 percent, or 0.6 to 1.1 acres in the reach of the river from the RIX outlet to Mission Boulevard. Using a mean population density of 433 SAS per acre (6,761 suckers per 15.6 acres of existing wetted habitat) the BA assessed this permanent reduction in wetted habitat to result in a worst-case scenario of SAS numbers decreasing by 260 to 476 SAS. Due to the unequal distribution of SAS throughout this reach of river an average density should not be used to estimate the potential take or displacement of SAS.

The 2015 Native Fishes Survey (Brown and May 2016) indicated that 92 percent (6,253 fish) of all SAS occurred in the reach of river between the RIX outfall and Riverside Avenue (4 percent of the current species' range in the Santa Ana River watershed). Most SAS in the watershed (6,135 fish, 91 percent) were found associated with one pool/riffle complex in this reach that was approximately 100 meters in length. The river upstream of the Riverside Avenue Bridge is expected to be most heavily affected reduced flow velocity/sediment transport and increased sand buildup that effectively smothers existing gravel beds (7 to 9.8 percent habitat reduction, BA and as

discussed in the Reduced Flow Velocity section above, respectively). A 7 to 9.8 percent loss of suitable habitat in this reach of river equates to a reduction or displacement of SAS of between 438 and 613 fish, with additional losses expected downstream of Riverside Avenue.

Draft results of the 2016 Native Fishes Survey (Brown and May 2017) indicate the current population of SAS is more evenly distributed than in 2015, with more fish found downstream of Riverside Avenue (5,219 SAS or 58 percent) than upstream (3,752 SAS or 42 percent). The difference in population estimates between 2015 and 2016 (6,761 and 8,971 fish, respectively) highlights the dynamic shift in SAS population numbers that can occur between years; a population increase of approximately 25 percent. Relatively continuous gravel beds were found from the RIX outlet down to beyond Mission Boulevard during the Riverwalk survey which occurred approximately one month after the 2016 Native Fishes Survey (USFWS 2017). Assuming the reduced flow study (ESA 2015b) is applicable to the 2016 Native Fishes Survey, a 7 to 9.8 percent loss of suitable habitat from the RIX outlet to Mission Boulevard equates to a reduction of SAS numbers of between 628 and 880 fish. This estimate of the decline in habitat values and associated reduced population size of SAS is more conservative than what was estimated in the BA (4 to 7 percent reduction in wetted habitat and 260 to 476 SAS), but it incorporates data that were unavailable when it was drafted.

It is anticipated that the reduction of aquatic habitat, reduced depth, and lower velocities associated with the reduction of 6.43 MGD to the Santa Ana River will result in incremental effects of sand deposition that will reduce SAS egg development/survival, increase egg predation, reduce fitness of adults that may expend more energy finding suitable spawning habitat, and reduce survival of SAS at all life stages.

To offset direct and indirect impacts to SAS and its habitat resulting from the loss of up to 22.3 percent of the calculated discharge from the RIX outfall into the Santa Ana River and the resulting substantive loss and degradation of SAS habitat between the RIX outfall and Mission Boulevard, Valley District will establish and implement an HMMP as described in CM 17. The HMMP will contain measures to increase the number of individual SAS in the Santa Ana River, increase the area of suitable and occupied habitat in this watershed, and establish two new populations in the watershed. The measures will either be implemented by Valley District in perpetuity or will be taken over by another entity upon HCP permit issuance. Measures and their expected outcomes are discussed more fully below in the discussion of Project Effects on Recovery.

### *Effect on Recovery*

The recovery objectives (RO) identified in the Draft Recovery Plan for the Santa Ana Sucker (USFWS 2014b) are listed below. Work with landowners and other stakeholders to:

- RO 1. Rangewide Monitoring - Develop and implement a rangewide monitoring protocol to accurately and consistently document populations, occupied habitat, and threats;



- RO 2. Recovery Research - Conduct research projects specifically designed to inform management actions and recovery;
- RO 3. Threat Reduction - Increase the abundance and develop a more even distribution of SAS within its current range by reducing threats to the species and its habitat; and
- RO 4. Range Expansion - Expand the range of the SAS by restoring habitat (if needed), and reestablishing occurrences within its historical range.

CM 17 will help achieve a significant number of ROs, goals, and actions identified in the draft recovery plan, including:

CM 17b will create an HMMP that will establish a long-term monitoring program (CM 17b.vi) that will either be implemented by Valley District in perpetuity or will be taken over by another entity (e.g., HCP) upon permit issuance. As a proposed covered activity as part of the HCP, SNRC and its long-term monitoring plan are anticipated to be incorporated into a rangewide monitoring protocol for SAS that is currently in development by Valley District. Measure CM 17b.vi will support RO 1. Measures discussed below will be included as part of the HMMP and will offset Project effects to SAS and its critical habitat and support the recovery of the species.

CM 17b.i “Habitat Node Creation (microhabitat enhancements)” – This measure will support species’ recovery objectives and PCEs through range expansion of SAS in the mainstem of the Santa Ana River (RO 4) by enhancing coarse substrate abundance (PCE 2), water depth and velocity (PCE 3), complexity of instream habitat (PCE 6), and use of mainstem tributaries. It is also expected to reduce threats from variable wastewater discharge and the non-native red alga by more evenly distributing SAS throughout the mainstem perennial stream, away from points of discharge (RO 3). This measure is expected to offset Project impacts to stream habitat (reduced stream depth, water velocity, and temporal availability and amount of coarse substrate habitat) by using boulders, large woody debris, or addition of cobble/gravel to increase the abundance and quality of preferred microhabitats (riffle/pool habitat) suitable for SAS foraging and spawning. Current and future native fish studies and other associated research (e.g., stream restoration techniques, fish passage, etc.) will be used to create and adaptively manage these habitat features. Six habitat nodes will be created and maintained in perpetuity, adding at minimum 1.5 acres of SAS habitat (e.g., coarse substrate with variable flow velocities creating areas of scour and riffles) similar to or better than natural riffle/pool habitat measured during the Native Fishes Surveys (Brown and May 2016, 2017) in the Santa Ana River.

The 1.5 acres of foraging and spawning habitat will be enhanced on the Santa Ana River associated with mainstem tributaries downstream of the USACE levee system in the City of Riverside. Fish densities are currently low in the downstream reaches of the river (below Mission Boulevard) due to a lack of suitable SAS habitat (low cover of cobble/gravel substrate). The enhanced habitat created by habitat nodes is expected to attract fish from upstream reaches and increase the use of associated mainstem tributaries. Attracting fish downstream of Mission Boulevard Bridge, will move them out of the area where Project effects are expected to be most

deleterious, as well as downstream of the densest distribution and cover of the invasive red alga, and where natural groundwater inputs reduce the effect of summer warming on surface flow. It is anticipated that SAS will occupy these habitat nodes in relatively high densities, more evenly spreading and increasing fish numbers in the Santa Ana River mainstem.

In one natural riffle/pool complex located upstream of Riverside Avenue USGS found an average of 12.0 and 3.1 SAS per meter of river length (Brown and May 2016 and 2017, respectively). Using these estimates for a relative comparison of the expected change in SAS numbers with Project implementation, we anticipate 1.5 acres (6 habitat nodes or 600 meters of river length) of SAS habitat will sustain between 1,863 and 7,218 adult and young fish. An estimate in the net change in SAS numbers in the watershed is approximately an increase of between 983 and 6,338 fish (assuming a maximum Project impact of 880 SAS), or equivalent to an increase of between 10.9 and 70.6 percent of the 2016 SAS population.

CM 17b.ii “Aquatic Predator Control Program” – This measure will support RO 3. It is anticipated that this measure will reduce the total number of non-native fish, reptile, and amphibian predators in the reach of the river from the RIX outlet to Mission Boulevard, in the habitat node creation areas, and in other locations where non-native predator removal is needed. Reduction of this threat will increase SAS survival and make available habitats to SAS that may currently be occupied by non-native predators.

CM 17b.iii “Exotic Weed Management Program” – This measure will support RO 3. It will help improve ecological function of existing riparian habitat within the Project impact area by removing non-native plant species. Species that use high amounts of water, like giant reed and salt cedar, will be removed, reducing water losses in the system from evapotranspiration, improving surface flow.

CM 17b.iv “Rialto Channel Water Temperature Management” – This measure will support RO 3 and 4. It will enhance water quality for SAS in Rialto Channel (Santa Ana River mainstem tributary) and further downstream by providing cool, high quality supplemental water from local groundwater sources to reduce the water temperature during the summer season. This measure will seasonally enhance habitat in an ecologically valuable tributary of the Santa Ana River, making it available for use by SAS year-round. Current data indicates that very few SAS occupy this tributary and upstream of the RIX outlet during late summer (Brown and May 2016, 2017). By attracting fish upstream of the RIX outlet they are moved outside of the impact area for both this Project and future RIX shutdown activities, as well as outside the known range of the non-native red alga. Combined with aquatic predator removal, after Project implementation these fish are expected to have reduced threats, increased overall health, larger eggs, and greater survival.

CM 17b.v “Upper Watershed SAS Population Establishment” – This measure will support RO 4. It will reestablish two populations of SAS, one in upper City Creek, and the other will include an upper tributary cited in the draft SAS recovery plan. Both of these upper tributaries are part of the species’ historic range and have high potential for successful relocation and reestablishment of the species. This measure will offset reduced effluent discharge (surface water flow) in the

mainstem Santa Ana River downstream of the RIX outlet and associated degradation in quantity or quality of habitat that may result in reduced reproduction, fitness, recruitment and/or survivorship of SAS. Implementation of this measure will contribute to the recovery of the species by increasing the number of SAS locations (metapopulations) in the Santa Ana River, increasing the total number of SAS currently found in the watershed, and distributing the risk of a catastrophic event between multiple, managed locations.

### *Effect on Critical Habitat*

The majority of the action area, except the Redlands Basins, is designated critical habitat for SAS. Project-related reduction in wetted habitat in the mainstem of the Santa Ana River is estimated to permanently degrade up to 1.21 acres of critical habitat. This represents approximately 0.02 percent of the 7,097 acres of designated critical habitat in the Santa Ana River Unit, and approximately 0.01 percent of the total 9,331 acres designated for the species. Flow reduction will gradually convert the edges of existing aquatic habitat to riparian habitat, as the channel width constricts. Primary constituent elements associated with instream habitat (i.e., flow, food sources) will be reduced, but those associated with riparian vegetation (i.e., shelter, cover) will remain intact. CM 17b, discussed above, will offset this degradation of ecological values important to SAS critical habitat by enhancing in stream habitat (habitat node creation, non-native plant removal, aquatic predator removal, and Rialto Channel summer water temperature reduction), reintroducing SAS to two historic tributaries in the upper Santa Ana River watershed, and managing and monitoring SAS at these three locations in perpetuity.

### CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to Section 7 of the Act. We are not aware of any planned non-Federal actions affecting listed species that are reasonably certain to occur in the action area considered by this biological opinion. The City of San Bernardino Municipal Water Department has also proposed a reduction in discharge from the RIX facility in a Draft Environmental Impact Report for the Clean Water Factory. However, it is our understanding that the Clear Water Factory will seek CWSRF funding and funding and other support from the Bureau of Reclamation, and will therefore be the subject of a future consultation.

### ANALYTICAL FRAMEWORK FOR THE JEOPARDY AND ADVERSE MODIFICATION DETERMINATIONS

#### Jeopardy Determination

Section 7(a)(2) of the Endangered Species Act requires that Federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. "Jeopardize the continued existence of" means "to engage in an action that

reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species” (50 CFR 402.02).

The jeopardy analysis in this biological opinion relies on four components: (1) the Status of the Species, which evaluates the range-wide condition of the SBKR and SAS, the factors responsible for that condition, and its survival and recovery needs; (2) the Environmental Baseline, which evaluates the condition of the SBKR and SAS in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the SBKR and SAS; (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the SBKR and SAS; and (4) the Cumulative Effects, which evaluates the effects of future, non-Federal activities in the action area on the SBKR and SAS.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the current status of the arroyo toad, desert tortoise, flycatcher, and SBKR, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the SBKR and SAS in the wild.

#### Adverse Modification Determination

This biological opinion does not rely on the regulatory definition of “destruction or adverse modification” of critical habitat at 50 Code of Federal Regulations 402.02. Instead, we have relied on the statutory provisions of the Endangered Species Act to complete the following analysis with respect to critical habitat.

In accordance with policy and regulation, the adverse modification analysis in this biological opinion relies on four components: (1) the Status of Critical Habitat, which evaluates the condition of designated critical habitat for the SBKR and SAS, in terms of primary constituent elements, the factors responsible for that condition, and the intended recovery function of the critical habitat overall; (2) the Environmental Baseline, which evaluates the condition of the critical habitat in the action area, the factors responsible for that condition, and the recovery role of the critical habitat in the action area; (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated and interdependent activities on the primary constituent elements and how that will influence the recovery role of the affected critical habitat units; and (4) Cumulative Effects, which evaluates the effects of future non-Federal activities in the action area on the primary constituent elements and how that will influence the recovery role of affected critical habitat units.

For purposes of the adverse modification determination, the effects of the proposed Federal action on the critical habitat of the SBKR and SAS are evaluated in the context of the range-wide condition of the critical habitat, taking into account any cumulative effects, to determine if the critical habitat range-wide would remain functional (or would retain the current ability for the

primary constituent elements to be functionally established in areas of currently unsuitable but capable habitat) to serve its intended recovery role for the SBKR and SAS.

The analysis in this biological opinion places an emphasis on using the intended range-wide recovery function of critical habitat for the SBKR and SAS, and the role of the action area relative to that intended function as the context for evaluating the significance of the effects of the proposed Federal action, taken together with cumulative effects, for purposes of making the adverse modification determination.

### **INCIDENTAL TAKE STATEMENT**

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Harm is further defined by us to include significant habitat modification or degradation that actually kills or injures a listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by us as an action that create the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and 7(o)(2) of the Act, such incidental take is not considered a prohibited taking under the Act, provided that such taking is in compliance with this incidental take statement.

The measures described below are non-discretionary, and must be undertaken by the USEPA so that they become binding conditions of any permit or grant documents issued to the permittee, as appropriate, for the exemption in section 7(o)(2) to apply. The USEPA has a continuing duty to regulate the activity covered by this incidental take statement. If the USEPA fails to assume and implement the terms and conditions of the incidental take statement or to make them enforceable terms of permit or grant documents, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of the incidental take, the USEPA must report the progress of the action and its impact on the species to the PSFWO as specified in the incidental take statement [50 CFR § 402.14(i)(3)]. The exemption provided by this incidental take statement to the prohibitions against take contained in section 9 of the Act extends only to the action area as described in the Environmental Baseline section of this biological opinion.

#### San Bernardino Kangaroo Rat

The exact distribution and population size of SBKR is difficult to estimate due to the dynamic conditions associated with their habitat and biology. Moreover, finding dead or injured SBKR within the construction area is unlikely as the individuals may be underground during construction activities.

Exclusion fencing will be erected, and SBKR will be captured and relocated outside of the construction footprint. However, some animals may be missed and subsequently die as a result of Project clearing and grading activities. Some SBKR may also be injured or killed as a result of the capture and relocation efforts. Because we do not have site-specific data regarding the density of SBKR at the site of the proposed action, the precise number of animals that will be affected by the proposed action is difficult to quantify. Nevertheless, based on the best available information, we have established the following take exemptions for SBKR:

1. Death or injury of adult and/or juvenile SBKR from ground disturbance of up to 0.9 acres resulting from construction of the 24-inch pipeline and associated outlet structures at City Creek and at Redlands Basins. The amount or extent of incidental take will be exceeded if more than 0.9 acres is disturbed or more than one SBKR is known to be injured or killed from ground disturbance during construction of the 24-inch pipeline or the associated outlet structures in City Creek and the Redlands Basins.
2. Death or injury of SBKR as a direct result of the capture and release efforts from within the fenced work areas associated with City Creek and the Redlands Basins. Incidental take will be exceeded if more than one SBKR is known to be injured or killed by the capture/relocation efforts during construction of the 24-inch pipeline and associated outlet structures.
3. Death or injury of adult and/or juvenile SBKR from water inundation of up to 8.2 acres of potentially occupied habitat resulting from the initial flushing of effluent into City Creek. The amount or extent of incidental take will be exceeded if more than 8.2 acres is inundated in the initial flushing of effluent into City Creek.

#### Santa Ana sucker

The exact distribution and population size of SAS is difficult to estimate due to the dynamic conditions associated with their habitat and biology. Some SAS may be injured or killed as a result of the capture and relocation efforts during habitat node creation, during long-term monitoring, during electroshocking activities for predator removal, or for the purposes of salvage in City Creek or another translocation stream. Because we do not have site-specific data regarding the density of SAS at the site of the proposed action, the precise number of animals that will be affected by the proposed action is difficult to quantify. Nevertheless, based on the best available information, we have established the following take exemptions for SAS:

1. Death or injury of adult and/or young SAS from displacement due to channel constriction and habitat loss of up to 1.21 acres resulting from up to 6.43 MGD of discharge flow reduction from the RIX facility. The amount or extent of incidental take will be exceeded if more than 1.21 acres of aquatic habitat is permanently lost from discharge flow reduction.

2. Capture and relocation of all SAS from within construction areas during construction and/or reconstruction of six habitat nodes in the mainstem of the Santa Ana River. Incidental take will be exceeded if more than six SAS are injured or killed during capture and relocation activities during construction and/or reconstruction of the six habitat nodes (1 fish per node) in any one calendar year.
3. Capture of SAS from the Santa Ana River for translocation to the upper watershed or to supplement the captive-population, for purposes of breeding and subsequent relocation. Incidental take will be exceeded if more than 25 percent of the Santa Ana River population or 400 SAS per year are removed for translocation/relocation purposes, per the programmatic consultation on SAS recovery permits (USFWS 2015a).
4. Capture and measurement of SAS from the mainstem of the Santa Ana River and from the two new populations created in the species' historic range for long-term monitoring and management. Incidental take will be exceeded if more than six SAS are injured or killed during long-term species monitoring in the Santa Ana River watershed per calendar year, or a mean of two (2) fish per metapopulation.
5. Capture and relocation of all SAS for the purpose of salvage from drying habitat or other threats that subject them to imminent mortality. There is no limit on the numbers of SAS that may be relocated during salvage efforts.

#### EFFECT OF THE TAKE

In this biological opinion, we have determined the level of anticipated take is not likely to result in jeopardy to SBKR or SAS, or adversely modify SBKR or SAS critical habitat.

#### CONCLUSION

After reviewing the current status of the SBKR and SAS, environmental baseline for the action area, effects of the proposed action, and cumulative effects, it is the USFWS's biological opinion that the proposed action is not likely to jeopardize the continued existence of SBKR or SAS, or adversely modify SBKR or SAS critical habitat. Our conclusion is based on the following:

1. Direct and indirect impacts to SBKR will be minimized through the implementation of the conservation measures;
2. The acquisition of long-term conservation of habitat to offset the impacts of the proposed action will support the range-wide conservation (recovery) of SBKR;
3. The temporary loss of SBKR habitat, including designated critical habitat is relatively small and will be restored, thus minimizing effects to individuals and their territories, and connectivity across the Project area;

4. The permanent loss of SBKR designated critical habitat represents a small proportion of the critical habitat within the affected unit; thus, the ecological function and values of designated critical habitat will be maintained in this unit and within the overall designation;
5. The permanent loss of designated SAS critical habitat will be offset by the creation and maintenance of habitat nodes and cooling of summer water temperature in Rialto Channel; thus, the ecological function and values of designated critical habitat will be maintained in this unit and within the overall designation;
6. The enhancement of Santa Ana River aquatic and riparian habitats, reintroduction to portions of its historic range, and long-term management of existing and new populations to offset the displacement of SAS in the river by the proposed action will support the range-wide conservation (recovery) of SAS.

#### REASONABLE AND PRUDENT MEASURES

The reasonable and prudent measures below are non-discretionary. Failure to comply may cause the protective coverage of section 7(o)(2) to lapse. The following reasonable and prudent measures are necessary and appropriate to minimize incidental take of SBKR and SAS:

1. The USEPA and or Valley District will monitor and report on compliance with the established take threshold for federally listed wildlife species associated with the proposed action.
2. The USEPA and or Valley District will monitor and report on compliance with, and the effectiveness of, the proposed conservation measures for the Project.

#### TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, the USEPA must comply with the following terms and conditions, which implement the reasonable and prudent measures described in the previous section, and the reporting and monitoring requirements. These conditions are non-discretionary.

##### All Species

To implement reasonable and prudent measure number 1 (monitor and report on compliance with established take thresholds), the USEPA and or Valley District will:

- 1-1 Ensure the Authorized Biologist(s) or Biological Monitor(s) who will trap or handle federally listed species are qualified and have been pre-approved by PSFWO for work on this Project.



- 1-2 Implement the CMs as specified in the Project description evaluated in this biological opinion. If the Biological Monitor detects impacts to federally listed species from Project-related activities in excess of that described in the above incidental take statement, the USEPA, Valley District, or the Biological Monitor will contact the PSFWO within 24 hours. At that time, the PSFWO and the USEPA or Valley District must review the circumstances surrounding the incident to determine whether additional protective measures are required. Project activities may continue pending the outcome of the review, provided that the proposed protective measures and any appropriate terms and conditions of this biological opinion have been and continue to be fully implemented.
- 1-3 If the amount of authorized take for any federally listed species as defined in the Incidental Take Statement is exceeded, the USEPA must reinitiate consultation, pursuant to the implementing regulations for section 7(a)(2) of the Endangered Species Act at 50 CFR 402.16, on the proposed action.

To implement reasonable and prudent measure number 2 (monitor and report on compliance with, and the effectiveness of, the proposed conservation measures), the USEPA or Valley District will:

- 2-1 Within 45 days of the completion of the proposed action, the USEPA or Valley District must provide a report to the PSFWO that provides details on the effects of the action on the federally listed species. Specifically, the report must include information on any instances when federally listed species were killed, injured, or handled; the circumstances of such incidents; and any actions undertaken to prevent similar instances from re-occurring.
- 2-2 Ensure USFWS personnel have the right to access and inspect the Project site during Project implementation (with prior notification from us) for compliance with the Project description, conservation measures, and terms and conditions of this biological opinion.

#### San Bernardino Kangaroo Rat

To implement reasonable and prudent measure number 1 (monitor and report on compliance with established take thresholds), the USEPA and or Valley District will:

- SBKR-1 In addition to the conservation measures outlined in this biological opinion, when trapping, collecting, and releasing any SBKR found in the construction area or vicinity during the course of work, the Qualified Biologist/Biological Monitor will implement the following measures:
  - a. Provide traps in sufficient numbers to provide adequate coverage of the construction area to ensure that any SBKR which are present are captured.

Mark all trap locations with flagging, reflective tape, or other technique that is visible under day and night conditions.

- b. Use only 12-inch Sherman or wire-mesh live traps; 9-inch models may be used only if obtained before March 13, 1990. Ensure all trap models are modified to eliminate or substantially reduce the risk of SBKR injury (e.g., tail lacerations or excisions). Do not place any batting in the traps.
- c. Sterilize traps previously used outside of San Bernardino County.
- d. Conduct trapping only if the nightly low temperature is forecast to be 50 degrees Fahrenheit or above, and if no extended periods of wind, rain, fog, or other inclement weather will occur to make conditions unsuitable for trapping or will unduly imperil the lives of the animals.
- e. Adjust traps by hand each time they are placed, set, and baited, at a sensitivity level appropriate for capturing SBKR. Visually inspect all traps before closing, and close them by hand.
- f. Check all traps at least twice each night, once near midnight and again at sunrise.
- g. Identify all trap locations with a unique identification code on a log sheet, note the date and time each trap is checked, and periodically review the log sheet to ensure no traps are inadvertently missed. Field documentation will be available to USFWS personnel upon request.
- h. Hold individual SBKR for no longer than 1 hour before releasing them, and relocate them as quickly as possible; this will mean selecting release locations in advance of trapping. Do not place the animal in a plastic bag; transfer it in a clean, structurally sound, breathable container with adequate ventilation. Do not at any time allow the animal to become stressed due to temperature extremes (either hot or cold).

#### Santa Ana sucker

To implement reasonable and prudent measure number 1 (monitor and report on compliance with established take thresholds), the USEPA and/or Valley District will:

- SAS-1-1 In addition to the CMs outlined in this biological opinion, when capturing and releasing any SAS found in the construction area, the Qualified Biologist will implement the following measures:

- a. Only the use of fine mesh (2 to 4 millimeter) knot-less seine nets, fine mesh (4 to 6 millimeter) knot-less hoop nets, modified hoop nets, or similar traps, or dip nets of 0.5 millimeter or finer mesh will be used for capturing SAS.
- b. Survey methods will be selected to minimize potential injury or mortality to SAS and potential disturbance or damage to breeding areas.
- c. If seines are used, particular care will be taken to avoid incidental injury or mortality to SAS that may be caught and suffocated in algal mats or sand.
- d. Care will also be taken to keep SAS in river water as much as possible and they should be released as close to the point of capture as possible.
- e. Use of non-conventional sampling gear must first be approved by the PSFWO.
- f. Electrofishing may be employed with the following restrictions upon following under the following conditions:
  - i. Electrofishing activities will not be conducted from March 1 through July 31.
  - ii. A Qualified Biologist will be the crew leader during electrofishing. The crew leader must have at least 100 hours of electrofishing experience in the field using similar equipment.
  - iii. The crew leader will provide basic training in electrofishing for the crew consisting of:
    1. Definitions of basic terminology (e.g., galvanotaxis, narcosis, and tetany).
    2. An explanation of how electrofishing attracts fish.
    3. An explanation of how gear can injure fish and how to recognize signs of injury.
    4. A review of these terms and conditions as well as the manufacturer's recommendations.
    5. A demonstration of the proper use of electrofishing equipment, the role each crew member performs, and basic gear maintenance.
    6. A review of safety considerations.

- iv. Prior to conducting electrofishing activities, visual surveys will be conducted to search for small, young SAS. If more than 100 small SAS (less than 30 millimeters in total length) occur within the sampling site, electrofishing activities will not be conducted.
- v. To avoid potential suffocation of SAS, electrofishing will not occur in areas where algal mats are located.
- vi. All captured suckers collected and retained will be placed in river water in insulated, aerated, and covered containers. Temperature, dissolved oxygen levels, and fish behavior (e.g., fish gulping at the surface indicating low dissolved oxygen levels) should be recorded to ensure that ambient river water quality levels are maintained.
- vii. Valley District or the Qualified Biologist will coordinate research or long-term monitoring activities with fisheries personnel from other agencies to avoid duplication of effort and unnecessary stress to SAS. Specific stream reaches will be electrofished no more than once every 3 months.
- viii. Only direct current or pulsed direct current will be used.
- ix. Each session will begin with pulse width and rate set to the minimum needed to capture SAS. These settings will be gradually increased, if necessary, only to the point where SAS are immobilized and captured. Initial pulse width will be no more than 500 microseconds and is not to exceed 5 milliseconds. Care will be taken when exceeding a pulse rate of 30 Hertz. In general, exceeding 30 Hertz will injure more fish.
- x. Fish will be netted and removed from the electric fields as quickly as possible.
- xi. Sampling will be terminated if injuries or abnormally long recovery times are observed.
- xii. Prior to activities that may involve handling SAS, all biologists will ensure that hands are free of sunscreen, lotion, or insect repellent.
- xiii. Handling may involve taking length and weight measurements to assess size and age classes of individuals and fish health, and will require minimal exposure out of water. Bagged portions of seines and nets will remain in that water until all SAS are removed, or SAS will be transferred to shallow containers of clean water, aerated if

necessary, and placed in a location that will not result in exposure to extreme temperatures.

- xiv. Any SAS exhibiting signs of physiological stress will be immediately released at the point of capture or as close to that location as possible. All fish will be returned in good condition to the point of capture unless an adverse disturbance is occurring, in which case they may be relocated away from disturbance areas and moved to the nearest part of the stream with appropriate habitat. Nets may be used to temporarily preclude individuals from returning to the immediate capture site.
- xv. In the event that the number of individuals allowed to be incidentally injured or killed is exceeded during the performance of permitted activities, the Qualified Biologist must immediately cease the activity until reauthorized by the Carlsbad Fish and Wildlife Office (CFWO) or PSFWO.

SAS-1-2 In addition to the CMs outlined in this biological opinion, when capturing SAS for captive rearing and translocation purposes, the Qualified Biologist will implement the measures discussed in the Draft Captive Breeding and Translocation Plan for Santa Ana Sucker (Dudek 2016a) and in the programmatic consultation for SAS recovery permits (USFWS 2015a) including but not limited to:

- a. A survey will be conducted to determine the general health of the donor SAS population prior to attempting collection for translocation purposes;
- b. To maximize genetic diversity within a collected population, SAS will be taken from multiple locations (e.g., pools/sampling areas) within a stream, as feasible;
- c. SAS will be visually examined for disease and signs of spawning (e.g., tubercles and lateral stripes). SAS with signs of disease, spawning, or behavior issues such as flashing or lethargy will not be used for translocation. In addition, fish with physical abnormalities, such as fungal lesions, white spot, skin hemorrhage or lesions, darkened skin, eroded fins, or excessive mucus production will also not be used in translocation.

### **CONSERVATION RECOMMENDATIONS**

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, help

implement recovery plans, or to develop information. We recommend the USEPA implement the following actions:

1. Shot Hole Borer Monitoring and Research

Objective: Increase the amount of monitoring and support ongoing research for the long-term management of this invasive non-native insect (Polyphagous and Kuroshio shot hole borer) in order to minimize the long-term effects of this insect-fungal pathogen on the riparian plant community. Vireo, flycatcher, SAS and other riparian-associated species would benefit from these actions.

Funding or the contribution of other resources would supplement the current volunteer monitoring program started in 2016. Long-term monitoring of shot hole borer along the Santa Ana River and its upper tributaries, including the establishment, maintenance, and monitoring of funnel or other type of insect traps at 1-mile intervals along stream corridors, is needed in order to follow the invasion of this insect across the Santa Ana River watershed.

Fund research focused on control of the shot hole borer insect, its symbiotic fungi, and/or biocontrol agents as part of a long-term management strategy for the species.

2. Invasive Red Alga Management in the Santa Ana River

Objective: Develop and implement a strategy to manage (reduce) the non-native invasive red algae in the Santa Ana River. This action would increase the amount of SAS habitat available for use in the mainstem of the river.

Supplying the stream with relatively cold water (less than 55 degrees Fahrenheit) for extended periods of time has been observed to decrease the amount of algal cover and cause filament bleaching and death (Russell *et al.* 2016). Extirpation of the species from the river may be possible with cold-water treatments but field testing is needed. High pulse flow events would contribute to managing red alga abundance in the occupied river by fracturing algal filaments with high velocity flow and/or by rolling the cobble and gravel. Funding or contributing resources to test these, or other control methods, would benefit SAS if an effective strategy for managing red alga can be found.

3. Rialto Wastewater –Reduce Water Temperature

Objective: Further reduce the water temperature in Rialto Channel. The current effluent flows down a flat and shallow concrete channel prior to entering the plunge pool downstream of Agua Mansa Road. During warm days this water may warm substantially reducing habitat suitability downstream for SAS.

Moving the discharge location to the plunge pool downstream of Agua Mansa Road will have the effect of minimizing effluent warming that currently occurs in the concrete-lined portion of Rialto Channel. Water temperature may increase by more than 5 degrees Fahrenheit during hot periods in this concrete-lined channel (USGS 2015). An alternative or additional action would be to shade (shade cloth or shade balls) the serpentine holding tank at the Rialto Wastewater Treatment Plant, or other exposed effluent pools in the treatment stream in order to minimize warming. Evaporative cooling and/or solar powered water chilling are other possibilities.

4. Regional Recycled Purple Pipe Project

Objective: Addition of a perennial supply of water to the mainstem of the Santa Ana River to contribute to the low-flow stream. Project impacts include the permanent reduction of available habitat for SAS downstream of RIX in the Santa Ana River.

This recommendation would reduce the impact of the Project on downstream resources, including SAS, by offsetting discharge reduction in the river with an alternative source of effluent discharge (Riverside effluent). The HCP is proposing to move the discharge location of the City of Riverside's effluent further upstream, near Riverside Avenue. In addition to increasing the low-flow volume, depth, and flow velocity of the river, it would also create a new mainstem tributary and new SAS habitat.

5. Rialto Tank – High Flow Pulse Events

Objective: Capture and store water that can be used to serve multiple conservation purposes. Project reduced discharge will degrade SAS habitat by accumulating and transporting fine sediment (sand) at a slower rate than the current condition. In order to maximize the flexibility of the tank there should be two inlets for receiving water and a variable control outlet valve. The two water sources may include, but should not be limited to, groundwater (CM 17b.iv) and Rialto wastewater. The tank and valves should be sized to achieve a maximum discharge and/or duration of sustained discharge, based upon specific conservation objectives.

The Rialto tank is being considered as part of the HCP to benefit SAS. The maximum discharge of a high pulse flow event would likely be equivalent to bank full flow. Flow velocity is directly correlated with the rate of sediment transport. In addition to transporting sand downstream more rapidly and exposing existing gravel beds, high flow pulsed water will turn a portion of the gravels and cobbles, reducing the abundance of the invasive red alga. If used in combination with water temperature reduction, an effective management strategy of the red alga may be possible. In addition, the Rialto tank would serve to further reduce the effect of RIX shutdowns on SAS if it was automatically synchronized to discharge during shutdown events. The duration of sustained discharge should be tied to a potential maximum duration of a

RIX shutdown as well as modeled to achieve an amount of sediment transported over an identified distance.

6. RIX Facility – High Flow Pulse Events

Objective: Create an agreement with the City of San Bernardino to enable artificial flushing flows using RIX effluent. This could be used in combination with or an alternative to the Rialto tank to create high pulse flow events in the river to benefit SAS.

7. Recovery Research

Objective: Participate in research projects that further species' recovery. Research is needed that identifies currently unrealized threats to SAS (e.g., effects of unregulated chemicals commonly found in effluent wastewater and/or elevated water temperature on SAS development, health, and longevity). Research designed to aid in SAS recovery supports SAS recovery objective 2.

### **REINITIATION NOTICE**

This concludes formal consultation regarding the Project as described in materials submitted to us. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In all instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions about this biological opinion, or the consultation process, please contact Kai Palenscar of the PSFWO, 777 E. Tahquitz Canyon Way, Suite 208, Palm Springs, California 92262 at 760-322-2070, extension 408.

Sincerely,

G. Mendel Stewart  
Field Supervisor



### LITERATURE CITED

- [Aspen] Aspen Environmental Group. 2016. Habitat Parameters for Santa Ana Sucker Based on 5-Year Population Study in Big Tujunga Creek, CA. Unpublished report.
- Boland, J.M. 2016. The impact of an invasive ambrosia beetle on the riparian habitats of the Tijuana River Valley, California. *PeerJ*. 4:e2141.
- Brown, J.S. and B.A. Harney. 1993. Population and community ecology of heteromyid rodents in temperate habitats. Pages 539-574 in: H. H. Genoways and J. H. Brown (eds.), *Biology of the Heteromyidae*. Special Publication No. 10, the American Society of Mammalogists. August 20, 1993.
- Brown L.R. and J.T. May. 2016. Native Fish Population and Habitat Study, Santa Ana River, California: Annual Report, July 2015 to June 2016. U.S. Geological Survey Annual Report.
- Brown L.R. and J.T. May. 2017. Preliminary Pop densities 2017 2-2-2017 final. Excel Spreadsheet. U.S. Geological Survey Draft Data.
- Burk, J.H., C.E. Jones, W.A. Ryan, and J.A. Wheeler. 2007. Floodplain vegetation and soils along the upper Santa Ana River, San Bernardino County, California. *Madroño* 54:126-137.
- [CDFW] California Department of Fish and Wildlife. 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities, November 24, 2009
- [CDFW] California Department of Fish and Wildlife. 2017. California Natural Diversity Database, State and Federally Listed Endangered and Threatened Animals of California. State of California, The Resources Agency, Department of Fish and Wildlife, Biogeographic Data Branch.
- [CEC] California Energy Commission. 2017. Cal-Adapt Climate Tools. This information can be found at: <http://cal-adapt.org/>
- Chen, Y., P.L. Dallara, L.J. Nelson, T.W. Coleman, S.M. Hishinuma, D. Carrillo, and S. Seybold. 2016. Comparative morphometric and chemical analyses of phenotypes of two invasive ambrosia beetles (*Euwallacea* spp.) in the United States. *Insect Science*. 1-16.
- Dudek. 2016a. Final Draft Santa Ana Sucker Translocation Plan. Prepared by Dudek for San Bernardino Valley Municipal Water District and submitted to the Palm Springs Fish and Wildlife Office, Palm Springs, California. November 2016.

- Dudek. 2016b. Santa Ana Sucker Translocation Plan City Creek Phase 1 and 2 Site Evaluation Report. Prepared by Dudek for San Bernardino Valley Municipal Water District and submitted to the Palm Springs Fish and Wildlife Office, Palm Springs, California. December 2016.
- Dudek. 2017. Phase 2 Bioassessment/Survey Stations. Figure in Hemlock Creek Watershed SAS Habitat Evaluation (Figure 1).
- [ESA] Environmental Science Associates. 2015a. Sterling Natural Resource Center Draft Environmental Impact Report. Prepared by ESA for San Bernardino Valley Municipal Water District and submitted to the Palm Springs Fish and Wildlife Office, Palm Springs, California. December 2015.
- [ESA] Environmental Science Associates. 2015b. Final Technical Memorandum Modeling the Effects of a Potential 6 MGD Reduction in Flow Releases from the RIX Facility on the Santa Ana River: velocity, depth and bed sedimentation (with addendum to model effects of 12-24 MGD flow reductions). Prepared by ESA for San Bernardino Valley Municipal Water District and submitted to the Palm Springs Fish and Wildlife Office, Palm Springs, California. September 2015.
- [ESA] Environmental Science Associates. 2016a. Sterling Natural Resource Center Biological Assessment. Prepared by ESA for San Bernardino Valley Municipal Water District and submitted to the Palm Springs Fish and Wildlife Office, Palm Springs, California. June 2016.
- [ESA] Environmental Science Associates. 2016b. Sterling Natural Resource Center Southwestern Willow Flycatcher and Least Bell's Vireo Survey Report. Prepared by ESA for San Bernardino Valley Municipal Water District and submitted to the Palm Springs Fish and Wildlife Office, Palm Springs, California. July 2016.
- [ESA] Environmental Science Associates. 2016c. Sterling Natural Resource Center Project Santa Ana Sucker Habitat Monitoring and Management Plan (HMMP) - Draft. Prepared by ESA for San Bernardino Valley Municipal Water District and submitted to the Palm Springs Fish and Wildlife Office, Palm Springs, California. December 2016.
- [ESA] Environmental Science Associates. 2016d. Sterling Natural Resource Center Project Focused San Bernardino Kangaroo Rat Survey Report. Prepared by ESA for San Bernardino Valley Municipal Water District and submitted to the Palm Springs Fish and Wildlife Office, Palm Springs, California. June 2016.
- Eskalen A., R. Stouthamer, S.C. Lynch, P.F. Rugman-Jones, M. Twizeyimana, A. Gonzalez, and T. Thibault. 2013. Host Range of *Fusarium* Dieback and Its Ambrosia Beetle (Coleoptera: Scolytinae) Vector in Southern California. The American Phytopathological Society. 97:938-951. Website: <http://eskalenlab.ucr.edu>

Eskalen A. 2017. Eskalen Lab website. University of California Riverside.  
<http://eskalenlab.ucr.edu> accessed February 19, 2017.

Ganguly, A.R., K. Steinhäuser, D.J. Erickson III, M. Branstetter, E.S. Parish, N. Singh, J.B. Drake, and L. Buja. 2009. Higher trends but larger uncertainty and geographic variability in 21st century temperature and heat waves. *Proceedings of the National Academy of Sciences*. September 15, 2009, Vol. 106 no. 37:15555–15559.

Glick, P., B.A. Stein, and N.A. Edelson, editors. 2011. *Scanning the Conservation Horizon: A Guide to Climate Change Vulnerability Assessment*. National Wildlife Federation, Washington, D.C.

Greenfield, D.W., S.T. Ross, and D.G. Deckert. 1970. Some aspects of the life history of the Santa Ana Sucker, *Catostomus (Pantosteus) santaanae* (Snyder). *California Department of Fish and Game* 56:166-179. Haas, C. D. 2000. Distribution, relative abundance, and roadway underpass responses of carnivores throughout the Puente-Chino Hills. 110 pp. Master's Thesis, Pomona: California State Polytechnic University.

Haglund, T.R., J.N. Baskin, and C.C. Swift. 2003. Results of the Year 3 (2003) Implementation of the Santa Ana Sucker Conservation Program for the Santa Ana River. Unpublished report prepared by San Marino Environmental Associates for Santa Ana Sucker Conservation Team. 142 pp.

Hoffman, S., R. Zembal, N. Housel. 2014. Status and Management of the Least Bell's Vireo and Southwestern Willow Flycatcher in the Santa Ana River Watershed, 2014, and Summary Data by Site and Watershed-wide, 2000-2014. Prepared by the Santa Ana Watershed Association for Orange County Water District and U.S. Fish and Wildlife Service.

Huber, M., and R. Knutti. 2011. Anthropogenic and natural warming inferred from changes in Earth's energy balance. *Nature Geoscience Letters*. Published online: 4 December 2011, DOI:10.1038/NGEO1327 (*Nature Geoscience* 5, 31-36 (2012)).

[IPCC] Intergovernmental Panel on Climate Change. 2013a. Annex III: Glossary [Planton, S. (ed.)]. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. pg. 1450.

[IPCC] Intergovernmental Panel on Climate Change. 2013b. Summary for Policymakers. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V.

Bex and P.M. Midgley (eds.]). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Pp. 3-29;

[IPCC] Intergovernmental Panel on Climate Change. 2014. Summary for policymakers. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, Pp. 1-32.

Lande, R. 1988. Genetics and demography in biological conservation. *Science* 241:1455-1460.

McKernan, R.L. 1997. The status and known distribution of the San Bernardino kangaroo rat (*Dipodomys merriami parvus*): Field surveys conducted between 1987 and 1996. Report prepared for the U.S. Fish and Wildlife Service by the San Bernardino County Museum; September 1997. 62 pp.

Meehl, G.A., T.F. Stocker, W.D. Collins, P. Friedlingstein, A.T. Gaye, J.M. Gregory, A. Kitoh, R. Knutti, J.M. Murphy, A. Noda, S.C.B. Raper, I.G. Watterson, A.J. Weaver and Z.-C. Zhao, 2007: Global Climate Projections. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Moyle, P.B. 2002. *Inland Fishes of California: Revised and Expanded*. University of California Press. Berkeley, California.

Prinn, R., S. Paltsev, A. Sokolov, M. Sarofim, J. Reilly, H. Jacoby. 2011. Scenarios with MIT integrated global systems model: significant global warming regardless of different approaches. *Climatic Change* (2011) 104:515–537.

[RWQCB] Regional Water Quality Control Board (Santa Ana Region). 2016. Colton/San Bernardino Regional Tertiary Treatment Rapid Infiltration and Extraction Facility: Update on Operational Impacts to Santa Ana Sucker. Report for Meeting Agenda Item Number 11. December 16, 2016.

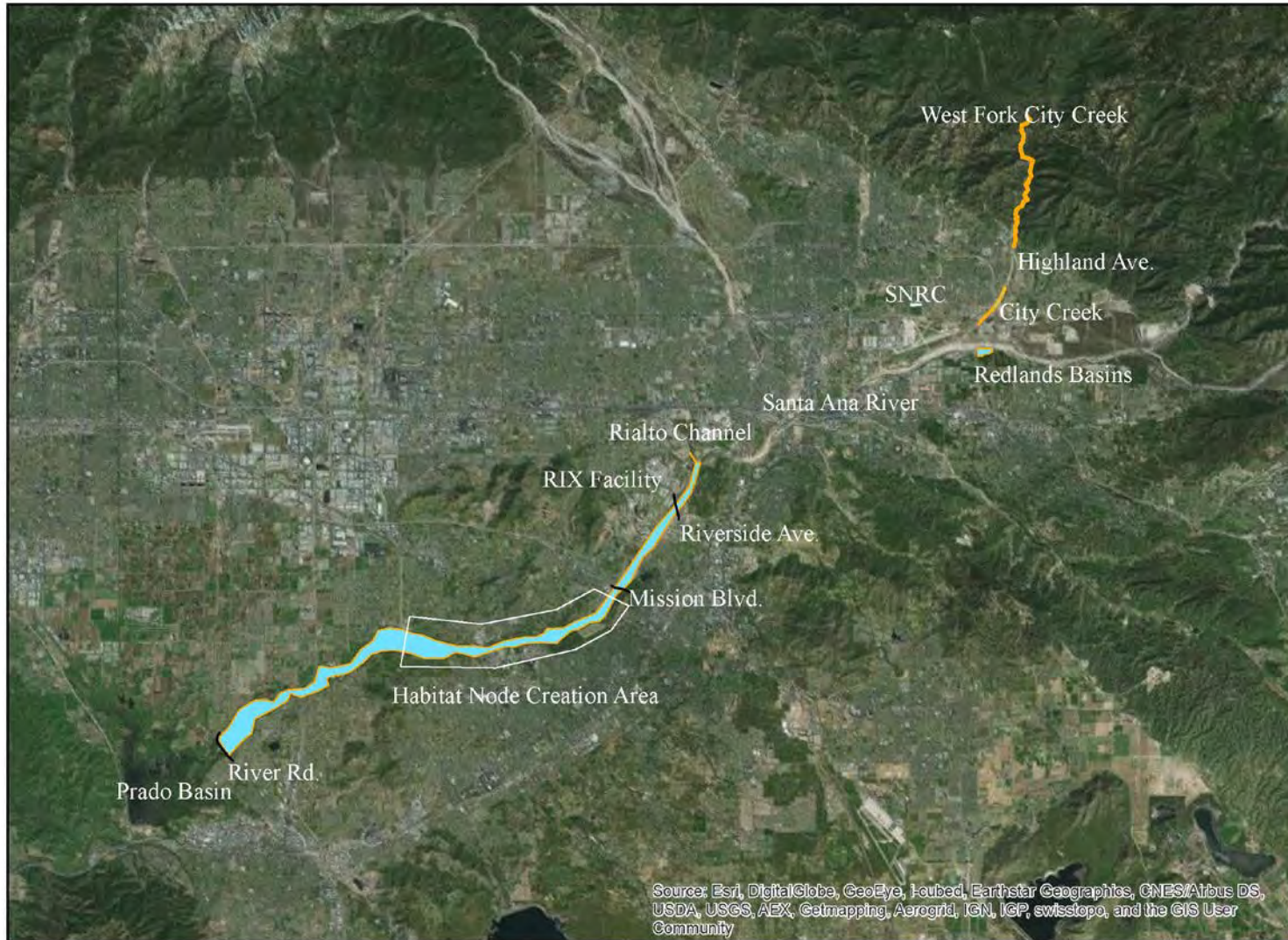
[RCRCD] Riverside-Corona Resource Conservation District. 2016. Upper Santa Ana River HCP: Alder and Hemlock Creeks, Fish Presence/Absence Surveys – Summer 2016. Survey Report.

- Russell, K., B. Mills, T. Hoemke, R. Marks, and K. Palenscar. 2016. Effects of a Non-native, invasive Red Alga (*Compsopogon cearuleus*), on the Foraging Behavior, Reproductive Success and Habitat Preference of the Santa Ana Sucker (*Catostomus santaanae*). Prepared by the Riverside-Corona Resource Conservation District and submitted to the Palm Springs Fish and Wildlife Office, Palm Springs, California.
- Saiki, M.K. 2000. Water Quality and Other Environmental Variables Associated with Variation in Population Densities of the Santa Ana Sucker Final Report. U. S. Geological Survey report prepared for the National Fish and Wildlife Foundation. 117 pp.
- [Valley District]. San Bernardino Valley Municipal Water District 2017. Sterling Natural Resource Center Biological Assessment Clarification and Amendment. Supplemental document to SNRC Biological Assessment and submitted to the Palm Springs Fish and Wildlife Office, Palm Springs, California. February 6, 2017.
- Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento. 1300 pp.
- Solomon, S., D. Qin, M. Manning, R.B. Alley, T. Berntsen, N.L. Bindoff, Z. Chen, A. Chidthaisong, J.M. Gregory, G.C. Hegerl, M. Heimann, B. Hewitson, B.J. Hoskins, F. Joos, J. Jouzel, V. Kattsov, U. Lohmann, T. Matsuno, M. Molina, N. Nicholls, J. Overpeck, G. Raga, V. Ramaswamy, J. Ren, M. Rusticucci, R. Somerville, T.F. Stocker, P. Whetton, R.A. Wood, and D. Wratt. 2007. Technical Summary. *In*: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- [SWRCB] State Water Resources Control Board. 2017. California Integrated Water Quality System. Website: <https://ciwqs.waterboards.ca.gov/ciwqs>. Accessed February 6, 2017.
- Swift, C.C. 2001. The Santa Ana sucker in the Santa Ana River: distribution, relative abundance, spawning areas and impact of exotic predators. Final report submitted to the Ad-Hoc Santa Ana Sucker Discussion Team. June.
- [USFWS] U.S. Fish and Wildlife Service. 1998a. Draft recovery plan for the least Bell's vireo (*Vireo bellii pusillus*). U.S. Fish and Wildlife Service, Portland, Oregon.
- [USFWS] U.S. Fish and Wildlife Service. 1998b. Endangered and threatened wildlife and plants: Emergency rule to list the San Bernardino kangaroo rat as endangered. (63 FR 3835).
- [USFWS] U.S. Fish and Wildlife Service. 1998c. Endangered and threatened wildlife and plants: Final rule to list the San Bernardino kangaroo rat as endangered. (63 FR 51005).

- [USFWS] U.S. Fish and Wildlife Service. 2000a. Endangered and threatened wildlife and plants; Final designation of critical habitat for the San Bernardino kangaroo rat (*Dipodomys merriami parvus*). Proposed rule. Federal Register 65:77178.
- [USFWS] U.S. Fish and Wildlife Service. 2000b. Endangered and threatened wildlife and plants; threatened status for the Santa Ana sucker. Federal Register 65:19686-19698.
- [USFWS] U.S. Fish and Wildlife Service. 2002a. Endangered and threatened wildlife and plants; Final designation of critical habitat for the San Bernardino kangaroo rat (*Dipodomys merriami parvus*). Final rule. Federal Register 67:19812.
- [USFWS] U.S. Fish and Wildlife Service. 2002b. Section 7 Consultation for Operations of Seven Oaks Dam, San Bernardino County, California (1-6-02-F-1000.10). Carlsbad Fish and Wildlife Office, Carlsbad, California.
- [USFWS] U.S. Fish and Wildlife Service. 2006. Least Bell's vireo 5-year review. U.S. Fish and Wildlife Service, Region 8, Carlsbad, California. 26 pp.
- [USFWS] U.S. Fish and Wildlife Service. 2007. Endangered and threatened wildlife and plants; Revised critical habitat for the San Bernardino kangaroo rat (*Dipodomys merriami parvus*). Proposed rule. Federal Register 72:33808.
- [USFWS] U.S. Fish and Wildlife Service. 2008. Endangered and threatened wildlife and plants; Final designation of critical habitat for the San Bernardino kangaroo rat (*Dipodomys merriami parvus*). Final rule. Federal Register 73:61936
- [USFWS] U.S. Fish and Wildlife Service. 2009. San Bernardino kangaroo rat 5-year review. U.S. Fish and Wildlife Service, Region 8, Carlsbad, California. 32 pp.
- [USFWS] U.S. Fish and Wildlife Service. 2010a. Santa Ana River woolly-star 5-year review. U.S. Fish and Wildlife Service, Region 8, Carlsbad, California. 30 pp.
- [USFWS] U.S. Fish and Wildlife Service. 2010b. Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for Santa Ana Sucker. Final Rule. Federal Register 75:77962.
- [USFWS] U.S. Fish and Wildlife Service. 2011. Santa Ana sucker (*Catostomus santaanae*) 5-Year Review: Summary and Evaluation. Unpublished document prepared by the U.S. Fish and Wildlife Service Carlsbad Fish and Wildlife Office, Carlsbad, California.
- [USFWS] U.S. Fish and Wildlife Service. 2012. Recovery outline for Santa Ana sucker (*Catostomus santaanae*). 38 pp.

- [USFWS] U.S. Fish and Wildlife Service. 2014a. Southwestern willow flycatcher 5-year review. U.S. Fish and Wildlife Service, Region 2, Phoenix, Arizona.
- [USFWS] U.S. Fish and Wildlife Service. 2014b. Draft Recovery Plan for the Santa Ana sucker. U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. 61 pp.
- [USFWS] U.S. Fish and Wildlife Service. 2015a. Programmatic Intra-Service Formal Section 7 Consultation on Issuance of 10(a)(1)(A) Permits for the Santa Ana Sucker (FWS-CFWO-1480113-14F0171). Carlsbad Fish and Wildlife Office, Carlsbad, California.
- [USFWS] U.S. Fish and Wildlife Service. 2015b. Intra-Service Consultation on Issuance of Section 10(a)(1)(B) Permit for the Incidental Take of San Bernardino Kangaroo Rat pursuant to Diversified Pacific Residential Development, City of Redlands, San Bernardino County, California (FWS-SB-14B0144-15F065). Palm Springs Fish and Wildlife Office, Palm Springs, CA.
- [USFWS] U.S. Fish and Wildlife Service. 2016. Intra-Service Consultation on Issuance of Section 10(a)(1)(B) Revised Permit for the Incidental Take of San Bernardino Kangaroo Rat pursuant to Diversified Pacific Residential Development, City of Redlands, San Bernardino County, California (FWS-SB-14B0144-15F065-R001). Palm Springs Fish and Wildlife Office, Palm Springs, CA.
- [USFWS] U.S. Fish and Wildlife Service. 2017. Data compiled from 2006-2016 Riverwalk Survey data sheets. On file in the Palm Springs Fish and Wildlife Office, Palm Springs, California.
- [USFWS and NMFS] U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1986. Preamble to implementation regulations for interagency cooperation. 50 CFR Part 402. Federal Register 51:19932.
- [USFWS and NMFS] U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1998. Endangered species consultation handbook available at: <http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>.
- [USGS] U.S. Geological Survey. 2015. Santa Ana River Discharge and Temperature Update January 15 to July 20, 2015. Presentation given to Valley District and USFWS.





**Figure 1.** Sterling Natural Resources Center – Action Area



## Appendix A

### Exclusionary Fence Design and Materials

#### Fencing Options:

1. Hardware Cloth Fence

The fence will consist of the following:

- a. Material will be ¼-in mesh, 23-gauge galvanized hardware cloth;
- b. Height will be a minimum of 3 feet above grade and 2 feet below grade; and
- c. Support will be with standard wire fence “T-posts.”

Hardware cloth is normally buried 2 feet below grade; however, if it’s not possible to bury the fence because of the substrate (e.g., a high percentage of rocks) or not appropriate for the project (i.e., the disturbance will be only be for a short term), upon approval of the PSFWO, it can be placed at grade as follows:

- d. Bend the 2 feet of fence that would be below grade so that it is at grade and facing out away from the work area and then cover it with sandbags
- e. If “T-posts” cannot be driven in the ground, uprights can be fabricated with rebar which have three legs welded at their base so they are free standing.

2. Chain Link Fence Backed by Shade Cloth

A possible fencing alternative when the fence will not extend below grade (see criteria above), is chain link fence backed by shade cloth with shade cloth extending out from the fence a minimum of 2 feet at grade, and weighted down by sand bags or suitable alternative, e.g., boulders (Figure 1).

Hand methods will be used to prepare the site for installation of the fence, e.g., the removal of vegetation in the path of the fence; unless an alternative method is approved by the PSFWO.

Mr. Douglas E. Eberhardt (FWS-SB-16B0182-17F0387)



**Figure 1.** Photograph of Chain Link and Shade Cloth Fence Configuration

STATE OF CALIFORNIA  
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY  
STATE WATER RESOURCES CONTROL BOARD

**DIVISION OF WATER RIGHTS**

---

In the Matter of Wastewater Petition WW0095

**San Bernardino Valley Municipal Water District**

**ORDER APPROVING CHANGE IN POINT OF DISCHARGE, PLACE OF USE, PURPOSE OF USE, AND QUANTITY OF DISCHARGE**

---

SOURCE: Santa Ana River

COUNTY: San Bernardino

---

**WHEREAS:**

1. On September 16, 2016, the San Bernardino Valley Municipal Water District (Valley District) filed Wastewater Change Petition WW0095 with the State Water Resources Control Board (State Water Board), Division of Water Rights (Division), pursuant to Water Code section 1211. The purpose of the petition is for the Valley District to obtain the State Water Board's authorization for the construction and operation of the Sterling Natural Resources Center (SNRC). The SNRC is to be jointly owned by the Valley District and the East Valley Water District (East District). The petition seeks to change the point of discharge, place of use, purpose of use and quantity of discharge of treated wastewater currently discharged to the Santa Ana River.
2. Water Code section 1211 requires the owner of a wastewater treatment plant to obtain approval from the State Water Board prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater where changes in the discharge or use of treated wastewater result in decreasing the flow in any portion of a watercourse. The Valley District has not yet obtained approval of any such changes under Water Code section 1211.
3. The East District service area currently generates wastewater at an approximate rate of six million gallons per day (mgd) for a total annual amount of approximately 6,725 acre-feet per year (afy). Pursuant to an agreement, the East District conveys wastewater generated within its service area to the City of San Bernardino (City) for treatment. The wastewater receives primary and secondary treatment at the San Bernardino Water Reclamation Plant (Plant) and tertiary treatment at the Rapid Infiltration and Extraction Facility (RIX). After treatment at the RIX, the treated wastewater is discharged to the Santa Ana River.
4. The SNRC is a wastewater treatment facility to be built within the City of Highland. The SNRC will have the capacity to treat up to 10 mgd of wastewater generated within the East District service area, which is located entirely within the Valley District service area. The SNRC will use bio-membrane technology to produce disinfected tertiary recycled water (Title 22 quality water) for Municipal, Industrial, Domestic, Irrigation, Heat Control, Frost Protection, and Fish and Wildlife Preservation and Enhancement use. Once constructed, all wastewater generated within the East District service area will be delivered to the SNRC for treatment.

5. Redirection of wastewater generated within the East District service area to the SNRC will reduce the amount of treated wastewater discharged from the RIX to the Santa Ana River by approximately 6 mgd. Once treated at the SNRC, the water will be conveyed primarily to City Creek. During peak flows, water will be conveyed to underground storage within existing basins currently operated by the City of Redlands (Redlands Basins). Currently, the San Bernardino basin area is managed by the Western-San Bernardino Watermaster pursuant to the Western Judgment (*Western Municipal Water District of Riverside County v. East San Bernardino County Water District*, Case No. 78426). When necessary, treated wastewater may also be sent to the RIX for discharge to the Santa Ana River. Water delivered to City Creek, the Redlands Basins and the RIX will be metered. All extraction wells in the San Bernardino basin area are metered and the results are reported annually to the Western-San Bernardino Watermaster.
6. Discharge of treated wastewater from the RIX to the Santa Ana River is currently authorized by the Santa Ana Regional Water Quality Control Board under Order No. R8-2013-0032 and NPDES Permit No. CA8000304.
7. The Valley District is participating in the development of the Upper Santa Ana River Habitat Conservation Plan (HCP), a collaborative effort among the water resource agencies of the Santa Ana River watershed, in partnership with the U.S. Fish and Wildlife Service (Service), the California Department of Fish and Wildlife (Department), and several other government agencies and stakeholder organizations. The purpose of the Upper Santa Ana River HCP is to enable the water resource agencies to continue to provide and maintain a secure source of water for the residents and businesses in the watershed, and to conserve and maintain natural rivers and streams that provide habitat for a diversity of unique and rare species in the watershed. The protection of these habitats and the river systems they depend on also provides recreational opportunities for activities such as hiking, fishing, and wildlife viewing. The Upper Santa Ana River HCP will specify how species and their habitats will be protected and managed in the future and will provide the incidental take permits needed by the water resource agencies under the federal and state endangered species acts to maintain, operate, and improve their water resource infrastructure.
8. For the purposes of this Order, the State Water Board considers the following information as the Valley District's existing point of discharge, place of use, and purpose of use of treated wastewater:
  - a. The point of discharge is the following: City of San Bernardino Rapid Infiltration and Exfiltration Facility Discharge Point at North 1,838,060 feet and East 6,757,195 feet by California Coordinate System 1983, Zone 5, being within NE ¼ of SE ¼ of Section 36, T1S, R5W, SBB&M;
  - b. There is no current place of use; and,
  - c. There is no current purpose of use.

9. Summary of Protests

On September 22, 2016, the Division issued a public notice of the petition in accordance with Water Code section 1703. The Division received the following protests:

<b>Protestant</b>	<b>Basis of Protest</b>	<b>Date of Protest</b>
Center for Biological Diversity	Environmental	September 27, 2016
City of Riverside	Environmental, Prior Rights	October 3, 2016
U.S. Fish and Wildlife/California Department of Fish and Wildlife	Environmental	October 10, 2016

City of San Bernardino	Environmental, Contrary to Law, Prior Rights, Public Interest	October 10, 2016
Anthony Serrano	Environmental, Contrary to Law	October 10, 2016

### 9.1 *Center for Biological Diversity*

The protest submitted by the Center for Biological Diversity alleges that approval of the petition would result in an adverse environmental impact. The Center alleges that a reduction in surface flow in the Santa Ana River would adversely affect downstream environmental resources in the Santa Ana River, including instream habitat for the Santa Ana sucker (*Catostomus santaanae*) and water quality, including temperature.

On November 10, 2016, the Center for Biological Diversity submitted an email to the Division withdrawing its protest.

### 9.2 *City of Riverside*

The protest submitted by the City of Riverside alleges that approval of the petition would result in an adverse environmental impact and injury to adjudicated water rights in the Upper Santa Ana River watershed. The City of Riverside alleges that approval of the petition would result in an increase in Total Dissolved Solids (TDS) concentrations in its groundwater supply and the potential for reductions in native groundwater being considered as a diluent source due to future projects. The City of Riverside further alleges that approval of the petition would impair the ability for the City of San Bernardino to maintain the discharge of at least 16,000 afy of treated wastewater to the Riverside North basin, as specified in the Orange County Judgment (*Orange County v. the City of Chino et al. Al.*, Orange County Superior Court No. 117628) and the Western Judgment.

On October 27, 2016, the City of Riverside submitted a letter to the Division withdrawing its protest.

### 9.3 *U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife*

The joint protest submitted by the U.S. Fish and Wildlife Service (Service) and the California Department of Fish and Wildlife (Department) alleges that approval of the petition would result in an adverse environmental impact. The Service and the Department allege that the reduction in surface flow has the potential for harm to fish and wildlife resources and their Santa Ana River habitats. The protest recommended inclusion of the following conditions in any order approving the petition:

Condition 1: Incidental take authorization, either through the execution of the Upper Santa Ana River HCP or through other mechanisms, for California Endangered Species Act and federal Endangered Species Act listed species shall be obtained by the Valley District before the SNRC diversion of 6 mgd of wastewater from the Plant and RIX, as proposed in the Petition, shall be permitted to occur.

Condition 2: If incidental take authorization is obtained through a mechanism other than the Upper Santa Ana River HCP, the Valley District shall complete early consultation with the Service and the Department to facilitate the development of a Habitat Mitigation and Monitoring Plan (HMMP) that will address potential impacts to riparian habitat in the Santa Ana River and City Creek, and include specific thresholds and/or success criteria to protect fish and wildlife resources. The Service and the Department shall approve the HMMP prior to the SNRC commencing operation.

By letter dated November 14, 2016, the Valley District responded to the protest and accepted the two conditions proposed by the Service and the Department, thereby resolving the protest.

#### 9.4 *City of San Bernardino*

The protest submitted by the City of San Bernardino (City) alleges that approval of the petition would be contrary to law, result in an adverse environmental impact, not serve the public interest, and result in injury to the City's prior rights.

The City's protest is dismissed. A detailed discussion of the protest allegations and the reasons for dismissal are provided below.

##### 9.4.1 *Contrary to Law*

The City contends that approval of the petition would be contrary to law because it would frustrate the ability of the City to meet its discharge obligations set forth in its 1969 Agreement with the Valley District and related court rulings. The City currently discharges between 28,000 and 34,000 afy from the RIX into the Santa Ana River in order to meet its obligations to the Valley District under the 1969 Agreement designed to ensure the Valley District's compliance with the terms of the Orange County Judgment and the Western Judgment. That Agreement requires that the City discharge at least 16,000 afy to provide flows and protect downstream rights. The SNRC project would reduce those discharges by approximately 6,700 afy, leaving discharges by the City from the RIX to range between 21,300 afy to 27,300 afy. These discharges are sufficient to meet the discharge requirements under the 1969 Agreement. Since the Valley District is bound to its commitments under the Western and Orange County judgments, and adherence by the Valley District to those commitments is a condition of this order, approval of the petition is not contrary to law.

The City also claims that the petition is contrary to law on the basis that East District is not currently authorized by the San Bernardino County Local Agency Formation Commission (LAFCO) to provide wastewater treatment and disposal services. A court of competent jurisdiction will ultimately determine whether the actions of East District are contrary to law. As a condition of this order, the Valley District is required to obtain all necessary approvals from Federal, State and local agencies prior to construction and operation of the project.

##### 9.4.2 *Environmental Impact*

The City's protest indicates that the City is currently litigating the adequacy of the Valley District's final Environmental Impact Report (EIR) for the SNRC project. The litigation is based on the final EIR's alleged failure to adequately disclose and analyze impacts including: 1) impacts to groundwater quality due to high levels of TDS anticipated in the SNRC's effluent; 2) impacts to the Santa Ana River and Santa Ana Sucker from supplemental flow sources from groundwater wells to make up for reduced flows at the RIX facility; and 3) potential stranding of Santa Ana Sucker by diurnal fluctuations in discharges occurring due to reduced discharges to City Creek during the late evening and early morning hours.

As a responsible agency under the California Environmental Quality Act (CEQA), the State Water Board is required to assume that the final EIR fully meets the requirements of CEQA. (Cal. Code Regs., tit. 14, § 15231, subd. (b).) The final EIR addresses these

concerns with appropriate mitigation measures. A court of competent jurisdiction will ultimately determine the adequacy of the final EIR. This order incorporates the mitigation terms of the final EIR and any amendment thereof that may arise from subsequent litigation, and that are within the purview of the State Water Board. As a condition of this order, the Valley District is required to obtain all necessary approvals from Federal, State and local agencies.

#### 9.4.3 *Public Interest*

The City's protest also alleges that the project is not in the public interest due to East District's failure to follow the LAFCO process. A court of proper jurisdiction will ultimately determine whether East District's actions are contrary to law. However, as stated in this order, the Valley District is required to obtain all necessary approvals from Federal, State, and local agencies prior to construction and operation of the project.

The City also alleges that the petition is against the public interest due to fiscal impact. The City cites a third party estimate it commissioned, which concluded that the cost of constructing and operating the SNRC project will be approximately \$300 million, twice the cost estimated by the Valley District's analysis. The State Water Board's authority to examine whether a change petition is in the public interest includes the authority to consider a proposed project's financial viability. At the same time, market forces and public opinion will often prevent non-viable projects from being built. The State Water Board is reluctant to second-guess the financial viability of a project, such as the SNRC, that has already been vetted through the CEQA and other public processes.

Potential fiscal impact should be weighed against the potential public interest benefits of the project. The SNRC proposes to recycle treated wastewater and to recharge local groundwater supplies for Municipal, Industrial, Domestic, Irrigation, Heat Control, Frost Protection and Fish and Wildlife Preservation and Enhancement uses. The State Water Board has a Policy for Water Quality Control for Recycled Water (Recycled Water Policy), originally adopted on February 3, 2009 and amended on January 22, 2013. The purpose of the Recycled Water Policy is to increase the use of recycled water from municipal wastewater sources. One of the goals for California, as stipulated in the Recycled Water Policy, is to increase the use of recycled water over 2002 levels by at least one million acre-feet per year by 2020, and by at least two million acre-feet per year by 2030. The Valley District's project, as proposed in the petition, is consistent with the purpose of the Recycled Water Policy.

On balance, the SNRC will help California meet the goals of the Recycled Water Policy. This is consistent with the public interest. There may be a disputed issue of fact between the City and Valley District as to whether the SNRC will cost more than projected. The material issue, however, is whether the SNRC costs too much, in light of its benefits, to justify being built. The City does not make this argument. There is not substantial evidence in the City's protest, its January 4, 2017 response, or in light of the whole record to support such an allegation. Accordingly, there is no disputed issue of material fact as to the SNRC's financial viability.

#### 9.4.4 *Injury to Prior Rights*

The City's protest alleges that approval of the petition would impair the City's superior rights to the treated wastewater it discharges from its RIX facility. The City cites Water Code section 1210, claiming that the City, as owner of the RIX treatment plant, holds the

exclusive right to the treated wastewater as against anyone who has supplied the water discharged into the wastewater collection and treatment system.

The petition does not assert a prior right to wastewater that has been treated by the City. The petition proposes to change the location of the point of discharge, place of use, and purpose of use of untreated wastewater of East District in furtherance of the SNRC project. Water Code section 1210 does not give the City a prior right to untreated wastewater generated by East District. Since 1984, the East District has provided untreated wastewater to the City under a pay as you go, optional, per dwelling service relationship. Although the East District was required to provide all of its raw sewage to the City under a Joint Powers Authority agreement prior to 1984, the JPA was amended in 1984 to make the discharge requirement optional. Rights would not attach under Water Code 1210 until the City actually receives and treats East District's wastewater. The petition merely proposes to send East District's untreated wastewater elsewhere per East District's contract with the City under the JPA. Therefore, the petition does not impair the prior rights of the City.

#### 9.5 *Anthony Serrano*

The protest submitted by Anthony Serrano alleges that approval of the petition would be contrary to law and result in adverse environmental impacts. Subsequent correspondence from Mr. Serrano received after the close of the protest period included the apparent addition of a protest concern that approval of the petition would not serve the public interest.

Mr. Serrano's protest is dismissed. A detailed discussion of the protest allegations and the reasons for dismissal are provided below.

##### 9.5.1 *Contrary to Law*

The protest states that "[t]he original EIR was based on a CEQA Plus type that is not authorized under California CEQA law in Article 11, Types of EIR's, Sections 15160-15170. The type of EIR should have been an 'EIR-EIS' because the surrounding and affected areas are part of the Santa Ana River Mainstem Project authorized by the United States Congress in 1978 and managed by the U.S. Army Corps of Engineers (Corps). A December 1989 Local Cooperation Agreement by the USACE and Local Sponsors requires Federal approvals."

The Valley District contends in its answer that, in addition to meeting the EIR requirements of CEQA, the Valley District also complied with the separate environmental review obligations imposed by the State Water Board on applicants seeking funding from the State Revolving Fund (SRF). The Valley District argues that the SRF is subject to federal environmental regulations, and as such must comply with specific "CEQA-Plus" requirements established by the U.S. Environmental Protection Agency in its operating Agreement with the State Water Board for administering the SRF program. Therefore, the District contends that the City has complied with the CEQA-Plus requirements of the SRF funding process as well as CEQA.

The Valley District's answer further argues that the Local Cooperation Agreement (LCA) between the Corps and the Local Sponsors of the Mainstem Project contains no provision requiring federal action or approval. It contends that the Serrano protest does not provide a sufficient basis to conclude that the Mainstem Project provides federal National Environmental Policy Act (NEPA) jurisdiction over the SNRC.



Mr. Serrano's January 13, 2017 letter raised new arguments regarding CEQA compliance, both with respect to compliance with the requirements of Assembly Bill 52 (2013-2014 Reg. Sess.) and the holding in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4<sup>th</sup> 369. These arguments are untimely. There appears to be no evidence, in light of the whole record, of non-compliance with requirements of Assembly Bill 52 (2013-2014 Reg. Sess.), nor is there information indicating that the requirements of *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4<sup>th</sup> 369 directly apply in this circumstance.

Insofar as the adequacy of the final EIR is concerned, the State Water Board, as a responsible agency, is required to assume that the final EIR fully meets the requirements of CEQA. (Cal. Code Regs., tit. 14, § 15231, subd. (b).) A court of competent jurisdiction will ultimately determine whether the actions of the Valley District are contrary to law. As a condition of this order, the Valley District is required to obtain all necessary approvals from Federal, State, and local agencies prior to construction and operation of the project.

#### 9.5.2 *Environmental Impact*

Mr. Serrano's protest further alleges that the petition will result in the reduction in flows in the Santa Ana River, resulting in adverse impacts to the Santa Ana Sucker.

The final EIR addresses these concerns with appropriate mitigation measures. This order incorporates the mitigation terms of the final EIR or any amendment thereof that may arise from subsequent litigation, and that are within the purview of the State Water Board. As a further condition of this order, the Valley District is required to obtain all necessary approvals from Federal, State, and local agencies.

#### 9.5.3 *Public Interest*

Mr. Serrano's statement of supporting facts, which the Division received on December 8, 2016, discusses project financing in the course of making the argument that the SNRC will have an adverse environmental impact. It also contains an allegation that "the proposed appropriation would not be within the board's jurisdiction, would not best conserve the public interest or public trust uses, and is contrary to law." In support of this allegation, Mr. Serrano submitted several articles discussing litigation between East District and other agencies and concludes that "[t]he Water Board can spend tax payer dollars on other water related projects while EVWD [East District] and SBVMWD [Valley District] work out their differences with local constituents who view the Sterling Natural Resources Center (waste water treatment facility) as a redundant and non- cost effective [sic] project because we already have a waste water treatment facility." On February 2, 2017, Mr. Serrano submitted an email which appeared to argue that, because of additional costs associated with filing a wastewater change petition for the SNRC, the wastewater change petition should be dismissed. This email also asserts, without reference to evidence, that "we cannot afford the additional estimated \$127M for the new SNRC."

Mr. Serrano did not raise these objections during the noticed protest period. It is unclear whether the protestant's untimely, conclusory reference to "local constituents who view" the SNRC as not cost effective was even intended as an argument that the project is not in the public interest. The arguments presented in Mr. Serrano's February 2, 2017 email are untimely. This Order considers a hypothetical public interest protest based on fiscal

issues without conceding whether Mr. Serrano has actually filed a valid protest on this issue.

The State Water Board's authority to examine whether a change petition is in the public interest includes the authority to consider a proposed project's financial viability. At the same time, market forces and public opinion will often prevent non-viable projects from being built. The State Water Board is reluctant to second-guess the financial viability of a project, such as the SNRC, that has already been vetted through CEQA and other public processes. Potential fiscal impact should be weighed against the potential public interest benefits of the project.

For the reasons previously discussed in section 8.4.3 above, the Valley District's project, as proposed in the petition, will help California meet the goals of the State Water Board's Policy for Water Quality Control for Recycled Water and is in the public interest. This is a benefit above and beyond the SNRC's wastewater treatment functions. There is no disputed issue of material fact as to the SNRC's financial viability. For the reasons discussed above, it would not be appropriate for the State Water Board to apply its public interest authority in this case.

10. The State Water Board has determined that the petition for change in the point of discharge, place of use, purpose of use and quantity of discharge to a watercourse will not cause injury to any other lawful user of water.
11. Under the CEQA, the Valley District is the lead agency for preparation of environmental documentation for the SNRC project. On March 15, 2016, the Valley District certified the final EIR and approved and adopted the CEQA Findings, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Plan (MMRP) for the SNRC project (SCH No. 2015101058). On March 16, 2016, the Valley District issued a Notice of Determination (NOD). The State Water Board is a CEQA responsible agency for purposes of considering whether to approve the petition that will allow the Valley District to proceed with the proposed project. As a CEQA responsible agency, the State Water Board must consider the environmental documentation prepared by the lead agency and any other relevant evidence in the record, and must reach its own conclusions on whether and how to approve the project involved. (Cal. Code Regs., tit. 14, § 15096, subd. (a).) The State Water Board will issue an NOD within five days of the date of this order.
12. CEQA Impacts and Mitigation

The State Water Board has reviewed and considered the final EIR in approving the petition. As a responsible agency, the State Water Board must mitigate or avoid to the extent feasible the identified significant impacts to resources within the State Water Board's purview. In addition, the State Water Board must balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. (Cal. Code Regs., tit. 14, § 15093, subd. (a).) Listed below are the significant impacts identified in the EIR that fall within the State Water Board's purview. These significant impacts result from the construction of the points of discharge and related infrastructure and by the diversion and use of the water that will result from operation of the project:

- Adverse impacts to special-status plant and wildlife species, including indirect impacts through habitat modification, due to project construction and operation;
- Adverse impacts to sensitive habitats (including riparian, wetlands, and/or other sensitive natural communities) within the project area due to project construction;

- Adverse impacts to water quality due to the violation of water quality standards or waste discharge requirements or otherwise substantially degrade water quality.
- Adverse impacts to water quality due to the alteration of the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation or flooding on or offsite.
- Adverse impacts to water quality due to the creation or contribution of runoff water which could exceed the capacity of stormwater drainage systems or provide additional sources of polluted runoff.

The mitigation measures identified in the SNRC final EIR and recited below pertain to the protection of resources within the State Water Board's purview, and have been incorporated into the project. With the exception of impacts to the Santa Ana sucker through habitat modification, incorporation of these mitigation measures avoids the impacts or reduces them to a less than significant level.

#### 12.1 *Impacts to Special Status Species*

Construction and operation of the project could have a substantial adverse effect, either directly or through habitat modifications on plant and wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the Department or Service.

##### Mitigation Measures:

- BIO-1: *Disturbance to Special-Status Plants.* The following measures will reduce potential project-related impacts to special-status plant species that may occur adjacent to the project site within City Creek to a less than significant level. Potential project-related impacts may result from the construction of the pipeline extension and discharge structure within City Creek and the Redlands Basins.
- a. Prior to the start of construction within City Creek and/or the Redlands Basins, a focused botanical survey will be conducted to determine the presence/absence of any of the special-status species with a moderate or high potential to occur. The focused botanical survey will be conducted by a botanist or qualified biologist knowledgeable in the identification of local special-status plant species, and according to accepted protocol outlined by the California Native Plant Society and/or the Department.
  - b. If a special status plant species is discovered in a project impact area, informal consultation with the Department and/or the Service will be required prior to the impact occurring to develop an appropriate avoidance strategy. Depending on the sensitivity of the species, relocation, site restoration, or other habitat improvement actions may be an acceptable option to avoid significant impacts, as determined through consultation with the Department and/or the Service.
  - c. If impact avoidance of a state or federally-listed species is not feasible, the Valley District shall quantify the impacted acreage supporting state or federally-listed plant species within the construction area and estimated

perennial flow area and prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected plants species. The Valley District shall implement the conservation measures and compensation requirements identified through consultation by USACE with both the Department and the Service.

- d. Permanent impacts to Riversidean alluvial fan sage scrub (RAFSS) habitat from construction and operation of the discharge including within the City Creek channel resulting from perennial flow shall require on-site replacement or off-site compensation at a ratio of at least 3:1 in consultation with the Department and the Service. Temporary impacts to RAFSS habitat would be mitigated at a ratio of at least 1:1 in consultation with the Department and the Service.

BIO-2: *Disturbance to Special-Status Wildlife.* The following measures will reduce potential project-related impacts to special-status wildlife species that may occur within disturbed and native habitats, to a less than significant level. Potential project-related impacts may result from construction of the SNRC, construction of the discharge structures within City Creek and other discharge locations, and perennial discharges to City Creek or other discharge locations.

- a. Prior to the start of construction within City Creek or other discharge locations, Valley District shall conduct focused surveys within the project impact areas to determine if any state or federally-listed wildlife species (southwestern willow flycatcher, coastal California gnatcatcher, San Bernardino kangaroo rat, and least Bell's vireo) are located within project impact areas. Focused surveys will be conducted by a qualified and/or permitted biologist, following approved survey protocol. Survey results will be forwarded to the Department and the Service. If state or federally-listed species are determined to occur on the project site with the potential to be impacted by the project, consultation with the Department and/or the Service will be required.
- b. If impact avoidance is not feasible, the Valley District shall quantify the impacted acreage supporting state or federally-listed wildlife species within the construction area and estimated perennial flow area and prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected wildlife species. The Valley District shall implement the conservation measures and compensation requirements identified through consultation by the USACE with both the Department and the Service.
- c. Prior to the start of construction of the SNRC building and the recycled water pipeline along 6th Street, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the Department 2012 Staff Report on Burrowing Owl

Mitigation. If burrowing owl is observed within undeveloped habitat within or immediately adjacent to the project impact area, avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance with the *Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans* of the Department 2012 Staff Report on Burrowing Owl Mitigation.

BIO-3: *Disturbance to Santa Ana Sucker.* The following measures will reduce potential project-related impacts to avoid, minimize, and compensate for impacts to Santa Ana sucker while contributing to the long-term conservation of the species.

- a. The diversion of wastewater flow to the new SNRC shall not occur until either the Upper Santa Ana River HCP has been fully executed by the Service and the Department or Valley District's Santa Ana sucker HMMP has been approved by the Service and the Department.
- b. The Valley District will be a signatory to the Upper Santa Ana River HCP that will include the proposed project as a covered activity. The HCP will include a menu of projects to be implemented by the signatory agencies that will create habitat, restore habitat, and establish self-sustaining populations in the watershed. The HCP will be approved by the Department and the Service.
- c. **In the event that the Upper Santa Ana River HCP is not approved in time to meet the project schedule, Valley District shall prepare and implement a HMMP that identifies habitat improvement actions, implementation methods, monitoring, and maintenance methods. The HMMP will consist of measures listed below to offset direct and indirect impacts to the Santa Ana sucker and its habitat resulting from the loss of 6 mgd of discharged water. The HMMP will be implemented by a contracted, qualified and permitted entity such as the Riverside-Corona Resource Conservation District in coordination with the Service and the Department. The HMMP will identify the goals and performance criteria of each conservation measure and will identify annual reporting and work forecasting requirements. The HMMP will be approved by the Service and the Department under their authority to enforce the federal and state Endangered Species Acts. The proposed diversion of 6 mgd from the RIX discharge will not occur until the HMMP has been approved by the Service and the Department. The HMMP will include the following elements:**

SAS-1: *Microhabitat Enhancements.* The HMMP will identify microhabitat enhancements within the upstream reach of the affected river segment using natural materials to increase scour and pool formation. This could include placement of large boulders and/or large woody debris to increase velocity of flow and gravel bar patches as well as deep pool refugia areas.

- SAS-2: *Aquatic Predator Control Program*. The HMMP will include an Aquatic Predator Control Program to be implemented within the upstream reach of the affected river segment that will target and remove exotic fish, amphibians, and reptiles immediately prior to the Santa Ana sucker spawning season.
- SAS-3: *Exotic Weed Management Program*. The HMMP will include an Exotic Weed Management Program targeting the removal of non-native species such as tamarisk, castor bean, tree of heaven, etc. The HMMP will include an annual maintenance and performance goal for non-native plant removal within the upper reach of the affected river segment.
- SAS-4: *High Flow Pulse Events*. The HMMP will identify means to create high flow pulse events as needed based on substrate conditions, up to 2 times per year. The high flow pulse events would be implemented through a cooperative agreement with the City of San Bernardino Municipal Water Department.
- SAS-5: *Supplemental Water*. Valley District will increase habitat availability in Rialto Channel during the summer months by providing cool supplemental water from nearby groundwater source to lower the water temperature in this tributary. Supplemental water will be added to the Rialto Channel when water temperatures reach 85 degrees. Supplemental water could be pumped groundwater or other water source. The discharge into the Rialto Channel will require a discharge permit from the Regional Water Quality Control Board.
- SAS-6: *Upper Watershed Santa Ana Sucker Population Establishment*. The HMMP will outline a plan for establishing a population of Santa Ana sucker in City Creek, or other suitable watershed tributary, in coordination with the Wildlife Agencies. The HMMP will identify measures to directly increase the number of Santa Ana sucker in the SAR population, increase the amount of suitable and occupied habitat in this watershed, and distribute the risk of a catastrophic event between multiple locations. The HMMP will identify the goals and success criteria of the establishment plan and will identify the amount of financial assistance to be provided by Valley District for the regionally-beneficial population establishment program.
- SAS-7: *Monitoring*. The HMMP will outline a monitoring program to collect hydrology data in the segment of river between the RIX discharge and Mission Boulevard. The data will include flow velocity and depth.

Findings: The project as mitigated will limit adverse impacts to fisheries and, in particular, to Santa Ana sucker populations. Measures included in the HMMP and the HCP will act to substantially offset direct and indirect impacts to the Santa Ana sucker and its habitat resulting from the loss of 6 mgd of discharged water. Avoidance strategies will be applied in consultation with the Service and the Department to protect special status plant species. The project is unlikely to adversely affect candidate, sensitive, or special-status wildlife species

other than the Santa Ana sucker, which shall be protected via conservation measures and compensation requirements identified through consultation by the Corps with both the Department and the Service.

This order adopts the above mitigation measures (BIO-1, BIO-2, BIO-3, and SAS-1 through 7) and incorporates them as a condition of the order. These measures will be implemented as set forth in the MMRP and will commit the Valley District to implement these actions. Accordingly, the State Water Board finds that, with the inclusion of the above mitigation measures, direct and indirect impacts to plant and wildlife other than the Santa Ana Sucker by the project construction and operation would be reduced to a less than significant level. Changes with or alterations have been required in, or incorporated into, the project which avoid the significant environmental effect or reduce them to a less than significant level.

Potentially adverse impacts to the Santa Ana Sucker will be carefully monitored and mitigated in accordance with the measures contained in the HMMP and HCP, including mitigation measures BIO-3 and SAS-1 through 7. Despite these measures, the final EIR identified that the remaining impact to the Santa Ana sucker through habitat modification would be significant and unavoidable. For the reasons stated here and in paragraph 14, and in light of the whole record, the State Water Board finds that specific economic, legal, social, technological, or other considerations, including in particular the water supply and Santa Ana sucker conservation benefits of the project, make further mitigation infeasible.

#### 12.2 *Impacts to Riparian Habitat*

Construction of the project could result in potential direct and indirect impacts to riparian habitat and other sensitive natural communities within the project area.

Mitigation Measure:

- BIO-4: *Construction Best Management Practices.* The Contractor shall implement the following Best Management Practices during construction of the pipeline and discharge structure adjacent to and within City Creek to protect any adjacent sensitive natural communities that provide habitat for special-status species.
- a. The following water quality protection measures shall be implemented during construction:
    - Stationary engines, such as compressors, generators, light plants, etc., shall have drip pans beneath them to prevent any leakage from entering runoff or receiving waters.
    - All construction equipment shall be inspected for leaks and maintained regularly to avoid soil contamination. Leaks and smears of petroleum products will be wiped clean prior to use.
    - Any grout waste or spills will be cleaned up immediately and disposed of off-site.
    - Spill kits capable of containing hazardous spills will be stored on-site.

- b. To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than two-feet deep shall be covered with tarp, plywood or similar materials at the close of each working day to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow for animals to escape, if necessary. Before such holes or trenches are backfilled, they should be thoroughly inspected for trapped animals. If trapped wildlife are observed, escape ramps or structures shall be installed immediately to allow escape. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods should be thoroughly inspected for burrowing owls and nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved.

Findings: Construction of the pipeline and discharge structure adjacent to and within City Creek may impact sensitive habitats. Riparian habitat and fishery habitat are located adjacent to the construction site but with implementation of the above mitigation measure (BIO-4), impacts to these sensitive habitats will be minimized. During construction, best management practices shall be implemented to protect any adjacent sensitive natural communities that provide habitat for special-status species. Water quality protection measures will be implemented to prevent leakage of contaminants to soil and receiving waters. In addition, numerous measures will be taken to prevent inadvertent entrapment of common and special status wildlife during construction.

This order adopts the above mitigation measure (BIO-4) and incorporates it as a condition of this order. This measure will be implemented as set forth in the MMRP and will commit the Valley District to implement these actions. Thus with the inclusion of the above mitigation measure, direct and indirect impacts to sensitive natural communities that provide habitat for special-status species by the project construction and operation would be reduced to a less than significant level.

### 12.3 *Impacts to Water Quality*

The project could violate water quality standards or waste discharge requirements, or otherwise substantially degrade water quality.

#### Mitigation Measures:

- HYDRO-1: The Valley District will prepare a Water Quality Management Plan (WQMP) to ensure that the SNRC facility design complies with stormwater management goals of the County of San Bernardino municipal separate storm sewer system (MS4) permit.
- HYDRO-2: Valley District shall prepare and implement a groundwater monitoring program that includes installation of an array of groundwater monitoring wells sufficient to characterize the effects of the discharge on local groundwater quality. If monitoring shows that beneficial uses of the groundwater may become adversely affected by the discharge, the monitoring program would require either modifications to treatment, modify the well screened area by sealing the affected portion of the screen in the impacted groundwater bearing zone, or compensation for adversely affected groundwater wells through replacement of the affected well or through providing replacement water.



Findings: Development of the SNRC has the potential to result in increased impervious surfaces that would increase stormwater runoff if uncontrolled. The facility would be subject to the County of San Bernardino MS4 permit that requires new development to prepare a Water Quality Management Plan (WQMP). Implementation of the WQMP would reduce potential impacts to runoff water quality. Discharge to City Creek or the Redlands Basin could result in the treated effluent infiltrating into the groundwater basin, thereby affecting groundwater quality. To ensure that groundwater quality is not adversely affected, HYDRO-2 would require that the Valley District install a groundwater monitoring network to monitor the discharge's effect on local groundwater quality. Any adverse impact to groundwater quality would be mitigated through treatment modifications or compensation.

This order adopts the above mitigation measures (HYDRO-1 and HYDRO-2) and incorporates them as a condition of this order. These measures will be implemented as set forth in the MMRP and will commit the Valley District to implement these actions. With the inclusion of the above mitigation measures, the potential for the discharge to adversely affect surface and groundwater quality would be reduced to a less than significant level.

#### 12.4 *Impacts to Site Drainage*

The project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation or flooding on or offsite.

##### Mitigation Measures:

HYDRO-3: The City Creek discharge structures shall be designed with velocity dissipation features as needed to prevent scour at the point of discharge. The design and location of these discharge facilities would be approved by the San Bernardino County Flood Control District (SBCFCD) and USACE to ensure that they do not impede high flow capacity.

HYDRO-4: Valley District shall prepare a City Creek Channel Vegetation Management Plan in coordination with SBCFCD and Department that outlines vegetation management measures to minimize impacts to the flood control function within City Creek. The plan will include periodic vegetation trimming to remove large trees that could impact flood control facilities downstream. The plan will outline schedule, permitting and reporting requirements.

Findings: Due to long-term operation of the City Creek discharge facility and the changing environment, the potential exists that the discharge may cause erosional impacts if left unmaintained or unsupervised. The above mitigation measure (HYDRO-3) is designed to dissipate water velocity as needed to prevent scour at the point of discharge. The Vegetation Management Plan (HYDRO-4) will ensure that vegetation in and around City Creek is managed so as to minimize impacts to the flood control function within City Creek.

This order adopts the above mitigation measures (HYDRO-3 and HYDRO-4) and incorporates them as a condition of this order. These measures will be implemented as set forth in the MMRP and will commit the Valley District to implement these actions. With the inclusion of the above mitigation measures, the potential for the discharge to induce erosion and sedimentation in downstream waters would be reduced to a less than significant level.

12.5 *Impacts to Stormwater Runoff*

The project would create or contribute runoff water which could exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Mitigation Measure:

HYDRO-5: The Valley District shall prepare an Operational Manual for the discharge to City Creek that identifies when discharges would be conveyed to other discharge basins to avoid contributing to flood flows in City Creek during peak flow periods.

Findings: Discharge to City Creek during high flow events has the potential to contribute to flood flows. During these high flow events, the treatment plant could discharge to other discharge locations to avoid contributing flow to the creek that could result in downstream flooding or contribute to polluted runoff during peak flow periods. The above mitigation measure (HYDRO-5) ensures that operational procedures are in place prior to project implementation to allow peak flows to be routed to other discharge basins to avoid the contribution of the project to flood flows.

This order adopts the above mitigation measure (HYDRO-5) and incorporates it as a condition of this order. This measure will be implemented as set forth in the MMRP and will commit the Valley District to implement this action. With the inclusion of the above mitigation measure, the potential for the project to create excessive runoff water that would exceed existing stormwater drainage systems or create additional sources of polluted runoff to City Creek would be reduced to a less than significant level.

13. The State Water Board prepared a MMRP which includes the mitigation measures described above in Paragraph 11 and specifies implementation, monitoring, and reporting on the mitigation measures. Compliance with these measures is an enforceable term within this order. Adoption of mitigation measures described in Paragraph 11 of this order avoid or significantly minimize all of the significant impacts under the State Water Board's purview to a less than significant level except for impacts to the Santa Ana sucker. While the proposed project may still result in significant and unavoidable impacts to the aquatic habitat of the Santa Ana Sucker, the State Water Board has determined that the significant impact to the Santa Ana sucker is acceptable due to the overriding considerations discussed in Paragraph 14 below.

14. Statement of Overriding Considerations.

14.1 *Impacts of the Project*

The impacts that are within the State Water Board's purview are described in Paragraph 11.

14.2 *Benefits of the Project*

Consistent with the State Water Board's recycled water policy, the project will provide numerous benefits. By recharging groundwater, the project will serve both existing and future water demands and increase local availability and use of recycled water. It will also help to meet regional water supply needs, while providing greater flexibility in the management of water supplies. The project includes a mitigation plan that adopts a comprehensive, habitat-focused approach that is intended to address specific factors that currently limit the health and abundance of the Santa Ana sucker. By providing supplemental water in the Rialto Channel,

when needed, the plan will increase the availability of suitable habitat for the existing sucker population during summer months, thereby improving the long-term resiliency of the sucker population in the Santa Ana River. This will also establish a distinct sucker population in a suitable upper watershed tributary to the Santa Ana River.

#### 14.3 *Statement of Overriding Considerations*

The State Water Board finds and declares that, on balance, the economic, legal, social, technological, and other benefits, including water supply, wastewater treatment, and Santa Ana sucker conservation and resiliency benefits outweigh the significant and unavoidable impacts to the Santa Ana sucker through habitat modification.

15. Regardless of any obligation the Valley District or the State Water Board may have under CEQA, the State Water Board has an independent obligation to consider the effect of the change on public trust resources and to protect those resources where feasible, and to balance any adverse public trust effects against the benefits of the project. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419 [189 Cal.Rptr. 346].) Staff evaluated potential effects to public trust resources in the April 25, 2017 memorandum titled *Staff Evaluation of Potential Effect to Public Trust Resources Caused by Approval of WW0095* for reduction in discharge under the petition, including specific consideration of effects related to special-status plants or wildlife, instream flow, water quality and riparian habitat. Staff concluded the petition will not result in adverse effects to special-status plants or wildlife, water quality or riparian habitat.

The Deputy Director has reviewed staff's conclusions and recommendations, and concurs. Potentially adverse effects to public trust resources from changes in stream flow that may interfere with Santa Ana sucker migration in the Santa Ana River may occur from the reduction in discharge and use of water as described in the change, but these effects are adequately addressed by the mitigation measures and protest dismissal requirements incorporated into this Order. With the inclusion of protest dismissal terms, standard terms and conditions, and mitigation measures evaluated in Paragraph 11 of this Order, the change will not cause an unreasonable effect to public trust resources and approval of the project is not contrary to the State Water Board's public trust responsibilities.

16. Pursuant to Resolution 2012-0029, the State Water Board has delegated the authority to administer the State Water Board's water rights program to the Deputy Director for Water Rights. The Deputy Director for Water Rights has redelegated the authority.

### **ORDER**

#### **NOW, THEREFORE, IT IS ORDERED THAT:**

1. The protests of the City of San Bernardino and Anthony Serrano are dismissed.
2. The request to change the point of discharge is approved. The points of discharge shall be:
  - a. City Creek at California Coordinate System, NAD 83, Zone 5, North 1,866,229 feet and East 6,805,246 feet, being within the NE $\frac{1}{4}$  of Section 4, T1S, R3W, SBB&M; and
  - b. City of San Bernardino Rapid Infiltration and Exfiltration Facility Discharge Point at North 1,838,060 feet and East 6,757,195 feet by California Coordinate System 1983, Zone 5, being within NE  $\frac{1}{4}$  of SE  $\frac{1}{4}$  of Section 36, T1S, R5W, SBB&M.

3. The request to change the place of use is approved. The place of use for treated wastewater produced by the SNRC is within the San Bernardino Valley Municipal Water District service area and portions of the Santa Ana River and City Creek, as shown on map dated November 28, 2016 filed with the State Water Board.
4. The request to change the purpose of use is approved. The purposes of use for treated wastewater produced by the SNRC are Municipal, Industrial, Domestic, Irrigation, Heat Control, Frost Protection and Fish and Wildlife Preservation and Enhancement.
5. The quantity of discharge of treated wastewater from the RIX to the Santa Ana River may be reduced by an average monthly rate of up to 6.0 mgd, for a total reduction of 6,725 afy, from January 1 to December 31 of each year.
6. The place of storage for treated wastewater is the Bunker Hill Subbasin within the Upper Santa Ana Valley Groundwater Basin as shown on map dated November 28, 2016 filed with the State Water Board.
7. The CEQA findings specified in paragraphs 11-14 above are hereby adopted.
8. This Order incorporates the mitigation terms of the final EIR specified in paragraph 11 above and in the Attachment 1. The Valley District shall implement the measures to mitigate significant impacts to biological resources and conduct the required reporting and monitoring of those measures. The State Water Board reserves jurisdiction to require any reasonable amendments to these measures and requirements to ensure that they will accomplish the stated goal or as appropriate to take into account any modifications to the final EIR as a result of litigation or otherwise.
9. The Valley District shall operate the project consistent with its obligations under the judgments in *Western Municipal Water District of Riverside County v. East San Bernardino County Water District*, Case No. 78426, and *Orange County v. the City of Chino et al. Al.*, Orange County Superior Court No. 117628.
10. The Valley District shall obtain all necessary federal (including Clean Water Act section 404), state and local agency permits and approvals required by other agencies prior to construction and operation of the project. Copies of such permits and approvals shall be forwarded to the Deputy Director for Water Rights.
11. The Valley District is responsible for compliance with any applicable waste discharge or water recycling requirements issued by the Regional Water Board or the State Water Board.

STATE WATER RESOURCES CONTROL BOARD

ORIGINAL SIGNED BY:  
JOHN O'HAGAN FOR:

*Leslie F. Grober, Deputy Director  
Division of Water Rights*

Dated: APR 28 2017

---

## State Water Resources Control Board

### MITIGATION MONITORING AND REPORTING PLAN Wastewater Change Petition WW0095 San Bernardino Valley Municipal Water District

This Mitigation Monitoring and Reporting Plan (MMRP) has been prepared in conformance with the California Environmental Quality Act (CEQA) (Public Resources Code section 21081.6). The MMRP has been developed based on the information and mitigation measures contained in the Environmental Impact Report (EIR) for the Sterling Natural Resource Center (SNRC) (SCH No. 2015101058) which includes the project described in wastewater change petition WW0095. The MMRP lists mitigation measures recommended in the EIR for the proposed project and specifies implementation and monitoring responsibilities. Pursuant to Public Resources Code section 21081.6, subdivision (b), each of the mitigation measures identified in the MMRP will be included as enforceable terms in any order authorizing construction, change the point of discharge, place of use, purpose of use and quantity of discharge of treated wastewater currently discharged pursuant to wastewater change petition WW0095.

Generally, the State Water Resources Control Board (State Water Board), Division of Water Rights (Division) Permitting Section staff will monitor mitigation measures requiring pre-construction actions or submittals. Construction and post construction mitigation measures will be reported to Division staff as specified in the attached matrix. Implementation of mitigation measures is the sole responsibility of the San Bernardino Valley Municipal Water District (Valley District). Compliance with mitigation measures will be assessed through the Division's routine compliance monitoring activities. Non-compliance with mitigation measures may be addressed through the Division's ongoing enforcement program on an as needed basis.

All documents and other information that constitute the public record for this project shall be maintained by the Division and shall be available for public review at the following address:

State Water Resources Control Board  
Division of Water Rights, 2<sup>nd</sup> Floor  
1001 I Street  
Sacramento, CA 95814

#### PROJECT DESCRIPTION:

On September 16, 2016, the Valley District filed Wastewater Change Petition WW0095 with the State Water Board pursuant to Water Code section 1211. The purpose of the petition is for the Valley District to obtain the State Water Board's authorization for the construction and operation of the SNRC. The SNRC is to be jointly owned by the Valley District and the East Valley Water District (East District). The petition seeks to change the point of discharge, place of use, purpose of use and quantity of discharge of treated wastewater currently discharged to the Santa Ana River.

Water Code section 1211 requires the owner of a wastewater treatment plant to obtain approval from the State Water Board prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater where changes in the discharge or use of treated wastewater result in decreasing the flow in any portion of a watercourse.

The East District service area currently generates wastewater at an approximate rate of six million gallons per day (mgd) for a total annual amount of approximately 6,725 acre-feet per year (afy). Pursuant to an agreement, the East District conveys wastewater generated within its service area to the City of San Bernardino for treatment. The wastewater receives primary and secondary treatment at the San Bernardino Water Reclamation Plant and tertiary treatment at the Rapid Infiltration and Extraction Facility (RIX). After treatment at the RIX, the treated wastewater is discharged to the Santa Ana River.

The SNRC is a wastewater treatment facility to be built within the City of Highland. The SNRC will have the capacity to treat up to 10 mgd of wastewater generated within the East District service area, which is located entirely within the Valley District service area. The SNRC will use bio-membrane technology to produce disinfected tertiary recycled water (Title 22 quality water) for Municipal, Industrial, Domestic, Irrigation, Heat Control, Frost Protection, and Fish and Wildlife Preservation and Enhancement use. Once constructed, all wastewater generated within the East District service area will be delivered to the SNRC for treatment.

Redirection of wastewater generated within the East District service area to the SNRC will reduce the amount of treated wastewater discharged from the RIX to the Santa Ana River by approximately 6 mgd. Once treated at the SNRC, the water will be conveyed primarily to City Creek. During peak flows, water will be conveyed to underground storage within existing basins currently operated by the City of Redlands (Redlands Basins). When necessary, treated wastewater may also be sent to the RIX for discharge to the Santa Ana River. Water delivered into spreading grounds will be metered. All extraction wells in the San Bernardino basin area are metered and the results are reported annually to the Western-San Bernardino Watermaster.

Discharge of treated wastewater from the RIX to the Santa Ana River is currently authorized by the Santa Ana Regional Water Quality Control Board under Order No. R8-2013-0032 and NPDES Permit No. CA8000304.

In accordance with the CEQA, the Valley District, as lead agency, completed a Draft Environmental Impact Report (EIR; State Clearinghouse No. 2015101058) in December 2015 and issued a Notice of Determination for the Final EIR on March 15, 2016. The State Water Board, acting as a responsible agency under the CEQA, has reviewed the Final EIR and will issue a Notice of Determination within five days of the date that the petition is approved.

Impact: Direct or indirect modifications of habitat for special-status plan and wildlife species and their habitat due to project construction	
Mitigation Measures:	<p><b>BIO-1: Disturbance to Special-Status Plants.</b> The following measures will reduce potential project-related impacts to special-status plant species that may occur adjacent to the project site within City Creek to a less than significant level. Potential project-related impacts may result from the construction of the pipeline extension and discharge structure within City Creek and the Redlands Basins.</p> <ol style="list-style-type: none"> <li>a) Prior to the start of construction within City Creek and/or the Redlands Basins, a focused botanical survey will be conducted to determine the presence/absence of any of the special-status species with a moderate or high potential to occur. The focused botanical survey will be conducted by a botanist or qualified biologist knowledgeable in the identification of local special-status plant species, and according to accepted protocol outlined by the California Native Plant Society and/or the California Department of Fish and Wildlife (Department).</li> <li>b) If a special status plant species is discovered in a project impact area, informal consultation with the Department and/or the U.S. Fish and Wildlife Service (Service) will be required prior to the impact occurring to develop an appropriate avoidance strategy. Depending on the sensitivity of the species, relocation, site restoration, or other habitat improvement actions may be an acceptable option to avoid significant impacts, as determined through consultation with the Department and/or the Service.</li> <li>c) If impact avoidance of a state or federally-listed species is not feasible, the San Bernardino Valley Municipal Water District (Valley District) shall quantify the impacted acreage supporting state or federally-listed plant species within the construction area and estimated perennial flow area and prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected plants species. The Valley District shall implement the conservation measures and compensation requirements identified through consultation by the U.S. Army Corps of Engineers (Corps) with both the Department and the Service.</li> <li>d) Permanent impacts to Riversidian Alluvial Fan Sage Scrub (RAFSS) habitat from construction and operation of the discharge including within the City Creek channel resulting from perennial flow shall require on-site replacement or off-site compensation at a ratio of at least 3:1 in consultation with the Department and the Service. Temporary impacts to RAFSS habitat would be mitigated at a ratio of at least 1:1 in consultation with the Department and the Service.</li> </ol>
Level of Impact Before and After Mitigation:	<p>Before: Potentially Significant                  After: Less than Significant with mitigation incorporation</p>
Implementation, Monitoring, and Implementation Action:	<ul style="list-style-type: none"> <li>• A qualified biologist will conduct pre-construction botanical survey as defined.</li> <li>• Prepare documentation to record results of the pre-construction survey.</li> <li>• If a special status plant species is detected, then implement measures as appropriate.</li> </ul>

		<ul style="list-style-type: none"> <li>• If impact avoidance is not feasible, then implement measures as appropriate. Prepare Biological Assessment as suggested.</li> <li>• Perform construction site inspections to ensure measures are implemented properly. An inspection log will be maintained to document results of site inspections.</li> <li>• Retain copies of pre-construction survey documentation and any subsequent reports in the project file.</li> </ul> <p>Consult with Service and Department to prepare and implement on-site or off-site compensation of 3:1 or 1:1 and mitigate impacts to RAFSS habitat.</p>
	<p>Timing in Reporting on Implementation and Monitoring:</p>	<p>Prior to and during project construction by the Valley District</p>
<p>Impact: Direct or indirect modifications of habitat for endangered or threatened fish species due to construction at City Creek</p>		
	<p>Mitigation Measures:</p>	<p><b>BIO-2: Disturbance to Special-Status Wildlife.</b> The following measures will reduce potential project-related impacts to special-status wildlife species that may occur within disturbed and native habitats, to a less than significant level. Potential project-related impacts may result from construction of the Sterling Natural Resource Center (SNRC), construction of the discharge structures within City Creek and other discharge locations, and perennial discharges to City Creek or other discharge locations.</p> <ol style="list-style-type: none"> <li>a) Prior to the start of construction within City Creek or other discharge locations, Valley District shall conduct focused surveys within the project impact areas to determine if any state or federally-listed wildlife species (southwestern willow flycatcher, coastal California gnatcatcher, San Bernardino kangaroo rat, and least Bell's vireo) are located within project impact areas. Focused surveys will be conducted by a qualified and/or permitted biologist, following approved survey protocol. Survey results will be forwarded to the Department and the Service. If state or federally-listed species are determined to occur on the project site with the potential to be impacted by the project, consultation with the Department and/or the Service will be required.</li> <li>b) If impact avoidance is not feasible, the Valley District shall quantify the impacted acreage supporting state or federally-listed wildlife species within the construction area and estimated perennial flow area and prepare a Biological Assessment pursuant to Section 7 of the Endangered Species Act and Section 2081 of the State Endangered Species Act. The Biological Assessment shall quantify compensation requirements for affected wildlife species. Valley District shall implement the conservation measures and compensation requirements identified through consultation by the Corps with both the Department and the Service.</li> <li>c) Prior to the start of construction of the SNRC building and the recycled water pipeline along 6th Street, focused burrowing owl surveys shall be conducted to determine the presence/absence of burrowing owl adjacent to the project area. The focused burrowing owl survey must be conducted by a qualified biologist and following the survey guidelines included in the Department 2012 Staff Report on Burrowing Owl Mitigation. If burrowing owl is observed within</li> </ol>



		undeveloped habitat within or immediately adjacent to the project impact area, avoidance/minimization measures would be required such as establishing a suitable buffer around the nest (typically 500-feet) and monitoring during construction, or delaying construction until after the nest is no longer active and the burrowing owls have left. However, if burrowing owl avoidance is infeasible, a qualified biologist shall implement a passive relocation program in accordance with the <i>Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans</i> of the Department 2012 Staff Report on Burrowing Owl Mitigation.
	Level of Impact Before and After Mitigation:	Before: Potentially Significant After: Less than Significant with mitigation incorporation
	Implementation, Monitoring, and Implementation Action:	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• A qualified biologist will conduct pre-construction surveys for state or federally-listed wildlife species (southwestern willow flycatcher, coastal California gnatcatcher, San Bernardino kangaroo rat, and least Bell's vireo) as defined.</li> <li>• A qualified biologist will conduct pre-construction survey for burrowing owl as defined.</li> <li>• A qualified biologist will conduct pre-construction site clearing survey for project impact area of natural habitat within City Creek.</li> <li>• Prepare documentation to record results of all of the pre-construction survey.</li> <li>• If a state or federally-listed species is detected, then implement measures as appropriate. If impact avoidance is not feasible, implement measures as appropriate. Prepare Biological assessment if required.</li> <li>• If a burrowing owl is detected, then implement measures as appropriate. If burrowing owl avoidance is not feasible, implement measures as appropriate.</li> <li>• Perform construction site inspections to ensure measures are implemented properly. An inspection log will be maintained to document results of site inspections.</li> <li>• Retain copies of both of the pre-construction surveys documentation in the project file.</li> </ul>
	Timing in Reporting on Implementation and Monitoring:	Within 60 days after construction is completed by the Valley District
Impact: Adverse impacts to sensitive habitats (including riparian, wetlands, and/or other sensitive natural communities) within the project area due to project construction.		
	Mitigation Measures:	<p><b>BIO-3: Disturbance to Santa Ana Sucker.</b> The following measures will reduce potential project-related impacts to avoid, minimize, and compensate for impacts to Santa Ana sucker while contributing to the long-term conservation of the species.</p> <p>a) The diversion of wastewater flow to the new SNRC shall not occur until either the Upper Santa Ana River Habitat Conservation Plan (HCP) has been fully executed by the Service and the Department or Valley District's Santa Ana sucker Habitat Monitoring and Management Plan</p>

		<p>(HMMP) has been approved by the Service and the Department.</p> <p>b) The Valley District will be a signatory to the Upper Santa Ana River HCP that will include the proposed project as a covered activity. The HCP will include a menu of projects to be implemented by the signatory agencies that will create habitat, restore habitat, and establish self-sustaining populations in the watershed. The HCP will be approved by the Department and the Service.</p> <p>c) In the event that the Upper Santa Ana River HCP is not approved in time to meet the project schedule, Valley District shall prepare and implement a HMMP that identifies habitat improvement actions, implementation methods, monitoring, and maintenance methods. The HMMP will consist of measures listed below to offset direct and indirect impacts to the Santa Ana sucker and its habitat resulting from the loss of 6 million gallons per day of discharged water. The HMMP will be implemented by a contracted, qualified and permitted entity such as the Riverside-Corona Resource Conservation District in coordination with the Service and the Department. The HMMP will identify the goals and performance criteria of each conservation measure and will identify annual reporting and work forecasting requirements. The HMMP will be approved by the Service and the Department under their authority to enforce the federal and state Endangered Species Acts. The proposed diversion of 6 million gallons per day from the Rapid Infiltration and Exfiltration Facility discharge will not occur until the HMMP has been approved by the Service and the Department. The HMMP will include the following elements.</p> <ul style="list-style-type: none"> <li>• <b>SAS-1: Microhabitat Enhancements.</b> The HMMP will identify microhabitat enhancements within the upstream reach of the affected river segment using natural materials to increase scour and pool formation. This could include placement of large boulders and/or large woody debris to increase velocity of flow and gravel bar patches as well as deep pool refugia areas.</li> <li>• <b>SAS-2: Aquatic Predator Control Program.</b> The HMMP will include an Aquatic Predator Control Program to be implemented within the upstream reach of the affected river segment that will target and remove exotic fish, amphibians, and reptiles immediately prior to the Santa Ana sucker spawning season.</li> <li>• <b>SAS-3: Exotic Weed Management Program.</b> The HMMP will include an Exotic Weed Management Program targeting the removal of non-native species such as tamarisk, castor bean, tree of heaven, etc. The HMMP will include an annual maintenance and performance goal for non-native plant removal within the upper reach of the affected river segment.</li> <li>• <b>SAS-4: High Flow Pulse Events.</b> The HMMP will identify means to create high flow pulse events as needed based on substrate conditions, up to 2 times per year. The high flow pulse events would be implemented through a cooperative agreement with the City of San Bernardino Municipal Water Department.</li> <li>• <b>SAS-5: Supplemental Water.</b> Valley District will increase habitat availability in Rialto Channel during the summer months by providing cool supplemental water from nearby groundwater source to lower the water temperature in this tributary. Supplemental water</li> </ul>
--	--	--

		<p>will be added to the Rialto Channel when water temperatures reach 85 degrees. Supplemental water could be pumped groundwater or other water source. The discharge into the Rialto Channel will require a discharge permit from the Regional Water Quality Control Board.</p> <ul style="list-style-type: none"> <li>• <b>SAS-6: Upper Watershed Santa Ana Sucker Population Establishment.</b> The HMMP will outline a plan for establishing a population of Santa Ana sucker in City Creek, or other suitable watershed tributary, in coordination with the Service and the Department. The HMMP will identify measures to directly increase the number of Santa Ana sucker in the Santa Ana River population, increase the amount of suitable and occupied habitat in this watershed, and distribute the risk of a catastrophic event between multiple locations. The HMMP will identify the goals and success criteria of the establishment plan and will identify the amount of financial assistance to be provided by Valley District for the regionally-beneficial population establishment program.</li> <li>• <b>SAS-7: Monitoring.</b> The HMMP will outline a monitoring program to collect hydrology data in the segment of river between the Rapid Infiltration and Exfiltration Facility discharge and Mission Boulevard. The data will include flow velocity and depth.</li> </ul>
	<p>Level of Impact Before and After Mitigation:</p>	<p>Before: Significant and unavoidable                  After: Significant and unavoidable with mitigation incorporation</p>
	<p>Implementation, Monitoring, and Implementation Action:</p>	<ul style="list-style-type: none"> <li>• Verify that the Upper Santa Ana River HCP is executed and approved before project construction begins.</li> <li>• If Upper Santa Ana River HCP is not approved in time, prepare and implement Santa Ana sucker HMMP.</li> <li>• A contracted and qualified entity will implement the HMMP.</li> <li>• Verify that the HMMP has been prepared and approved by the applicable entities, including the Service and the Department.</li> <li>• Verify that the agreement for the high pulse flow events has been executed with the City of San Bernardino Municipal Water Department.</li> <li>• Verify that the Rialto Channel discharge permit has been prepared and approved by the Regional Water Quality Control Board.</li> <li>• Include mitigation measures SAS-1 through SAS-7 in construction contractor specifications.</li> <li>• Perform construction site inspections to ensure measures are implemented properly and the construction contractor is complying with construction limitations. An inspection log will be maintained to document results of site inspections.</li> <li>• Retain copies of Upper Santa Ana River HCP or Santa Ana sucker HMMP documentation and construction site inspection logs in the project file.</li> </ul>
	<p>Timing in Reporting on Implementation and Monitoring:</p>	<p>Prior to and during construction by the Valley District.</p>

Impact: Adverse impacts due to construction of the project that could result in the interference with the movement of any native resident or migratory fish or wildlife species.	
Mitigation Measure:	<p><b>BIO-4: Construction Best Management Practices.</b> The Contractor shall implement the following Best Management Practices during construction of the pipeline and discharge structure adjacent to and within City Creek to protect any adjacent sensitive natural communities that provide habitat for special-status species.</p> <p>a) The following water quality protection measures shall be implemented during construction:</p> <ul style="list-style-type: none"> <li>• Stationary engines, such as compressors, generators, light plants, etc., shall have drip pans beneath them to prevent any leakage from entering runoff or receiving waters.</li> <li>• All construction equipment shall be inspected for leaks and maintained regularly to avoid soil contamination. Leaks and smears of petroleum products will be wiped clean prior to use.</li> <li>• Any grout waste or spills will be cleaned up immediately and disposed of off-site.</li> <li>• Spill kits capable of containing hazardous spills will be stored on-site.</li> </ul> <p>b) To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than two-feet deep shall be covered with tarp, plywood or similar materials at the close of each working day to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow for animals to escape, if necessary. Before such holes or trenches are backfilled, they should be thoroughly inspected for trapped animals. If trapped wildlife are observed, escape ramps or structures shall be installed immediately to allow escape. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods should be thoroughly inspected for burrowing owls and nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved.</p>
Level of Impact Before and After Mitigation:	<p>Before: Potentially Significant                  After: Less than Significant with mitigation incorporation</p>
Implementation, Monitoring, and Implementation Action:	<ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Conduct evaluation of project area for trapped animals during construction. If trapped animals are found within construction sites, then implement measures as defined.</li> <li>• Perform construction site inspections to ensure mitigation measures are implemented properly.</li> <li>• Retain copies of survey documentation and construction site inspection logs in the project file</li> </ul>
Timing in Reporting on Implementation and Monitoring:	<p>Prior to and during construction by the Valley District</p>

Impact: Adverse impacts to water quality due to potential violation of water quality standards or waste discharge requirements or otherwise substantially degrading water quality	
Mitigation Measures:	<p><b>HYDRO-1:</b> The Valley District will prepare a Water Quality Management Plan (WQMP) to ensure that the SNRC facility design complies with stormwater management goals of the County of San Bernardino municipal separate storm sewer system (MS4) permit.</p> <p><b>HYDRO-2:</b> Valley District shall prepare and implement a groundwater monitoring program that includes installation of an array of groundwater monitoring wells sufficient to characterize the effects of the discharge on local groundwater quality. If monitoring shows that beneficial uses of the groundwater may become adversely affected by the discharge, the monitoring program would require either modifications to treatment, modify the well screened area by sealing the affected portion of the screen in the impacted groundwater bearing zone, or compensation for adversely affected groundwater wells through replacement of the affected well or through providing replacement water.</p>
Level if Impact Before and After Mitigation:	<p>Before: Potentially Significant                  After: Less than Significant with mitigation incorporation</p>
Implementation, Monitoring, and Implementation Action:	<ul style="list-style-type: none"> <li>• Prepare the WQMP prior to project implementation.</li> <li>• Retain copies of the plan in the project file.</li> <li>• Retain copies of sampling and analyses conducted in accordance with the WQMP in the project file.</li> <li>• Conduct site inspections in accordance with the WQMP to ensure proper implementation of stormwater management goals.</li> <li>• Prepare the groundwater monitoring program prior to project implementation.</li> <li>• Retain copies of the program report in the project file.</li> <li>• During plan implementation, retain copies of the monitoring reports in the project file.</li> <li>• Implement suggested mitigation measure if monitoring shows groundwater is adversely affected.</li> </ul>
Timing in Reporting on Implementation and Monitoring:	Prior to and during construction by the Valley District
Impact: Adverse impacts to water quality due to the alteration of the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation or flooding on or offsite	
Mitigation Measures:	<p><b>HYDRO-3:</b> The City Creek discharge structures shall be designed with velocity dissipation features as needed to prevent scour at the point of discharge. The design and location of these discharge facilities would be approved by the San Bernardino County Flood Control District (SBCFCD) and the Corps to ensure that they do not impede high flow capacity.</p> <p><b>HYDRO-4:</b> Valley District shall prepare a City Creek Channel Vegetation Management Plan in coordination with SBCFCD and Department that outlines vegetation management measures to minimize impacts to the flood control function within City Creek. The plan will include periodic vegetation trimming to remove large trees that could impact flood control facilities</p>

		downstream. The plan will outline schedule, permitting and reporting requirements.
	Level if Impact Before and After Mitigation:	Before: Potentially Significant After: Less than Significant with mitigation incorporation
	Implementation, Monitoring, and Implementation Action:	<ul style="list-style-type: none"> <li>• Include mitigation measure in project design specifications.</li> <li>• Retain specifications related to discharge facilities in the project file.</li> <li>• Prepare Vegetation Management Plan prior to project implementation.</li> <li>• Retain Vegetation Management Plan in the project file</li> </ul>
	Timing in Reporting on Implementation and Monitoring:	Prior to construction by the Valley District
Impact: Adverse impacts to water quality due to potential to create or contribute runoff water which could exceed the capacity of planned stormwater drainage systems or provide substantial additional sources of polluted runoff.		
	Mitigation Measures:	<b>HYDRO-5:</b> The Valley District shall prepare an Operational Manual for the discharge to City Creek that identifies when discharges would be conveyed to other discharge basins to avoid contributing to flood flows in City Creek during peak flow periods.
	Level if Impact Before and After Mitigation:	Before: Potentially Significant After: Less than Significant with mitigation incorporation
	Implementation, Monitoring, and Implementation Action:	<ul style="list-style-type: none"> <li>• Prepare Operational Manual prior to project implementation.</li> <li>• Retain Operation Manual in the project file.</li> </ul>
	Timing in Reporting on Implementation and Monitoring:	Prior to construction by the Valley District



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Ecological Services  
Palm Springs Fish and Wildlife Office  
777 East Tahquitz Canyon Way, Suite 208  
Palm Springs, California 92262



In Reply Refer To:  
FWS-SB-16B0182-17F0387-R001

August 11, 2017  
*Sent by Email*

Mr. Douglas E. Eberhardt  
Manager, Infrastructure Section  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street  
San Francisco, California 94105

Attention: Elizabeth Borowiec

Subject: Re-initiation of Formal Section 7 Consultation on the Proposed Sterling Natural Resource Center, San Bernardino County, California

Dear Mr. Eberhardt:

On March 9, 2017, we issued biological opinion FWS-SB-16B0182-17F0387 that addressed impacts to the federally endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*; SBKR) and the federally threatened Santa Ana sucker (*Catostomus santaanae*; SAS) and their respective designated critical habitats for the issuance of federal funding [Clean Water State Revolving Fund (CWSRF)] by the U.S. Environmental Protection Agency (EPA) for the construction and operation of the Sterling Natural Resources Center (project). The EPA has delegated the administration of the CWSRF program to the states, including California, under the federal Clean Water Act (CWA), to assist in funding projects intended to improve water quality. The Division of Financial Assistance of the State Water Resources Control Board (State Water Board) administers the CWSRF program in California pursuant to 40 Code of Federal Regulations (CFR) Part 35, Subpart K. East Valley Water District (EVWD), in cooperation with the San Bernardino Valley Municipal Water District (Valley District), is the non-Federal applicant.

The biological opinion analyzed the temporary and permanent impacts associated with the construction of the SNRC facility, new pipeline, and associated outlet structures in the City of Highland, City Creek, and Redlands Basins, and the reduction of effluent flow to the Santa Ana River downstream of the Rapid Infiltration and Extraction (RIX) treatment plant discharge outlet. On June 27, 2017, we received a letter from the State Water Board dated June 22, 2017, requesting changes to the project description related to the roles and responsibilities of the EPA and State Water Board associated with the conservation measures that require ongoing implementation. This amendment addresses the roles and responsibilities of both the EPA and State Water Board associated with the implementation of the SNRC conservation measures.

The State Water Board, under guidance from the EPA, is proposing that the EPA and State Water Board will remain responsible for implementation of the Terms and Conditions of the biological opinion's incidental take statement until funds are disbursed and project implementation is complete, or they no longer retain discretionary involvement or control over the project, as described in 1 and 2, below:

1. If an incidental take permit is issued for the Upper Santa Ana River HCP, prior to completion of the EPA and State Water Board actions and the HCP addresses any outstanding or ongoing project conservation measures, the USFWS will notify the EPA and State Water Board that the terms of the biological opinion have been met.
2. If the permit for the HCP is not issued 6 months prior to the anticipated completion of the project implementation, any unfulfilled obligations, including ongoing management of conservation lands included in the project description by EVWD, will be endowed and taken over by a conservation land manager identified by Valley District. Valley District will establish, subject to the approval of the State Water Board, USFWS, and EPA, an appropriate instrument to hold and disperse funds, identify an endowment manager to regulate disbursement of funds, and identify a conservation land manager. Valley District will evaluate the adequacy of the endowment with a property analysis record, or equivalent analysis, approved by the USFWS. Once the conservation land manager has been identified and engaged and the funding instrument has been established and funded, the USFWS will notify the EPA and State Water Board that terms of the biological opinion have been met.

After reviewing the modification of the project description, we have determined that the requested changes to the Project description do not affect the analysis of impacts to SAS, SBKR, or their respective designated critical habitats, the amount or extent of take we expect to result from the proposed action or the conclusions in the original biological opinion (FWS-SB-16B0182-17F0387).

This concludes reinitiated formal consultation regarding the maintenance roads and activities for the Sterling Natural Resource Center project outlined in materials submitted to us. As provided in 50 CFR §402.16 reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; and (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions or comments about this consultation, please contact Kai Palenscar of this office at 760-322-2070, extension 408.

Sincerely,

Kennon A. Corey  
Assistant Field Supervisor

cc:

Ahmad Kashkoli, Senior Environmental Scientist, State Water Board  
Cedric Irving, Environmental Scientist, State Water Board  
Heather Dyer, Water Resources Project Manager, Valley District



**Settlement Agreement**

This Settlement Agreement (“Agreement”) is entered into and effective this 21st day of November, 2017 by and among the City of San Bernardino (“City”), the City of San Bernardino Municipal Water Department (“SB Water”), East Valley Water District (“East Valley”) and San Bernardino Valley Municipal Water District (“Valley District”). The City, East Valley and Valley District are each sometimes referred to herein as a “Party” and are collectively referred to herein as the “Parties.”

Recitals

- A. On March 15, 2016, Valley District certified the Final Environmental Impact Report (“SNRC EIR”) under the provisions of the California Environmental Quality Act (“CEQA”) for the Sterling Natural Resource Project (“SNRC Project”) and approved the SNRC Project.
- B. On April 14, 2016, the City filed suit (the “CEQA Lawsuit”) challenging the validity of Valley District’s certification of the SNRC EIR as violating the provisions of CEQA.
- C. On June 1, 2016, the City filed a second lawsuit (the “LAFCo Lawsuit”) challenging East Valley’s actions in connection with the SNRC Project and alleging such actions violated the Cortese-Knox-Hertzberg Act (“LAFCo Law”). Valley District and East Valley filed a cross-complaint in that action.
- D. On March 7, 2017, SB Water certified the Final Environmental Impact Report (“CWF EIR”) under the provisions of CEQA for the Clean Water Factory Project (“CWF Project”) and approved the CWF Project.
- E. On June 6, 2017, the Superior Court for the County of San Diego entered judgment in favor of Valley District and East Valley in connection with the CEQA Lawsuit. The City has filed a timely appeal of that decision.
- F. By means of tolling agreements and stipulations the Parties have: (i) tolled the dates for filing the appendix on appeal and briefs in CEQA Lawsuit in the Court of Appeal, (ii) tolled all discovery and the hearing on the City’s motion for a writ of mandate in the LAFCo Lawsuit (including discovery undertaken in connection with the cross-complaint filed by Valley District and East Valley), (iii) tolled the deadline for the City to file a motion to tax costs in the CEQA Lawsuit, and (iv) tolled the statute of limitations on potential legal challenges by East Valley and Valley District to the CWF Project.
- G. The Parties now wish to enter into a comprehensive settlement that will accomplish a number of different purposes, all of which are of equal importance.

Settlement Agreement  
City of San Bernardino, SB Water, East Valley and Valley District  
November 2017  
Page 1 of 18

43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72

- The Parties wish to enter into arrangements that will allow East Valley and Valley District to construct and operate the SNRC Project and that will allow the City to construct and operate the CWF Project.
  - The Parties wish to enter into arrangements that will ensure that the SNRC Project and the CWF Project are operated in a manner that is consistent with the recovery of threatened and endangered fish populations in the Santa Ana River that may depend on the discharge of treated wastewater into the Santa Ana River.
  - The Parties wish to enter into arrangements that will replenish the San Bernardino Basin Area ("SBBA") and thereby enhance water supply reliability for their respective ratepayers.
  - The Parties wish to enter into arrangements that will allow East Valley to provide wastewater treatment and disposal services to its ratepayers in compliance with the LAFCo Law, and without adversely affecting the ratepayers within the City.
  - The Parties wish to further enhance water supply reliability (and thereby lessen the demands for the extraction of groundwater from the SBBA) by engaging in a number of water efficient landscape improvements located within the City.
  - The Parties wish to conclude all of the foregoing litigation on a mutually agreeable basis and move on from the conflict associated with litigation to collaborative efforts that will best serve the interests of their respective ratepayers.
- H. The Parties wish to memorialize their mutual agreements and understandings by means of this Agreement.

Agreements

73  
74  
75  
76  
77  
78  
79  
80  
81  
82

1. *Construction and Operation of Facilities*
  - a. *Status of Existing JPA Agreement.* At present, the City provides wastewater treatment and disposal services to East Valley pursuant to a Joint Powers Authority agreement dated January 7, 1958, as amended most recently in April 1984 ("JPA Agreement"). The Parties intend to continue to operate under the terms of the JPA Agreement solely as it pertains to wastewater treatment and disposal services until termination of the JPA Agreement as provided for in subparagraph 1(b) below. Not later than ninety (90) days after the date upon which the San Bernardino Local Agency Formation Commission ("LAFCo") may approve the activation of East Valley's latent authority for wastewater

83 treatment and disposal services, all remaining JPA obligations imposed upon the  
84 Parties including, but not limited to, East Valley's obligation to collect connection  
85 fees for the benefit of the City and the expansion fees described in section 3(c) of  
86 this Agreement shall terminate. The Parties shall, within one hundred eighty  
87 (180) days of the execution of this Agreement, agree upon amendments to the  
88 JPA Agreement to effectuate this Agreement.

89 b. *Termination of JPA Agreement.* Prior to completion of the SNRC Project, East  
90 Valley shall provide notice of anticipated completion to the other Parties and  
91 identify a date, at least six (6) months in the future, when East Valley will begin  
92 to provide wastewater treatment and disposal services to its customers. Upon  
93 SNRC Project completion, East Valley shall provide notice of completion to all  
94 Parties.

95 (1) The City shall, within thirty days of the date of East Valley's notice of  
96 completion, provide the other Parties with final invoicing, consistent with  
97 the City's prior invoicing practices, showing all charges incurred or that  
98 will be incurred for the operation of the City's facilities through the date  
99 on which East Valley will provide wastewater treatment services.

100 (2) East Valley shall, within thirty (30) days of receiving the City's final  
101 invoicing, either agree with that invoicing or begin the dispute resolution  
102 process described in paragraph 6(b) below. Such disputes shall be limited  
103 to invoice items that exceed one percent (1%) of the total invoiced  
104 amount.

105 (3) The JPA Agreement shall terminate on the date that East Valley begins to  
106 provide wastewater treatment services to its customers (the "Service  
107 Date") notwithstanding any dispute among the parties relating to the  
108 invoicing provided by the City. Such disputes will be addressed through  
109 procedures described in paragraph 6(b) below.

110 c. *SNRC Project.* The Parties agree to cooperate to enable East Valley and Valley  
111 District to construct the SNRC Project and place that project into operation at the  
112 earliest possible date, as follows:

113 (1) *General Provisions*

114 (a) The Parties agree that the SNRC Project will divert and treat all  
115 wastewater flows that are generated within East Valley's service  
116 area, which are currently approximately 6 million gallons/day, that  
117 would have been treated by SB Water pursuant to the JPA  
118 Agreement.

- 119 (b) Upon execution of this Agreement, the City and SB Water shall  
120 send a letter to the State Water Resources Control Board  
121 supporting the use of State Revolving Fund ("SRF") grant and  
122 loan funds, at the lowest available rate of interest, to fund the  
123 SNRC Project. Such letter shall be approved in advance by East  
124 Valley. If requested by East Valley and/or Valley District,  
125 representatives of the City and/or SB Water shall participate in a  
126 teleconference with the State Water Resources Control Board or its  
127 staff to state that SRF grant or loan funds be issued to East Valley  
128 for the construction of the SNRC Project.
- 129 (c) After execution of this Agreement and upon request of East Valley  
130 and/or Valley District, the City and/or SB Water shall provide  
131 similar letter(s) supporting the SNRC Project to local, state or  
132 federal administrative or regulatory agencies, private financial  
133 institutions, or other entities with oversight or control over the  
134 SNRC Project or its financing.
- 135 (2) *East Trunk Sewer Line.* The Parties shall negotiate and execute the  
136 appropriate legal instruments through which the City and SB Water shall  
137 convey by means of grant deed all right, title and interest in a 20,800  
138 linear foot portion of the East Trunk Sewer Line as shown on Exhibit A  
139 attached hereto, which is incorporated herein by reference, together with  
140 any associated appurtenances, easements, operating agreements and the  
141 like necessary for the safe operation of that portion of the East Trunk  
142 Sewer Line, to East Valley. Such conveyance shall become effective on  
143 the date upon which LAFCo may approve activation of East Valley's  
144 latent authority to provide wastewater treatment services. This portion of  
145 the East Trunk Sewer Line is needed by East Valley so as to allow East  
146 Valley to collect and transport wastewater flows to the SNRC Project.  
147 The City, SB Water and East Valley shall cooperate in drawing up the  
148 necessary documentation and obtaining any regulatory permits for such  
149 transfer. All costs incurred by any Party associated with the conveyance  
150 and transfer of this portion of the East Trunk Sewer Line shall be the sole  
151 responsibility of East Valley, and East Valley shall reimburse the other  
152 Parties for any such costs incurred by them. After the date of the transfer,  
153 East Valley shall be responsible for all operation and maintenance costs  
154 associated with the portion of the East Trunk Sewer Line that has been  
155 transferred to East Valley from the City and SB Water.
- 156 (3) *Commingling/Exchange of Flows.* East Valley, the City and SB Water  
157 further understand and agree that implementing the transfer of a portion of

158 the East Trunk Sewer Line, both while the SNRC Project is being  
 159 constructed and after the SNRC Project commences operation, will require  
 160 an exchange/commingling of wastewater flows originating within the  
 161 service areas of the City/SB Water and East Valley in roughly equal  
 162 quantities so as to ensure the efficient operation of the regional wastewater  
 163 system and thereby avoid increasing the cost of wastewater treatment to  
 164 East Valley's ratepayers. The City/SB Water and East Valley agree that,  
 165 within one hundred eighty (180) days of the effective date of this  
 166 Agreement, they will enter into the necessary agreements for such  
 167 exchange/commingling of wastewater flows, and that they will cooperate  
 168 fully in obtaining any regulatory approvals needed for the transfer of the  
 169 portion of the East Trunk Sewer Line to East Valley. To the extent that  
 170 additional physical facilities are needed to accomplish the transfer, the  
 171 costs associated with the permitting, construction and operation of those  
 172 new physical facilities shall be the sole responsibility of East Valley, and  
 173 East Valley shall reimburse the other Parties for any such costs incurred  
 174 by them.

175 d. *CWF Project.* The Parties agree to support the construction and operation of a  
 176 new recycled water plant project by the City (known as the "CWF Project").

177 (1) SB Water and Valley District hereby reaffirm their respective  
 178 commitments pursuant to the February 22, 2011 Memorandum of  
 179 Understanding ("MOU") that withdrew protests to Wastewater Change  
 180 Petition No. WW0059 for the CWF Project.

181 (2) After execution of this Agreement and upon request of the City, Valley  
 182 District and/or East Valley shall appear at public meetings to support the  
 183 CWF Project and/or take such other actions (including but not limited to  
 184 resolutions of their respective governing boards) to support the CWF  
 185 Project. After execution of this Agreement and upon request of the City or  
 186 SB Water, East Valley and/or Valley District shall provide similar letter(s)  
 187 supporting the CWF Project to local, state or federal administrative or  
 188 regulatory agencies, private financial institutions, or other entities with  
 189 oversight or control over the CWF Project or its financing.

190 (3) The Parties agree that the CWF Project will not be inconsistent with the  
 191 provisions of the Upper Santa Ana River Habitat Conservation Plan, if  
 192 such plan is approved by the United States Fish & Wildlife Service  
 193 ("USFWS").

194 (a) The City and Valley District, together with their partners under  
 195 said MOU, may seek to obtain the regulatory permits necessary for

196 the CWF Project in advance of the completion of the Upper Santa  
197 Ana River Habitat Conservation Plan, *provided that* the provisions  
198 associated with the CWF Project are subsequently included in the  
199 Upper Santa Ana River Habitat Conservation Plan.

200 (b) If the USFWS does not approve the Upper Santa Ana River  
201 Habitat Conservation Plan by January 1, 2020, then the City and  
202 Valley District may seek to obtain separate regulatory permits for  
203 the CWF Project.

204 (4) After execution of this Agreement, after submittal of any SRF grant/loan  
205 application for the CWF Project, and upon request of the City or SB  
206 Water, Valley District and East Valley shall send a letter to the State  
207 Water Resources Control Board supporting the use of SRF grant and loan  
208 funds, at the lowest available rate of interest, to fund the CWF Project.  
209 Such letter shall be approved in advance by the City or SB Water. If  
210 requested by the City or SB Water, representatives of East Valley and/or  
211 Valley District shall participate in a teleconference with the State Water  
212 Resources Control Board or its staff to state that SRF grant or loan funds  
213 be issued to the City or SB Water for the construction of the CWF Project.

214 e. *Treatment and Management of Solids*

215 (1) *Prior to the Completion of the SNRC Project.* Until the completion of the  
216 SNRC Project, East Valley and City/SB Water will work cooperatively to  
217 enable the City/SB Water to treat solids originating within East Valley's  
218 service area in the same manner as at present. The Parties shall also work  
219 cooperatively: (i) to develop cost-effective plans and specifications for any  
220 additional pipelines or new equipment/facilities that may be necessary to  
221 effectuate the solids handling agreement described in paragraph 1(e)(2)  
222 below; (ii) in the acquisition and construction of such equipment/facilities;  
223 and (iii) in securing any needed regulatory permits or approvals. East  
224 Valley shall be responsible for all cost associated with such pipelines or  
225 new equipment/facilities as may be determined in the agreement described  
226 in paragraph 1(e)(2) below.

227 (2) *After Completion of the SNRC Project.* Within thirty (30) days of the  
228 effective date of this Agreement, East Valley and the City/SB Water will  
229 enter into negotiations for the handling of solids after the completion of  
230 the SNRC Project, with the goal of entering into a definitive agreement for  
231 the cost-effective handling of solids originating within East Valley's  
232 service area by the City/SB Water no later than one hundred eighty (180)  
233 days from the effective date of this Agreement.

- 234 (a) The initial term of the solids handling agreement shall be for ten  
235 (10) years, with two optional five (5) year renewal periods. The  
236 solids handling agreement shall commence on the Service Date.  
237 The solids handling agreement shall include an "evergreen" term  
238 that provides that the agreement shall be renewed for subsequent  
239 terms unless either party provides written notice of termination at  
240 least two years before the termination of the then-current term.
- 241 (b) The solids handling agreement shall provide for a service charge to  
242 be paid by East Valley to the City/SB Water, which charge shall be  
243 set so as to enable the City/SB Water to recover the actual costs of  
244 providing solids handling and treatment of the solids handling  
245 process liquid product, together with reasonable overhead not to  
246 exceed forty percent (40%) of the actual cost of service, *provided*  
247 *that* overhead shall not be charged on electricity costs charged by a  
248 third party utility provider and associated with the provision of  
249 solids handling.
- 250 (c) In the event that the City/SB Water and East Valley are unable to  
251 agree on the design, construction, or installation for the  
252 equipment/facilities that would enable SB Water to continue to  
253 provide solids handling services to East Valley after the Service  
254 Date by one hundred eighty (180) days after the effective date of  
255 this Agreement, East Valley shall, not later than thirty (30) days  
256 after the Service Date and on the anniversary of the Service Date  
257 thereafter for nine (9) years, pay SB Water the sum of seven  
258 hundred thousand dollars (\$700,000) each year, for a total payment  
259 to SB Water of seven million dollars (\$7,000,000). In the  
260 alternative, and subject to the prior written consent of SB Water  
261 and SB Water's concurrence on the value of the replenishment  
262 water, East Valley may replenish the SBBA with water that has an  
263 equivalent value as the payment to be made in any given year.
- 264 f. *Installation of Water Efficient Landscaping.* Not later than ninety (90) days after  
265 the date upon which LAFCo may approve the activation of East Valley's latent  
266 authority for wastewater treatment and disposal services, East Valley shall pay  
267 five hundred thousand dollars (\$500,000) and Valley District shall agree to  
268 reimburse the City for up to five hundred thousand dollars (\$500,000) to SB  
269 Water for the purpose of enabling SB Water to install water efficient landscape  
270 improvements in areas to be determined by the City and SB Water. During that  
271 same period of time, SB Water shall contribute an additional five hundred  
272 thousand dollars (\$500,000) to that account, to bring the total contributions to the

273 account to one million five hundred thousand dollars (\$1,500,000). The City and  
274 SB Water, after consulting East Valley and Valley District, shall develop a plan  
275 for the installation of water efficient landscape improvements using the \$1.5  
276 million, within one (1) year of the execution of this Agreement. The City and SB  
277 Water shall install such water efficient landscape improvements within three (3)  
278 years of the date of execution of this Agreement.

279 g. *Replenishment of the SBBA.* Beginning in the fiscal year of the Service Date or  
280 fiscal year 2021/22, whichever is later, Valley District shall deliver to the City/SB  
281 Water a total of thirty thousand (30,000) acre-feet of State Water Project Water, at  
282 Valley District's sole cost, for direct diversion and/or groundwater replenishment  
283 at the City/SB Water's direction. City/SB Water expects to use and Valley  
284 District expects to deliver three thousand (3,000) acre-feet of such water each  
285 year, but if Valley District is not able to deliver three thousand (3,000) acre-feet in  
286 a given year, it shall use its best efforts to deliver the undelivered water in the  
287 following fiscal years, provided that such water is available in any given year  
288 pursuant to Valley District's contract with the California Department of Water  
289 Resources. The unavailability of such water in any given year does not excuse  
290 Valley District's overall obligation under this Agreement to deliver thirty  
291 thousand (30,000) acre-feet of such water to the City/SB Water.

292 h. *Upper Santa Ana River Habitat Conservation Plan and the CWF Project.* Valley  
293 District shall use its best efforts to develop, in conjunction with USFWS and  
294 California Department of Fish and Wildlife ("CDFW") (collectively, the  
295 "Wildlife Agencies") and through the Wildlife Agencies' permitting processes, a  
296 habitat conservation plan for the Upper Santa Ana River that provides for take  
297 coverage for a new recycled water plant project on the part of the City/SB Water  
298 that would reduce the current discharge of treated wastewater into the Santa Ana  
299 River by five (5) million gallons/day.

300 (1) In the event that the final habitat conservation plan, or as provided in  
301 paragraphs 1(d)(3) and 1(h) above, the Wildlife Agencies' permitting  
302 processes, does not authorize the City/SB Water to reduce its discharge of  
303 treated wastewater to the Santa Ana River by five (5) million gallons/day,  
304 Valley District shall deliver to the City/SB Water up to three thousand  
305 (3,000) acre-feet per year of State Water Project Water, at Valley  
306 District's sole cost, for direct diversion and/or groundwater replenishment  
307 at the City/SB Water's direction.

308 (2) The annual amount of such water delivered by Valley District will be the  
309 difference between five (5) million gallons/day and the amount of treated  
310 wastewater discharge that SB Water is allowed to reduce from its current  
311 discharge amount. Valley District will provide this annual amount until



312 the City/SB Water can reduce its discharge by five (5) million gallons per  
313 day from its current discharge amount for its recycled water project,  
314 *provided that* prior to the construction of the City/SB Water's new  
315 recycled water plant, the City/SB Water has installed and is properly  
316 maintaining automatic back-up power for the RIXES Well  
317 Rehabilitation/Santa Ana Sucker Habitat Maintenance/Restoration Project  
318 at the City/SB Water's wastewater treatment plant(s).

319 (3) The Parties agree and acknowledge that future growth within the service  
320 areas of SB Water and East Valley may allow SB Water and East Valley  
321 to increase the quantity of recycled water generated from wastewater  
322 flows within their respective service areas. The Parties agree that they  
323 will support increases in the quantity of recycled water as part of both the  
324 SNRC Project and the CWF Project *provided that* the increase in recycled  
325 water for either project is derived from growth within that Party's service  
326 area *and provided further* that such increased use of recycled water does  
327 not diminish the quantity of treated wastewater that will be discharged into  
328 the Santa Ana River pursuant to the Upper Santa Ana River Habitat  
329 Conservation Plan.

330 2. *Application to San Bernardino County Local Agency Formation Commission to Activate*  
331 *Wastewater Treatment Authority.* Within 60 days of the execution of this Agreement,  
332 East Valley shall begin the process to submit to LAFCo an application to activate its  
333 latent wastewater treatment and disposal authority. East Valley agrees that it will pursue  
334 the application to a final decision by LAFCo, either in favor of the activation of the latent  
335 authority or to deny activation of that authority. At least 45 days prior to the submission  
336 of the application, East Valley shall provide a draft of the proposed application to the  
337 other Parties to this Agreement for review and comment. The provisions of the  
338 application shall be consistent with the terms of this Agreement and shall fully comply  
339 with all of the applicable requirements of LAFCo Law. No later than five (5) days after  
340 the date on which East Valley submits the application to LAFCo, the City/SB Water and  
341 Valley District shall submit letters supporting that application to LAFCo. The Parties  
342 understand that East Valley will request that LAFCo expedite processing of the  
343 application so that East Valley's latent wastewater treatment authority can be activated no  
344 later than December 31, 2018. The City/SB Water and Valley District, upon request by  
345 East Valley, shall appear at public meetings to support East Valley's application and/or  
346 take such other actions (including but not limited to resolutions of their respective  
347 governing boards) to support that application.

- 348 3. *Transfers of Property and Other Assets.* The Parties will negotiate and execute definitive  
349 agreements for the following transfers of property and assets, which will become  
350 effective on the date that LAFCo approves the activation of East Valley's latent authority  
351 to treat and dispose of wastewater.
- 352 a. The transfer, in fee title and without encumbrances or liens, from East Valley to  
353 the City/SB Water of approximately 22 acres of land located at the intersection of  
354 Sterling and 3<sup>rd</sup> Street (APNs 1192-231-01 and 1192-241-01), save for the  
355 existing well portion of the property, as shown on Exhibit B, which is attached  
356 hereto and incorporated herein by reference.
- 357 b. The transfer from the City/SB Water to East Valley of the balance of the East  
358 Trunk Sewer Line Replacement Fund, which is currently estimated to be  
359 approximately \$8 million, which funds have been collected by the City/SB Water  
360 from East Valley's ratepayers since 1984 for the purpose of expanding the  
361 capacity of the East Trunk Sewer Line to meet the needs of future growth. Not  
362 later than ninety (90) days after the date upon which LAFCo may approve the  
363 activation of East Valley's latent authority for wastewater treatment and disposal  
364 services, the East Trunk Sewer Line funds will no longer be collected by the  
365 City/SB Water. East Valley shall use the transferred funds in compliance with all  
366 applicable laws, including but not limited to Proposition 218.
- 367 c. The transfer under subparagraph 3(a) is made by East Valley to the City/SB  
368 Water in consideration of the transfer from the City/SB Water to East Valley  
369 under subparagraph 3(b).
- 370 4. *Dismissal/Prevention of Litigation.* The Parties agree that this Agreement represents a  
371 comprehensive settlement of all current litigation between the Parties. Not later than ten  
372 (10) days after the execution of this Agreement, the City shall dismiss its appeal in the  
373 CEQA Lawsuit with prejudice, and the City, East Valley, and Valley District shall  
374 dismiss their respective complaints in the LAFCo Lawsuit with prejudice. Valley District  
375 and East Valley shall, also within ten (10) days after the execution of this Agreement,  
376 withdraw their pending Bill of Costs filed in the CEQA Lawsuit, and all Parties shall bear  
377 their own costs and fees incurred in said litigation. Valley District and East Valley agree  
378 that they will not file any administrative or judicial challenges to the CWF Project.

379 5. *Indemnification*

380 a. *General Indemnification.* Each Party shall indemnify, defend and hold harmless  
 381 each of the other Parties and their respective directors, officers, employees and  
 382 agents from and against all damages, liabilities, claims, actions, demands, costs  
 383 and expenses (including, but not limited to, costs of investigations, lawsuits and  
 384 any other proceedings whether in law or in equity, settlement costs, attorneys'  
 385 fees and costs), and penalties or violations of any kind, which arise out of, result  
 386 from, or are related to the Party's performance of its obligations under this  
 387 Agreement.

388 b. *Indemnification Procedures.* Any Party that is an indemnified party (the  
 389 "Indemnified Party") that has a claim for indemnification against the other Party  
 390 (the "Indemnifying Party") under this Agreement, shall promptly notify the  
 391 Indemnifying Party in writing, *provided, however,* that no delay on the part of the  
 392 Indemnified Party in notifying the Indemnifying Party shall relieve the  
 393 Indemnifying Party from any obligation unless (and then solely to the extent) the  
 394 Indemnifying Party is prejudiced. Further, the Indemnified Party shall promptly  
 395 notify the Indemnifying Party of the existence of any claim, demand, or other  
 396 matter to which the indemnification obligations would apply, and shall give the  
 397 Indemnifying Party a reasonable opportunity to defend the same at its own  
 398 expense and with counsel of its own selection, *provided* that the Indemnified  
 399 Party shall at all times also have the right to fully participate in the disputed  
 400 matter at its own expense. If the Indemnifying Party, within a reasonable time  
 401 after notice from the Indemnified Party, fails to defend a claim, demand or other  
 402 matter to which the indemnification obligations would apply, the Indemnified  
 403 Party shall have the right, but not the obligation, to undertake the defense of, and  
 404 to compromise or settle (exercising reasonable business judgment), the claim or  
 405 other matter, on behalf, or for the account, and at the risk, of the Indemnifying  
 406 Party. If the claim is one that cannot by its nature be defended solely by the  
 407 Indemnifying Party, then the Indemnified Party shall make available all  
 408 information and assistance to the Indemnifying Party that the Indemnifying Party  
 409 may reasonably request.

410 6. *Administration of Agreement*

411 a. *Books and Records.* Each Party shall have access to and the right to examine any  
 412 of the other Parties' pertinent books, documents, papers or other records  
 413 (including, without limitation, records contained on electronic media) relating to  
 414 the performance of that Party's obligations pursuant to this Agreement.

415 (1) *Retention of Records; Preservation of Privilege.* Each Party shall retain  
 416 all such books, documents, papers or other records to facilitate such

417 review in accordance with that Party's record retention policy. Access to  
418 each Party's books and records shall be during normal business hours  
419 only. Nothing in this paragraph shall be construed to operate as a waiver  
420 of any applicable privileges.

421 (2) *Outside Auditors.* Any Party may, at any time and at its sole cost, hire an  
422 auditor to examine the accounting for work performed pursuant to this  
423 Agreement. The Parties may also agree to retain an independent auditor to  
424 review the accounting for work performed pursuant to this Agreement.  
425 The costs of such an auditor will be shared equally among the Parties.

426 b. *Disputes.* The Parties recognize that there may be disputes regarding the  
427 obligations of the Parties or the interpretation of this Agreement. The Parties  
428 agree that they may attempt to resolve disputes as follows:

429 (1) *Statement Describing Alleged Violation or Interruption of Agreement.* A  
430 Party alleging a violation or interruption of this Agreement (the  
431 "Initiating Party") shall provide a written statement describing all facts  
432 that it believes constitute a violation or interruption of this Agreement to  
433 the Party alleged to have violated or interrupted the terms of this  
434 Agreement (the "Responding Party").

435 (2) *Response to Statement of Alleged Violation or Interruption.* The  
436 Responding Party shall have sixty (60) days from the date of the written  
437 statement to prepare a written response to the allegation of a violation or  
438 interruption of this Agreement and serve that response on the Initiating  
439 Party or to cure the alleged violation or interruption to the reasonable  
440 satisfaction of the Initiating Party. The Initiating Party and the  
441 Responding Party shall then meet within thirty (30) days of the date of the  
442 response to attempt to resolve the dispute amicably.

443 (3) *Mediation of Dispute.* If the Initiating Party and the Responding Party  
444 cannot resolve the dispute within ninety (90) days of the date of the  
445 written response, they shall engage a mediator, experienced in water-  
446 related disputes, to attempt to resolve the dispute. Each Party shall ensure  
447 that it is represented at the mediation by a Director. These representatives  
448 of the Initiating Party and the Responding Party may consult with staff  
449 and/or technical consultants during the mediation and such staff and/or  
450 technical consultants may be present during the mediation. The costs of  
451 the mediator shall be divided evenly between the Initiating Party and the  
452 Responding Party or Parties.

453 (4) *Prior to Claims Under California Tort Claims Act.* The Parties agree that  
454 the procedure described in this paragraph 6(b) represents an effort to  
455 resolve disputes without the need for a formal claim under the California  
456 Tort Claims Act or other applicable law. The period of time for the  
457 presentation of a claim by one Party against another shall be tolled for the  
458 period from the date on which the Initiating Party files a written statement  
459 until the date upon which the mediator renders a decision.

460 (5) *Reservation of Rights.* Nothing in this paragraph 6(b) shall require a Party  
461 to comply with a decision of the mediator and, after the completion of the  
462 mediation process described above, each Party shall retain and may  
463 exercise at any time all legal and equitable rights and remedies it may  
464 have to enforce the terms of this Agreement; provided, that prior to  
465 commencing litigation, a Party shall provide at least five (5) calendar  
466 days' written notice of its intent to sue to the other Party.

467 7. *General Provisions.*

468 a. *Authority.* Each signatory of this Agreement represents that s/he is authorized to  
469 execute this Agreement on behalf of the Party for which s/he signs. Each Party  
470 represents that it has legal authority to enter into this Agreement and to perform  
471 all obligations under this Agreement.

472 b. *Amendment.* This Agreement may be amended or modified only by a written  
473 instrument executed by each of the Parties to this Agreement.

474 c. *Jurisdiction and Venue.* This Agreement shall be governed by and construed in  
475 accordance with the laws of the State of California, except for its conflicts of law  
476 rules. Any suit, action, or proceeding brought under the scope of this Agreement  
477 shall be brought and maintained to the extent allowed by law in the County of San  
478 Bernardino, California.

479 d. *Headings.* The paragraph headings used in this Agreement are intended for  
480 convenience only and shall not be used in interpreting this Agreement or in  
481 determining any of the rights or obligations of the Parties to this Agreement.

482 e. *Construction and Interpretation.* This Agreement has been arrived at through  
483 negotiations and each Party has had a full and fair opportunity to revise the terms  
484 of this Agreement. As a result, the normal rule of construction that any  
485 ambiguities are to be resolved against the drafting Party shall not apply in the  
486 construction or interpretation of this Agreement.

- 487 f. *Entire Agreement.* This Agreement constitutes the entire agreement of the Parties  
488 with respect to the subject matter of this Agreement and, save as expressly  
489 provided in this Agreement, supersedes any prior oral or written agreement,  
490 understanding, or representation relating to the subject matter of this Agreement.
- 491 g. *Partial Invalidity.* If, after the date of execution of this Agreement, any provision  
492 of this Agreement is held to be illegal, invalid, or unenforceable under present or  
493 future laws effective during the term of this Agreement, such provision shall be  
494 fully severable. However, in lieu thereof, there shall be added a provision as  
495 similar in terms to such illegal, invalid or unenforceable provision as may be  
496 possible and be legal, valid and enforceable.
- 497 h. *Successors and Assigns.* This Agreement shall be binding on and inure to the  
498 benefit of the successors and assigns of the respective Parties to this Agreement.  
499 No Party may assign its interests in or obligations under this Agreement without  
500 the written consent of the other Parties, which consent shall not be unreasonably  
501 withheld or delayed.
- 502 i. *Waivers.* Waiver of any breach or default hereunder shall not constitute a  
503 continuing waiver or a waiver of any subsequent breach either of the same or of  
504 another provision of this Agreement and forbearance to enforce one or more of  
505 the rights or remedies provided in this Agreement shall not be deemed to be a  
506 waiver of that right or remedy.
- 507 j. *Attorneys' Fees and Costs.* The prevailing Party in any litigation or other action  
508 to enforce or interpret this Agreement shall be entitled to reasonable attorneys'  
509 fees, expert witnesses' fees, costs of suit, and other and necessary disbursements  
510 in addition to any other relief deemed appropriate by a court of competent  
511 jurisdiction.
- 512 k. *Necessary Actions.* Each Party agrees to execute and deliver additional  
513 documents and instruments and to take any additional actions as may be  
514 reasonably required to carry out the purposes of this Agreement.
- 515 l. *Compliance with Law.* In performing their respective obligations under this  
516 Agreement, the Parties shall comply with and conform to all applicable laws,  
517 rules, regulations and ordinances.
- 518 m. *Third Party Beneficiaries.* This Agreement shall not create any right or interest in  
519 any non-Party or in any member of the public as a third party beneficiary.

- 520 n. *Counterparts.* This Agreement may be executed in one or more counterparts,
- 521 each of which shall be deemed to be an original, but all of which together shall
- 522 constitute but one and the same instrument.
  
- 523 o. *Notices.* All notices, requests, demands or other communications required or
- 524 permitted under this Agreement shall be in writing unless provided otherwise in
- 525 this Agreement and shall be deemed to have been duly given and received on: (i)
- 526 the date of service if served personally, served by facsimile transmission, or
- 527 served via electronic mail on the Party to whom notice is to be given at the
- 528 address(es) provided below, (ii) on the first day after mailing, if mailed by Federal
- 529 Express, U.S. Express Mail, or other similar overnight courier service, postage
- 530 prepaid, and addressed as provided below, or (iii) on the third day after mailing if
- 531 mailed to the Party to whom notice is to be given by first class mail, registered or
- 532 certified, postage prepaid, addressed as follows:

533 *Notice to San Bernardino Valley Municipal Water District*

534 Douglas Headrick, General Manager  
 535 SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT  
 536 380 East Vanderbilt Way, San Bernardino, CA 92408  
 537 Phone: (909) 820-3701  
 538 Email: [douglash@sbywmwd.com](mailto:douglash@sbywmwd.com)

540 David R.E. Aladjem  
 541 DOWNEY BRAND LLP  
 542 621 Capitol Mall, Sacramento, CA 95814  
 543 Phone: (916) 520-5361  
 544 Email: [daladjem@downeybrand.com](mailto:daladjem@downeybrand.com)

545 *Notice to East Valley Water District*

546 John Mura, General Manager/CEO  
 547 EAST VALLEY WATER DISTRICT  
 548 31111 Greenspot Rd., Highland, CA 92346  
 549 Phone: 909-889-9501  
 550 Email: [john@eastvalley.org](mailto:john@eastvalley.org)

552 Jean Cihigoyenette  
 553 JC LAW FIRM  
 554 5871 Pine Ave., Suite 200, Chino Hills, CA 91709  
 555 Phone: 909-941-3382  
 556 E-mail: [jean@thejclawfirm.com](mailto:jean@thejclawfirm.com)

558  
559  
560  
561  
562  
563  
564  
565  
566  
567  
568  
569  
570  
571  
572  
573  
574  
575  
576  
577  
578  
579  
580  
581  
582  
583  
584  
585  
586  
587  
588  
589  
590  
591  
592  
593  
594

*Notice to the City of San Bernardino and the City of San Bernardino Municipal Water Department*

Andrea M. Miller, City Manager  
CITY OF SAN BERNARDINO  
290 North "D" Street  
San Bernardino, CA 92418  
Phone: (909) 384-5122  
E-mail: [Miller\\_an@sbcity.org](mailto:Miller_an@sbcity.org)

Gary D. Saenz  
City Attorney  
Office of the City Attorney  
290 North "D" Street, 3rd Floor  
San Bernardino, CA 92401  
Phone: (909) 384-5355  
E-mail: [Saenz\\_Ga@sbcity.org](mailto:Saenz_Ga@sbcity.org)

Andrew M. Hitchings  
Somach Simmons & Dunn  
500 Capitol Mall, Suite 1000  
Sacramento, CA 95814  
Phone: (916) 446-7979  
E-mail: [ahitchings@somachlaw.com](mailto:ahitchings@somachlaw.com)

IN WITNESS HEREOF, the Parties have executed this Agreement on the dates set forth below:

**SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT**

By: 

Dated: 11/21/17

Susan Longville  
President, Board of Directors

By: 

Dated: 11/21/17

Steve Copelan, Secretary



595 APPROVED AS TO FORM

596 By: [Signature]

Dated: 11/21/17

597 David R.E. Aladjem  
598 Downey Brand, LLP  
599 Counsel for San Bernardino Valley Municipal Water District  
600

601 EAST VALLEY WATER DISTRICT

602  
603 By: [Signature]

Dated: 11-21-17

604 Ronald L. Coats  
605 Chairman of the Board  
606

607 By: [Signature]  
608 John Mura, General Manager/CEO

Dated: 11-21-17

609 APPROVED AS TO FORM

610  
611 By: [Signature]

Dated: 11-21-17

612 Jean Cihigoyenetché  
613 JC Law Firm  
614 Counsel for East Valley Water District  
615  
616  
617

618

CITY OF SAN BERNARDINO

619

620

By: R. Carey Davis

Dated: 11/29/2017

621

R. Carey Davis  
Mayor

622

623

624

By: Andrea Miller

Dated: 11/29/17

625

Andrea Miller  
City Manager

626

627

628

629

CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

630

631

By: Toni Callicott

Dated: 11-30-17

632

Toni Callicott  
President

633

634

APPROVED AS TO FORM

635

636

637

By: Gary D. Saenz

Dated: 11/28/17

638

Gary D. Saenz, City Attorney

639

640

By: Andrew M. Hitchings

Dated: 11/30/17

641

Andrew M. Hitchings  
Somach Simmons & Dunn  
Special Counsel for City of San Bernardino

642

643

644

645

646

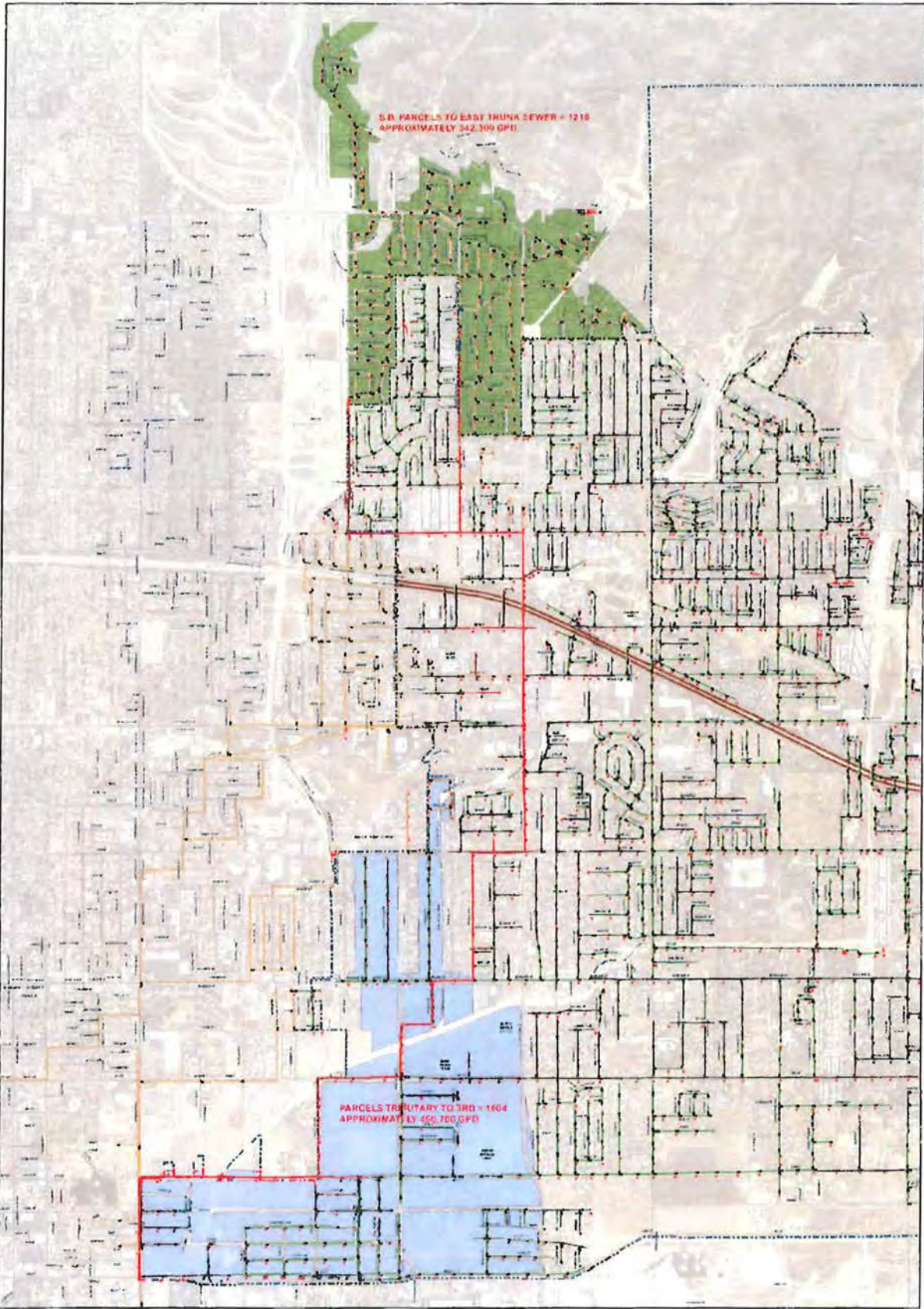
647

Exhibit A: Map: EVWD and San Bernardino Tributary to 3rd Sewer Study

Exhibit B: Map: Sterling Properties

# Exhibit A





DATE: 08/14/2012 11:45:00 AM

<p><b>EVWD</b></p> <ul style="list-style-type: none"> <li>EVWD</li> <li>EVWD</li> <li>EVWD</li> </ul> <p><b>BOUNDARY</b></p> <ul style="list-style-type: none"> <li>EVWD</li> <li>EVWD</li> </ul>	<p><b>SAN BERNARDINO CUSTOMER RESIDE EVWD BOUNDARY</b></p>	<p><b>SAN BERNARDINO CUSTOMERS OUTSIDE EVWD DISTRICT</b></p> <ul style="list-style-type: none"> <li>EVWD</li> <li>EVWD</li> <li>EVWD</li> </ul>	<p><b>EVWD CUSTOMERS SERVED BY SAN BERNARDINO</b></p>	<p><b>EVWD AND SAN BERNARDINO TRIBUTARY TO 3RD SEWER STUDY</b></p>	
---	--	---	---	--	--

# Exhibit B



# STERLING PROPERTIES



**ASSIGNMENT AND ASSUMPTION OF EIR OBLIGATIONS AND  
IMPLEMENTATION, MONITORING AND REPORTING RESPONSIBILITIES  
UNDER THE STERLING NATURAL RESOURCE CENTER MITIGATION  
MONITORING AND REPORTING PROGRAM**

This Assignment and Assumption of EIR Obligations and Implementation, Monitoring and Reporting Responsibilities under the Sterling Natural Resource Center Mitigation Monitoring and Reporting Program (“Assignment”) is entered into as of October \_\_, 2018 (“The Effective Date”), by and among EAST VALLEY WATER DISTRICT, a County Water District, organized and operating pursuant to California Water Code Section 30000 et seq. (“Assignee”) and SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT, a Municipal Water District, organized and operating pursuant to California Water Code 71000 et seq. (Assignor),(Collectively “The Parties”).

**RECITALS**

**WHEREAS**, on or about October 23, 2015, the Parties entered into an agreement entitled Framework Agreement for the Construction and Operation of Groundwater Replenishment Facilities by and Between East Valley Water District and San Bernardino Valley Municipal Water District (“Framework Agreement”). The project contemplated by the Framework Agreement is known as the Sterling Natural Resource Center; and

**WHEREAS**, on or about March 15, 2016, Assignor as lead agency, adopted Resolutions Number 1038 and 1039 Certifying the Final Environmental Impact Report and adopting CEQA Findings, Statement of Overriding Considerations, Mitigation Monitoring and Reporting Plan and approving the Sterling Natural Resource Center project; and

**WHEREAS**, on March 23, 2016 Assignee, as responsible agency, approved Resolution 2016.02 Adopting CEQA Findings of Fact, a Statement of Overriding Considerations, and a Mitigation Monitoring and Reporting Program for the Sterling Natural Resource Center Project and Approving the Sterling Natural Resource Center, and certified the Final Environmental Impact Report; and

**WHEREAS**, the Mitigation Monitoring and Reporting Program (MMRP) established certain monitoring and reporting obligations which were assumed by Assignor; and

**WHEREAS**, on or about March 6, 2018, the Parties entered into an agreement entitled First Amended Agreement for the Construction and Operation of Groundwater Replenishment Facilities by and between East Valley Water District and San Bernardino Valley Municipal Water District which amendment provided, in pertinent part, as follows:

///

“Notwithstanding the previous subparagraph, if the San Bernardino County Local Agency Formation Commission activates EVWD’s authority to provide wastewater treatment services to its rate payers (Activation), this Agreement shall be deemed terminated in its entirety, effective on the date of Activation and neither Party to this Agreement shall have any further obligation hereunder except for those obligations which have accrued as of the date of Activation.”; and

**WHEREAS**, on June 20, 2018, the San Bernardino County Local Agency Formation Commission approved the activation of EVWD’s latent wastewater treatment authority conditioned upon the following:

“Within 90 days of the effective date of the Reorganization, San Bernardino Valley Municipal Water District (hereafter Valley District) and the East Valley Water District (hereafter EVWD) shall take all actions necessary to transfer all obligations arising under the Sterling Natural Resource Center 2016 EIR and the Mitigation Monitoring and Reporting Program for that project to be assigned to EVWD. This condition complies with the March 2018 amendment to the “Framework Work Agreement” (sic), agreed to by Valley District and EVWD providing that the agreement will terminate upon LAFCO activation of EVWD’s latent wastewater treatment authorities.”; and

**WHEREAS**, the Parties wish to comply with the LAFCO condition of transfer of obligations arising under the Sterling Natural Resource Center 2016 EIR and the MMRP;

**NOW THEREFORE**, for good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

## **AGREEMENT**

### 1. Assignment

As of the Effective Date, Assignor hereby transfers, assigns and conveys all of its obligations, and responsibilities, express and implied, arising from and/or related to the Sterling Natural Resource Center Final Environmental Impact Report and associated MMRP, SCH #2015101058.

### 2. Assumption of Assignment

As of the Effective Date, Assignee hereby accepts, assumes and agrees to perform, fulfill and comply with all the obligations and responsibilities of Assignor, express and implied, arising from and/or related to the Sterling Natural Resource Center Final Environmental Impact Report and associated MMRP, SCH #2015101058.



### 3. References in MMRP.

The Parties hereby agree that all references in the MMRP to “Valley District” shall be deemed references to Assignee.

### 4. Indemnification

#### (a) Assignee Indemnity.

Assignee shall indemnify Assignor against and agrees to hold Assignor harmless of and from all liabilities, obligations, actions, suits, proceedings or claims, and all costs and expenses, including, but not limited to, reasonable attorney’s fees (collectively, Claims and Costs), based upon or arising out of any negligent or intentional breach or failure of Assignee to observe or perform any obligation of Assignee as set forth in this Agreement.

#### (b) Assignor Indemnity.

Assignor shall indemnify Assignee against and agrees to hold Assignor harmless of and from all liabilities, obligations, actions, suits, proceedings or claims, and all costs and expenses, including, but not limited to, reasonable attorney’s fees (collectively, Claims and Costs), based upon or arising out of any negligent or intentional breach or failure of Assignor to observe or perform any of the obligations of the Assignor as set forth in this Agreement.

### 5. Notices

All notices, requests, demands, or other communications required or permitted under this Assignment and Consent shall be in writing unless provided otherwise herein and shall be deemed to have been duly given and received if mailed to the parties to whom notices are to be given by first class mail, registered or certified, postage prepaid, addressed as follows:

Notice to San Bernardino Valley Municipal Water District:

Douglas Headrick, General Manager  
 San Bernardino Valley Municipal Water District  
 380 East Vanderbilt Way  
 San Bernardino, CA 92408

David R. E. Aladjem  
 Downey Brand, LLP  
 621 Capital Mall  
 Sacramento, CA 95814

///  
 ///  
 ///

Notice to East Valley Water District:

John Mura, General Manager/CEO  
 East Valley Water District  
 31111 Greenspot Road  
 Highland, CA 92346

Jean Cihigoyenetché  
 JC Law Firm  
 5871 Pine Avenue, Suite 200  
 Chino Hills, CA 91709

6. Binding Effect

This Assignment and Consent shall inure to the benefit of and shall be binding upon the parties hereto and their respective successors and assigns.

7. Entire Agreement

This Assignment and Consent shall constitute the entire Agreement between the parties hereto with respect to the subject matter of this Assignment and Consent and supersedes all prior Agreements, understandings, negotiations, representations, and discussions, whether verbal or written, of the parties, pertaining to that subject matter.

8. Severability

If any provision of this Assignment and Consent is determined to be illegal and unenforceable, all other provisions shall nevertheless be effective.

9. Governing Law

This Assignment and Consent and the legal relations between the parties hereto shall be governed by and be construed in accordance with the laws of the state of California with venue in the Superior Court for the County of San Bernardino, California.

10. Counterparts

This Assignment and Consent may be executed in several counterparts and all such executed counterparts shall constitute one document, binding on all the parties hereto, notwithstanding that all of the parties hereto are not signatories to the original or to the same counterpart.

[SEE NEXT PAGE FOR SIGNATURES]

IN WITNESS WHEREOF, the Assignor, Assignee, and Consultant have executed this Assignment and Consent as of the date first set forth above.

Assignor: SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT, A Municipal Water District

By: Douglas D. Headrick

Printed Name: Douglas D. Headrick

Its: General Manager

Assignee: EAST VALLEY WATER DISTRICT, A County Water District

By: John Mura

Printed Name: John Mura

Its: General Manager/CEO

Santa Ana Sucker Habitat  
Monitoring and Management Plan

Drafted by:

Environmental Science Associates

Provided for:

Sterling Natural Resource Center

November 2023

# TABLE OF CONTENTS

---

	<u>Page</u>
<b>Table of Contents</b> .....	<b>2</b>
<b>Chapter 1</b> .....	<b>4</b>
Introduction .....	4
1.1 Purpose and Need for the Santa Ana Sucker Habitat Monitoring and Management Plan .....	4
1.2 Summary of Santa Ana Sucker Status and Ecology .....	4
<b>Chapter 2</b> .....	<b>1</b>
Summary of Proposed Actions and Santa Ana Sucker Conservation Measures .....	1
2.1 Project Area and Components .....	1
2.2 Santa Ana Sucker Conservation Measures .....	2
2.3 Mitigation Areas and Population Establishment .....	5
<b>Chapter 3</b> .....	<b>6</b>
Framework for Implementation .....	6
3.1 Responsible Parties and Roles .....	6
3.2 Implementation Process .....	6
<b>Chapter 4</b> .....	<b>1</b>
Microhabitat Enhancements (CM 21.b.i., SAS-1).....	1
4.1 Location, Timing, and Implementation Materials and Methods.....	1
4.2 Monitoring and Adaptive Management .....	4
4.3 Maintenance .....	4
4.4 Performance Criteria and Reporting.....	5
4.5 In-Perpetuity Monitoring and Management .....	5
<b>Chapter 5</b> .....	<b>1</b>
Aquatic Predator Control Program (CM 21.b.ii., SAS-2) .....	1
5.1 Location, Timing, and Target Exotic Species.....	1
5.2 Control Methods.....	3
5.3 Monitoring and Adaptive Management .....	3
5.4 Performance Criteria and Reporting.....	3
5.5 In-Perpetuity Monitoring and Management .....	4
<b>Chapter 6</b> .....	<b>1</b>
Exotic Weed Management Program (CM 21.b.iii., SAS-3).....	1
6.1 Location, Timing, and Implementation Methods .....	1
6.2 Maintenance .....	4
6.3 Monitoring and Adaptive Management .....	4
6.4 Performance Criteria and Reporting.....	6
6.5 In-Perpetuity Monitoring and Management .....	7
<b>Chapter 7</b> .....	<b>8</b>
High Flow Pulse Events (SAS-4) .....	8
7.1 Location, Timing, and Implementation Methods .....	8
7.2 Monitoring and Adaptive Management .....	10
7.3 Performance Criteria and Reporting.....	10
7.4 In-Perpetuity Monitoring and Management .....	11
<b>Chapter 8</b> .....	<b>1</b>

Rialto Channel / Santa Ana River Water Temperature Amelioration Project (CM	
21.b.iv, SAS-5) .....	1
8.1 Location, Timing, and Implementation Methods .....	1
8.2 Monitoring and Adaptive Management .....	2
8.3 Performance Criteria and Reporting.....	3
8.4 In-perpetuity Monitoring and Management .....	4
<b>Chapter 9.....</b>	<b>1</b>
Upper Watershed Santa Ana Sucker Population Establishment (CM 21.b.v., SAS-6) .....	1
9.1 Location, Timing, and Implementation Methods .....	1
9.2 Monitoring and Adaptive Management .....	4
9.3 Performance Criteria and Reporting.....	6
9.4 In-Perpetuity Monitoring and Management .....	7
<b>Chapter 10.....</b>	<b>8</b>
Annual Monitoring of Santa Ana River (CM 21.b.vi., SAS-7) .....	8
10.1 Location, Timing and Monitoring Methods .....	8
10.2 Analysis and Reporting .....	8
10.3 In-Perpetuity Monitoring and Management .....	8
<b>Chapter 12.....</b>	<b>1</b>
Summary of Reporting and Agency Coordination .....	1
12.1 Compilation of Reporting for All Measures .....	1
12.2 Resource Agency Coordination.....	1
12.3 In-Perpetuity Monitoring and Management .....	1
<b>Chapter 13.....</b>	<b>1</b>
References .....	1
<b>Appendix A Files.....</b>	<b>1</b>
Habitat Parameters for Various Life History Stages of Santa Ana Sucker – Sterling Natural Resources Center .....	1
Permitting for Microhabitat Enhancement along the Santa Ana River .....	1
Annual Report: Santa Ana River Stream Habitat Improvement Pilot Project (SBVMWD 2022) .....	1
<b>Appendix B.....</b>	<b>2</b>
Nonnative Aquatic Predator Control Plan (ICF 2023).....	2
<b>Appendix C.....</b>	<b>3</b>
Exotic Weed Management Plan (IERCD 2023).....	3
<b>Appendix D.....</b>	<b>4</b>
Rialto Channel/Santa Ana River Water Temperature Amelioration Project Cost Estimate .....	4
<b>Appendix E Files.....</b>	<b>5</b>
Santa Ana Sucker Translocation Plan (Dudek 2022).....	5
EVWD Translocation Financial Security.....	5
Santa Ana Sucker Regional Population Establishment Program Endowment Estimate .....	5

# CHAPTER 1

---

## Introduction

### **1.1 Purpose and Need for the Santa Ana Sucker Habitat Monitoring and Management Plan**

#### 1.1.1 Background

East Valley Water District (EVWD) is proposing to construct the Sterling Natural Resource Center (SNRC) facility in the City of Highland to treat wastewater generated in EVWD's service area for beneficial reuse in the upper Santa Ana River watershed. EVWD currently conveys its wastewater to the City of San Bernardino for secondary treatment at the San Bernardino Water Reclamation Plant (SBWRP) and tertiary treatment at the Rapid Infiltration and Extraction (RIX) facility which discharges to the Santa Ana River. The proposed project would instead treat, recycle and reuse the wastewater for multiple beneficial uses within the upper Santa Ana River watershed. Once constructed and operational, approximately 6 million gallons per day (MGD) of water previously treated at RIX and discharged to the Santa Ana River would be treated at the SNRC. Following treatment EVWD's wastewater will be conveyed to a series of infiltration basins for groundwater replenishment in the Bunker Hill Groundwater Basin.

#### 1.1.2 Purpose and Need

This Santa Ana Sucker (or SAS) Habitat Monitoring and Management Plan (HMMP) has been prepared to describe how project impacts, the potential operational effects of the Sterling Natural Resource Center (SNRC) project on Santa Ana sucker (SAS), a federally threatened species and its designated critical habitat, will be offset/mitigated. Development of an this HMMP is a requirement of the Biological Opinion and associated amendments issued by the USFWS for the project, Wastewater Change Order WW0095 issued by the State Water Resources Control Board (SWRCB) and facilitates compliance with the project's Final Environmental Impact Report (SCH No. 2015101058) pursuant to California Environmental Quality Act (CEQA). If the Upper Santa Ana River Habitat Conservation Plan (HCP) is adopted prior to or during implementation of this HMMP, the monitoring and reporting identified in this plan will be carried forward into the HCP's monitoring and reporting program. Incidental take of SAS that may occur associated with the implementation of this HMMP has been provided through the section 7 consultation and issuance of the Biological Opinion, and addenda thereto.

### **1.2 Summary of Santa Ana Sucker Status and Ecology**

The SAS was designated as a federally threatened species on April 12, 2000. Critical habitat was designated for this species on December 14, 2010.

## 1.2.1 Status and Critical Habitat

In 2010, an area of 9,331 acres in portions of rivers and creeks within San Bernardino, Los Angeles, Orange, and Riverside counties were designated as critical habitat for SAS (50 CFR Part 17) (USFWS 2010). The reduction in discharge to the Santa Ana River is located within Unit 1 (Santa Ana River) designated critical habitat for SAS, which comprises 7,097 acres (USFWS 2010). A majority of the proposed mitigation also occurs within Unit 1.

### Status and Distribution

Santa Ana sucker was historically documented throughout the upper and lower portions of the Santa Ana River watershed, including the mainstem from near the current location of Seven Oaks Dam to approximately 14 miles below Prado Dam and multiple tributaries including City Creek, Warm Creek, Lytle Creek, Rialto Channel, Evans Lake drain, Tequesquite Arroyo, Sunnyslope Creek, Anza Park drain, and Chino Creek. In contrast to the species' range in the Los Angeles and San Gabriel Rivers, where the extant populations are in the upper portions of the watershed, the species is confined to the lowlands of the Santa Ana River watershed. Barriers to migration restrict the range of the SAS to approximately 21 miles from South La Cadena Drive in San Bernardino County to Prado Dam. The extent of habitat suitable for spawning in the mainstem is limited to the reach of the Santa Ana River upstream of River Road. Spawning is not currently known to occur below Prado Dam (USFWS 2017). The species is also known to occupy tributaries within this range, including Rialto Channel, Tequesquite Arroyo, Sunnyslope Creek, and Anza Park drain.

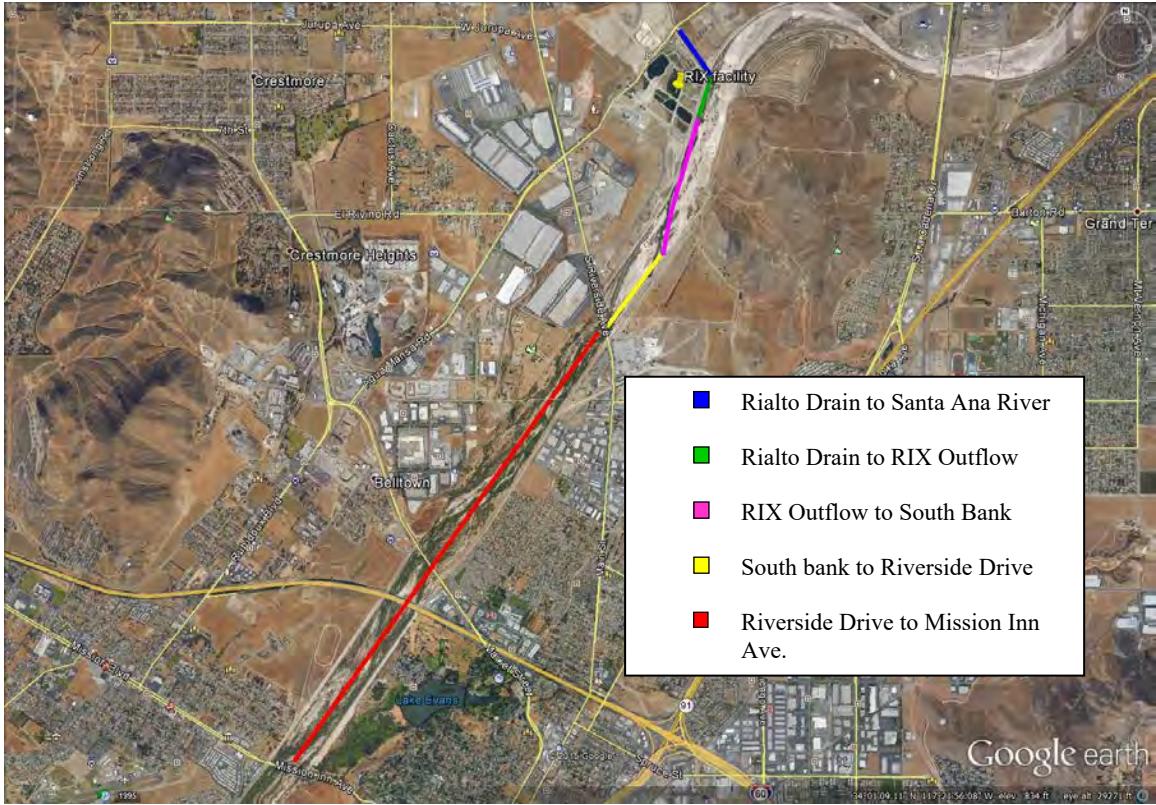
Currently the species occurs only within portions of the Santa Ana, Los Angeles, Santa Clara and San Gabriel River watersheds. Over 80 percent of the SAS's historical range has been lost in the Los Angeles River watershed, 75 percent within the San Gabriel River watershed and 70 percent in the Santa Ana River watershed (USFWS 2017). The Santa Clara River population was thought to have been transplanted from the Los Angeles Basin and was not protected when the species was listed.

### Status and Distribution in the Vicinity of the Mitigation Areas

Mitigation is proposed within the mainstem Santa Ana River and in two mountain tributaries. As previously discussed within the upper Santa Ana River watershed, the species is primarily restricted to an approximate 21-mile stretch between La Cadena crossing of the Santa Ana River and Prado Dam. The species is no longer found within mountain tributaries to the Santa Ana River.

Annual SAS surveys within the Santa Ana River have documented significant fluctuations in estimated population size, ranging from 501 to 35,541 (Figure 1-1 and **Table 1-1**).





**Figure 1-1**  
USGS Santa Ana Sucker Survey Locations, 2015 to 2020

**TABLE 1-1**  
**SANTA ANA SUCKER POPULATION ESTIMATES IN SANTA ANA RIVER**

Year	Santa Ana Sucker Population Estimate <sup>1</sup>
2015	26,597
2016	35,541
2017	16,036
2018	5,584
2019	14,733
2020	501
2021	4,891 <sup>2</sup>
2022	16,999 <sup>2</sup>

<sup>1</sup> SOURCE: United States Geological Survey. 2023. Unpublished data.  
<sup>2</sup> Survey area increased from approximately 4.4 miles (Rialto Channel to Mission Avenue, years 2015-20) to approximately 9 miles (Rialto Channel to Van Buren Avenue, years 2021-22) due to an observed shift in native fishes downstream. In 2021, 18 miles (Rialto Channel to River Road Bridge) were surveyed but native fish were only observed upstream of Van Buren Boulevard.

## Threats to the Species

Main threats to the species include habitat destruction, natural and human-induced changes in stream-flow, urban development and related land-use practices, intensive recreation, introduction of nonnative competitors and predators, and demographics associated with small population size (USFWS 2017).

## Threats to the Species in the Vicinity of the Mitigation Areas

Within the mainstem Santa Ana River downstream of the RIX facility, threats include nonnative aquatic predators, off-highway vehicle (OHV) traffic through spawning habitat, homeless encampments, and elevated water temperatures. The primary threat to SAS within the proposed mountain tributary stream mitigation sites include nonnative aquatic predators and habitat disturbance caused by stochastic events, including fire and flood.

### 1.2.2 Ecology and Habitat Needs

#### Habitat Affinities

The SAS occurs in watersheds associated with draining the San Gabriel and San Bernardino Mountains of southern California. Historically, this species extended from the uppermost watershed areas to the Pacific Ocean and have been known to occur both within steep mountain streams as well as those meandering through alluvial floodplains. This species inhabits perennial streams with water ranging in depth from inches to several feet and in currents ranging from slight to swift. Historically, suitable streams have been subject to periods of severe flooding as well as extended drought conditions typical of southern California weather (USFWS 2017).

The SAS is known to utilize various substrate types throughout each life stage. The presence of coarse substrates (gravel, cobble) with a mixture of sand provides the optimal stream conditions. This species also prefers in-stream and bank-side riparian vegetation that provides shade and cover, particularly for larvae and juveniles. However, such conditions are less important for adults as they utilize deeper, larger pools (USFWS 2017).

Tolerances to water quality variables (temperature, dissolved oxygen and turbidity) have not been determined; however, this species has been found to be most abundant in clear water, with temperatures less than 72 °F (USFWS 2017). Temperatures much above 86 °F are likely to be a limiting factor to movement and distribution of the species (USFWS 2010).

#### Life History

The SAS is a small, short-lived member of the sucker family (*Catostomidae*). They utilize the downward orientation of their mouthparts to suck up algae, small invertebrates and other organic matter (USFWS 2017).

Spawning of this species typically occurs between mid-February through July with peak activity occurring in April. Fecundity (number of eggs/offspring) is high and increases linearly as body weight increases. Spawning takes place over gravel riffles where fertilized eggs adhere to

substrate and hatch within 360 hours (15 days). Larvae measure approximately 0.28 inches (7 mm) at hatching.

### **1.2.2.1 Primary Constituent Elements**

In 2010, the USFWS adopted a critical habitat designation that encompasses much of the SAR channel and City Creek. The designation published in the Federal Register on December 14, 2010, lists Primary Constituent Elements (PCE, renamed Physical and Biological Features) for the SAS as follows:

1. A functioning hydrological system within the historical geographic range of Santa Ana sucker that experiences peaks and ebbs in the water volume (either naturally or regulated) that encompasses areas that provide or contain sources of water and coarse sediment necessary to maintain all life stages of the species, including adults, juveniles, larvae, and eggs, in the riverine environment;
2. Stream channel substrate consisting of a mosaic of loose sand, gravel, cobble, and boulder substrates in a series of riffles, runs, pools, and shallow sandy stream margins necessary to maintain various life stages of the species, including adults, juveniles, larvae, and eggs, in the riverine environment;
3. Water depths greater than 1.2 in (3 cm) and bottom water velocities greater than 0.01 ft per second (0.03 m per second);
4. Clear or only occasionally turbid water;
5. Water temperatures less than 86° F (30° C);
6. Instream habitat that includes food sources (such as zooplankton, phytoplankton, and aquatic invertebrates), and associated vegetation such as aquatic emergent vegetation and adjacent riparian vegetation to provide: (a) Shading to reduce water temperature when ambient temperatures are high, (b) shelter during periods of high water velocity, and (c) protective cover from predators; and
7. Areas within perennial stream courses that may be periodically dewatered, but that serve as connective corridors between occupied or seasonally occupied habitat and through which the species may move when the habitat is wetted.

Although the PCEs are not definitive habitat suitability criteria, they do provide some indication of target habitat features including for depth and velocity that could be affected by flow reduction. PCE number 3 identifies minimum velocity of 0.01 feet per second. However, other studies have shown that optimal velocity for SAS is likely in the range of 1.2 - 2.4 feet per second (Sakai, 2000), because these higher velocities move sand and silt from the cobble substrate, resulting in more favorable habitat. On behalf of the Upper Santa Ana River Habitat Conservation Plan, additional studies are currently being conducted to better understand habitat requirements of this species. Results from these studies are anticipated to augment our understanding of basic requirements of SAS identified in the PCEs and previous literature.

### 1.2.3 Recovery Plan for the Santa Ana Sucker

The Recovery Plan for the Santa Ana Sucker was developed to identify reasonable actions that may be necessary, based upon the best scientific and commercial data available, for the conservation and survival of SAS (USFWS 2017).

The goal of the recovery plan is to control or reduce threats to SAS to the extent that the species warrants delisting and no longer needs protection under the Act. The following objectives are identified in the recovery plan:

1. Develop and implement a rangewide monitoring protocol to accurately and consistently document populations, occupied habitat, and threats.
2. Conduct research projects specifically designed to inform management actions and recovery.
3. Increase the abundance and develop a more even distribution of SAS within its current range by reducing threats to the species and its habitat.
4. Expand the range of SAS by restoring habitat (if needed), and reestablishing occurrences within its historical range.

Recovery of a species occurs when threats have been sufficiently ameliorated based on delisting (or recovery) criteria. Delisting will be considered for SAS when the following conditions have been met in each of the recovery units (RUs), including the Santa Ana River.

1. **Present or threatened destruction, modification, or curtailment of habitat or range.** Adequate amounts of suitable habitat are restored, protected, and managed within each recovery unit to support viable populations of all life stages of SAS and provide resiliency and redundancy to protect against catastrophic events throughout the current range of the species.
2. **Predation.** Management is implemented to reduce competition and predation by nonnative species to levels determined to be necessary for the maintenance of viable SAS populations.
3. **Other natural or manmade factors affecting its continued existence.** The current range of the species is expanded through modification or removal of existing barriers, restoration of suitable habitat, and/or reintroduction of the species to areas within its historical range in a configuration that ensures reasonable certainty the remaining genetic makeup of the species has been preserved and can withstand catastrophic events in the watershed.

Appropriate gene flow is maintained between occupied areas of each RU, through natural processes or management, to ensure population viability and genetic exchange.

Stable or increasing population averaged over 15 years within each RU and occupancy including the following areas:

- Santa Ana River Watershed Recovery Unit –
  - Santa Ana River in the Prado Reach and Imperial Reach;
  - Four tributaries in the Prado Reach and/or Imperial Reach (for example Tequesquite Arroyo, Anza Drain, Hole Creek, Evans Drain, Sunnyslope Creek, Day Creek, Aliso Creek); and

- Three tributaries in the La Cadena Reach (for example City Creek, Lytle Creek, Cajon Wash, Alder Creek, Plunge Creek, Santa Ana River above Seven Oaks Dam).

A long-term monitoring and management plan is in place to evaluate the effectiveness of management actions to address ongoing threats and to identify new threats which may require implementation of adaptive management actions.

### 1.2.3.1 Summary of Recovery Actions

Recovery actions are considered by USFWS to be necessary to bring recovery of SAS and ensure its long-term conservation, and each action is assigned a priority based on what is most important for recovery of the species.

**Priority 1:** An action that is taken to prevent extinction or to prevent the species from declining irreversibly.

**Priority 2:** An action that is taken to prevent a significant decline in species population/habitat quality or some other significant negative impact short of extinction.

**Priority 3:** All other actions necessary to provide for full recovery of the species.

Below is a summary of the recovery actions necessary to achieve SAS recovery.

1. Develop and implement a rangewide monitoring protocol to accurately and consistently document populations, occupied habitat, and threats (Priority 2, 3 for all RUs).
  - a. Develop a rangewide monitoring protocol including metrics related to the status of the Santa Ana sucker population (i.e., abundance, age structure, and distribution); metrics related to habitat suitability for each life stage (i.e., water quality and quantity, substrate, food sources); metrics related to the status of threats (i.e., hydrological modifications and barriers to dispersal, water quality, nonnative vegetation, and OHV use); and standardized data sheets.
2. Conduct biological research to inform management actions and recovery for the SAS.
  - a. Water Quality – Determine the sensitivity of SAS to water quality variables that may be altered by hydrological modification or regulated discharges (i.e., water temperature, dissolved oxygen, turbidity, etc.) (Priority 2 for Santa Ana River RU).
  - b. Hydrology – In areas with modified hydrology, determine hydrological processes necessary to maintain breeding, feeding, and sheltering habitat for the species (Priority 1 for Santa Ana River RU).
  - c. Sediment Transport – In areas with modified hydrology, evaluate sediment sources and transport to determine if sufficient sediment is available to maintain appropriate gradient and substrate composition for the species (Priority 1 in the Santa Ana River RU).
  - d. Suitable Habitat – Determine habitat conditions (i.e., gradient, water quality, water velocity, and substrate) that are conducive to supporting the SAS (Priority 2 for all RUs).
  - e. Nonnative Species – Determine how habitat suitability can be improved through reduction of nonnative aquatic species (Priority 2 in the Santa Ana River RU) and

- nonnative riparian vegetation (i.e., *Arundo donax* and *Tamarix ramosissima*) (Priority 3 for all RUs).
- i. Investigate the extent of impacts to invasive red algae (*Compsopogon caeruleus*) to SAS habitat within the Santa Ana River RU. If impacts are found to be significant, investigate management actions to remove or treat this nonnative to reduce impacts to sucker where it occurs (Priority 1 for Santa Ana River RU).
  - f. Genetics – Ensure the natural genetic diversity across the range of the species is preserved. Determine the genetic variation within and between watersheds where SAS occur (Priority 2 for all RUs).
  - g. Captive Propagation – Captive propagation may be necessary to assist in the recovery of the species due to the limited extent of suitable spawning habitat (Priority 1 for all RUs).
3. Increase the abundance and distribution of the SAS within its current range by reducing threats to the species and its habitat, including ameliorating hydrological modifications resulting from flood control and water conservation operations (Priority 1 for Santa Ana River RU).
  4. Increase the range of the SAS by restoring habitat (as needed), and reestablishing occurrences within its historical range.
    - a. Assess areas within the Santa Ana River RU for potential range expansion, followed by planning and implementation of habitat restoration and reintroductions. Areas to be considered for possible reintroduction include: Aliso Creek, Temescal Creek, Chino Creek, San Antonio Creek, Cucamonga Creek, Day Creek, Alder Creek, Santa Ana River above Seven Oaks Dam, Mill Creek, Lytle Creek, Cajon Wash, City Creek, Plunge Creek, Warm Creek, Mountain Home Creek, Bear Creek, and other potential tributaries (Priority 1).



## **CHAPTER 2**

---

# **Summary of Proposed Actions and Santa Ana Sucker Conservation Measures**

### **2.1 Project Area and Components**

The proposed project is located within two municipalities, including the City of Highland, and City of San Bernardino. The SNRC has been constructed on approximately 20 acres, located east and west of North Del Rosa Drive between East 5th Street and East 6th Street in the City of Highland.

The SNRC would produce tertiary-treated water for reuse. A conveyance system including a pumping station and pipeline would be constructed to convey treated water from the SNRC to the Weaver Basins (a series of five new infiltration basins) for groundwater recharge, located south of Greenspot Road, north of Abbey way, east of Merris Street, and west of Weaver Channel in the City of Highland (Figure 2-1).

Most of the wastewater reaching the new treatment facility would be conveyed by gravity within the existing collection system. However, some modifications would be necessary to connect the existing collection system with the new treatment plant. Two lift stations and approximately 11,000 linear feet of forcemain would be installed within city streets west of the SNRC, as shown in Figure 2-1.





**Figure 2-1**  
Project Components Overview

## 2.2 Santa Ana Sucker Conservation Measures

The project EIR stated that construction and operational impacts to biological resources would occur and require mitigation. Measures to reduce potential project-related impacts to avoid, minimize, and compensate for impacts to Santa Ana sucker are identified in mitigation measure BIO-3 of the EIR. BIO-3 requires the preparation and implementation of a HMMP that encompasses seven elements, identified as SAS-1 through SAS-7 (see below).

Conservation measures were also identified in the Biological Opinion (FWS-SB-16B0182-17F0387), issued March 9, 2017, and in amendments to the BO (amendment 1 (FWS-SB-16B0182-17F0387-R001 issued August 11, 2017) and amendment 2 (FWS-SB-16B0182-17F0387-R002 issued January 3, 2022), to avoid and minimize impacts to listed species and designated critical habitat and offset those impacts that would result from the project. The BO included all but one (SAS-4. High Flow Pulse Events) of the mitigation measures identified in the EIR as conservation measures. However, SAS-4 from the EIR was identified as a conservation recommendation in the 2017 BO (#6 RIX Facility – High Flow Pulse Events).

The Santa Ana sucker conservation measures listed below encompass those identified in the EIR and in Wastewater Change Order WW0095 (SAS-1 through SAS-7), and those identified in the

BO (CM.21.b.i through CM.21.b.vi). For some of the measures we are proposing an expanded effort/temporal change in timing of measure implementation based on data and information collected since drafting of the EIR and 2017 BO, and to provide greater flexibility for successful implementation. In combination, the conservation measures will reduce potential project-related impacts to avoid, minimize, and offset impacts to SAS while contributing to the long-term conservation of the species (ESA 2016). Relevant permitting from the USFWS and/or CDFW (e.g., state scientific collection permit, MOU, etc.), as appropriate, will be secured prior to implementation of the conservation measures.

- CM 21.b.i. (SAS-1): Habitat Node Creation (Microhabitat Enhancements). The HMMP will identify microhabitat enhancements within the upstream reach of the affected river segment using natural materials to increase scour and pool formation. This could include placement of large boulders and/or large woody debris (nodes) to increase velocity of flow and gravel bar patches as well as deep pool refugia areas. This measure will enhance stream habitat within at least 1.5 acres of SAS-occupied habitat along approximately 2.5 miles of river, as measured in fall by the areas of pools created, gravel cobble substrates exposed, and other functional habitat features created/enhanced.
  - Flexibility in enhancement area and expanded Effort (identified in the Supplemental BA; proposed for inclusion in CDFW EPIMS-SBR-42496-R6): To provide greater flexibility for implementation (and overcome landowner access permissions) microhabitat enhancements can be created within an area greater than the upstream reach of the affected river segment, i.e., enhancement can be created between RIX outfall and Van Buren Boulevard (or elsewhere along the mainstem Santa Ana River if determined beneficial to the species). Also, an additional 0.5 acre of microhabitat enhancements (total of 2.0 acres) will be maintained temporally during dry rainfall years ( $\leq 14.7$  inches<sup>1</sup>) until Upper Watershed Population Establishment has occurred (CM.21.b.v.). Nodes would be reinstalled periodically when needed to maintain effectiveness.
- CM 21.b.ii. (SAS-2): Aquatic Predator Control Program. The HMMP will include an Aquatic Predator Control Program to be implemented between Rialto Channel downstream to Van Buren Boulevard (or elsewhere along the mainstem Santa Ana River if determined beneficial to the species), focusing on areas of highest ecological value to SAS reproduction (currently from Rialto Channel downstream to approximately Mission Boulevard and in mainstem tributaries). The nonnative aquatic predator removal program will be focused on reducing the abundance of nonnative aquatic predators immediately preceding the start of the SAS spawning season (approximately March 1). The control effort will occur a minimum of one time per year outside of the SAS spawning season (August 1 to February 28), using electrofishing or other techniques as approved by the USFWS and CDFW.
  - Expanded Effort (identified in the Supplemental BA; proposed for inclusion in CDFW EPIMS-SBR-42496-R6): Nonnative species will be removed a minimum of two times per year until Upper Watershed Population Establishment has occurred (CM.21.b.v.), at which point the effort will be reduced to a minimum of one time per year. Control will be implemented outside of the SAS spawning season (August 1 to February 28), using electrofishing or other techniques as approved by the USFWS and CDFW.

---

<sup>1</sup> Measured in San Bernardino, CA.

- CM 21.b.iii. (SAS-3): Exotic Weed Management Program. The HMMP will include an Exotic Weed Management Program targeting the removal of nonnative species such as giant reed, tamarisk, castor bean, tree of heaven, etc. The HMMP will include an annual maintenance and performance goal for nonnative plant removal within the upper reach of the affected river segment. The weed removal efforts will occur within an approximate 4.2-mile stretch of the Santa Ana River (e.g., Rialto Channel to Mission Boulevard Bridge, or, depending on landowner permissions, from Market Street Bridge to Anza Creek).
  - Flexibility in weed management implementation area (identified in Supplemental BA; proposed for inclusion in CDFW EPIMS-SBR-42496-R6): To provide greater flexibility for implementation based on landowner access permissions, the geographic area of implementation can be expanded to include management between Market Street Bridge and Anza Creek.
- SAS-4: High Flow Pulse Events. The HMMP will identify means to create high flow pulse events as needed based on substrate conditions, up to 2 times per year. The high flow pulse events would be designed to flush out fine sediment from the upstream reach of the affected river segment and would be implemented through a cooperative agreement with the City of San Bernardino Municipal Water Department and/or the City of Rialto.
- CM 21.b.iv (SAS-5): Rialto Channel Water Temperature Management. The HMMP will identify methodology to reduce water temperature in Rialto Channel to tolerable levels (less than 86 degrees Fahrenheit) during summer months.
  - Flexibility in location and timing of water temperature amelioration (identified in Supplemental BA; proposed for inclusion in CDFW EPIMS-SBR-42496-R6): Rialto Channel/Santa Ana River Water Temperature Amelioration Project. The HMMP will identify funding to be committed by EVWD to contribute towards implementation of a proposed measure(s) to ameliorate Rialto Channel and/or Santa Ana River water temperatures to <86 degrees Fahrenheit. Proposed measures/strategies to reduce water temperature will be developed following completion of a larger-scale water temperature monitoring study (to be completed by the Upper Santa Ana River Habitat Conservation Plan applicants).
- CM 21.b.v. (SAS-6): Upper Watershed SAS Population Establishment. The HMMP will outline a plan for establishing two new locations of Santa Ana sucker within City Creek and Hemlock Creek, or other suitable watershed tributary, in coordination with the Wildlife Agencies. The HMMP will identify measures to directly increase the number of Santa Ana sucker in the SAR population, increase the amount of suitable and occupied habitat in this watershed, and distribute the risk of a catastrophic event between multiple locations. At least one translocation of SAS will have occurred with data provided to the USFWS and CDFW indicating that the nascent population is healthy, reproducing, and appears to be successfully establishing. The HMMP will also identify the amount of financial assistance to be provided by EVWD for the regionally-beneficial population establishment program. Success criteria shall include, but not be limited to, a stable or increasing population averaged over 5 years within City Creek or other suitable tributary within the upper Santa Ana River watershed.
  - Flexibility in implementation timing (identified in Supplemental BA; proposed for inclusion in CDFW EPIMS-SBR-42496-R6): Flexibility in timing of translocation is needed to address downstream landowner concerns. A financial security is also proposed to provide assurances that the translocations will be implemented as soon as possible.



- CM 21.b.vi. (SAS-7): Hydrology Monitoring. The HMMP will outline a monitoring program to collect hydrology data in the segment of river between the RIX discharge and Mission Boulevard. The data will include flow velocity, temperature and depth.
  - Flexibility in monitoring area requested to overcome landowner access permissions. Monitoring area will be coterminous with areas covered by SAS 1-5.

## 2.3 Mitigation Areas and Population Establishment

In order to offset operational project impacts associated with the proposed diversion of 6 MGD from the RIX Tertiary Treatment Facility discharge, implementation of the conservation measures identified in Section 2.3 are proposed within the Santa Ana River between RIX and River Road and within two mountain tributaries to the Santa Ana River (collectively referred to as the mitigation areas) (**Figure 2-2**).



**Figure 2-2**  
Mitigation Areas

# CHAPTER 3

---

## Framework for Implementation

### 3.1 Responsible Parties and Roles

#### 3.1.1 Project Sponsor

East Valley Water District (EVWD) is responsible for implementation of all mitigation measures identified in the EIR and Biological Opinion, as amended. The EVWD contact for the project is:

East Valley Water District  
31111 Greenspot Road  
Highland, CA 92346

Contact: Jeff Nolte, Director of Engineering & Operations  
jnoelte@eastvalley.org  
(909) 888-8986

#### 3.1.2 Implementation and Agency Coordination

This HMMP will be reviewed and approved by the USFWS under their authority to enforce the federal Endangered Species Acts, and by the California Department of Fish and Wildlife (CDFW). The proposed diversion of 6 MGD from the RIX Tertiary Treatment Facility discharge will not occur until this HMMP has been approved by USFWS and CDFW. This HMMP will be implemented by a contracted, qualified and permitted entity such as the Riverside-Corona Resource Conservation District (RCRCD), qualified hydrologists, as well as other staff or contractors as needed, in coordination with the USFWS and CDFW.

### 3.2 Implementation Process

#### 3.2.1 Plan Development

This HMMP outlines a monitoring framework to evaluate the effectiveness of mitigating the potential operational effects of the SNRC project on SAS and guide adaptive management. The HMMP describes project objectives, defines expected or desired outcomes, and describes monitoring activities to track progress toward objectives and compliance with regulatory permits during the initial implementation phase.

If monitoring reveals issues that require more in-depth study to reduce uncertainty for management, then the Project Sponsor, with input from experts, will identify and prioritize key questions for further monitoring or study. Focused investigations would be developed and implemented separately, based on priority and availability of funding and expertise.

### 3.2.1.1 Relationship to Recovery Actions

The HMMP has been prepared in consideration of the recovery actions identified in the recovery plan, and plan implementation will aid in species recovery, as shown in **Table 3-1**.

**TABLE 3-1  
RELATIONSHIP TO RECOVERY ACTIONS**

<b>Conservation Measure ID</b>	<b>Habitat Improvement Action</b>	<b>Relationship to Recovery Actions</b>
CM 21.b.i. (SAS-1)	Microhabitat Enhancements	This measure will result in the creation of suitable habitat features within the Santa Ana River (Recovery Actions #1, 2d, and 3).
CM 21.b.ii. (SAS-2)	Aquatic Predator Control Program	This measure conducts biological research to inform management actions and recovery for the SAS through the removal of aquatic predators (Recovery Actions #2e and 3).
CM 21.b.iii. (SAS-3)	Exotic Weed Management Program	This measure conducts biological research to inform management actions and recovery for the SAS through the removal of exotic weeds within the riparian corridor (Recovery Actions #2e and 3).
SAS-4	High Flow Pulse Events	This measure will result in high flow pulse events based on substrate conditions (Recovery Actions #2c, 3).
CM.21.b.iv (SAS 5)	Rialto Channel/ Santa Ana River Water Temperature Amelioration Project	This measure will involve monitoring water temperature conditions within Rialto Channel and the Santa Ana River to identify potential locations and seasonal timing implementing a strategy to ameliorate water temperatures to less than 86 degrees in Rialto Channel only during summer months. The revised effort in the Supplemental BA proposes funding to be committed by EVWD to contribute towards implementation of a proposed measure(s) to ameliorate Rialto Channel/Santa Ana River water temperatures to <86 degrees Fahrenheit. Potential measures/strategies to reduce water temperature will be developed following completion of a larger-scale water temperature monitoring study (to be completed by others) (Recovery Actions #2a, 2b, and 3).
CM 21.b.v. (SAS-6)	Upper Watershed SAS Population Establishment	This measure increases the current range of the SAS by re-establishing SAS populations within its historical range of City Creek (Recovery Actions #3 and 4).
CM 21.b.vi. (SAS-7)	Hydrology Monitoring	This measure will involve monitoring hydrology and water quality for conditions optimal for SAS (Recovery Actions #2a, 2b and 3).

### 3.2.2 Monitoring and Adaptive Management

Monitoring and adaptive management is an iterative approach that uses regular monitoring and assessments to evaluate progress towards project objectives. Adaptive management acknowledges that uncertainties exist in predicting how project implementation affects important resources and provides a scientific and institutional framework for adjusting future management decisions as understanding of the ecosystem improves (Williams et al. 2009). The SNRC project follows the steps of the adaptive management cycle:

- (1) Plan – Identify goals and objectives and identify uncertainties and key questions for assessment.
- (2) Design – Summarize designs and operational scenarios for optimal habitat parameters.
- (3) Implement – Construct and/or implement conservation measures.

- (4) Monitor – Describe monitoring methods for measuring indicators of desired outcomes and triggers of management actions.
- (5) Evaluate – Analyze, synthesize, and manage data to document project outcomes, assess progress toward objectives, detect any negative outcomes, and reduce uncertainty.
- (6) Adapt and Learn – Communicate findings to decision-makers and managers to determine if and when to adjust management actions and/or monitoring to improve project performance and inform future actions.

The effectiveness of actions will be assessed by measuring physical and biological indicators of expected or desired project outcomes. Status and trends of these indicators will be measured to evaluate progress toward objectives and to detect potential issues that may trigger a management response. An adaptive approach will be used to prioritize and phase monitoring elements for efficiency and cost-effectiveness.

The scientists and managers responsible for implementation of the HMMP will annually synthesize and analyze the monitoring data. An overall review will be conducted annually to evaluate project performance. A decision-making framework will guide recommendations for maintaining or adjusting operations.

The HMMP is a living document, flexible enough to respond to unanticipated events and to accommodate lessons learned. Each year, the field sampling program will be evaluated and updated, if necessary, in annual reports to be prepared by the Project Sponsor or qualified contractors on behalf of the Project Sponsor.

### **3.2.2.2 Relationship to Primary Constituent Elements**

The design, implementation, monitoring and maintenance of habitat improvements within the mitigation areas are geared towards improving the PCEs for the SAS identified in Section 1.2.2.1. **Table 3-2** identifies the PCEs that would be improved as it relates to each habitat improvement action.

**TABLE 3-2  
RELATIONSHIP TO PRIMARY CONSTITUENT ELEMENTS**

<b>Conservation Measure ID</b>	<b>Habitat Improvement Action</b>	<b>Relationship to Primary Constituent Elements (aka: Physical and Biological Features)</b>
CM 21.b.i. (SAS-1)	Microhabitat Enhancements	PCE #1, 2, 3, 6
CM 21.b.ii. (SAS-2)	Aquatic Predator Control Program	PCE #1
CM 21.b.iii. (SAS-3)	Exotic Weed Management Program	PCE #1, 3, 6
SAS-4	High Flow Pulse Events	PCE #1, 2,
CM 21.b.iv (SAS-5)	Rialto Channel/ Santa Ana River Water Temperature Amelioration Project	PCE #1, 5
CM 21.b.v. (SAS-6)	Upper Watershed SAS Population Establishment	PCE #1, 2, 3, 4, 5, 6, 7
CM 21.b.vi. (SAS-7)	Hydrology Monitoring	PCE #1, 3, 4, 5

### 3.2.3 Evaluation and Reporting

Monitoring procedures, approach, and schedule may be assessed following each monitoring event. Adjustments to the monitoring program may be recommended due to changing site conditions, newly available research data, ability to combine efforts with other related research, or if monitoring methods are determined too difficult or impractical to implement. Minor adjustments are expected to occur over the monitoring period to maintain completeness and feasibility of the monitoring program.

### 3.2.4 Anticipated Schedule

The anticipated schedule for implementation, monitoring and adaptive management of the SAS habitat improvements are summarized in **Table 3-3** below, and also discussed in further detail in subsequent chapters.

**TABLE 3-3  
MONITORING AND ADAPTIVE MANAGEMENT SCHEDULE**

<b>Metric</b>	<b>Frequency</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
<b>Microhabitat Enhancements</b>													
Construct habitat features	Variable								●	●	●	●	
Habitat assessment	Annual									●			
Maintenance of habitat features	When Necessary		●						●		●		●
<b>Aquatic Predator Control</b>													
Predator removal	Semi-annual (Oct-Feb) (at minimum)	●										●	



Metric	Frequency	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
<b>Exotic Weed Management</b>													
Exotic weed removal (Years 1 - 5)	Three times per year (minimum)		●							●			●
Exotic weed removal (Years 6+)	Semi-annual (minimum)		●								●		
<b>(High Flow) Pulse Events</b>													
Implementation	Up to two times per year (timing will be adaptive to minimize impacts and maximize benefits)			●				●					
Monitoring (Year 1)	Annual (pre/post pulse)			●	●								
Monitoring (Years 2+)	Annual (up to 2)			●				●					
<b>Rialto Channel/Santa Ana River Amelioration Project</b>													
Project Implementation	Once												
Project Monitoring	Continuous	●	●	●	●	●	●	●	●	●	●	●	●
Project Maintenance	As-needed												
<b>Upper Watershed SAS Population Establishment</b>													
Implementation	Once						●						
Population Establishment Monitoring	Semi-annual	●			●						●		●
Population Management	Quarterly (at minimum)		●			●			●				●
<b>Hydrology Monitoring</b>													
Monitoring (Year 1)	Monthly	●	●	●	●	●	●	●	●	●	●	●	●
Monitoring (Years 2+)	Quarterly		●			●			●				●
<b>Management Decisions</b>													
Annual Report	Annual												●
Management Review	Annual, or more often as needed	●											
Workplan Adjustments	Annual, or more often as needed		●	●									

## CHAPTER 4

### Microhabitat Enhancements (CM 21.b.i., SAS-1)

---

The goal of this Conservation Measure is to increase the amount of SAS-suitable microhabitat within the occupied reach of the Santa Ana River. The goal will be achieved through installation of natural structures in the river to create/enhance suitable substrate/in-stream conditions for the benefit of Santa Ana sucker. A minimum of 1.5 acres of habitat will be enhanced along approximately 2.5 miles of the SAS-occupied reach of the Santa Ana River. To provide greater flexibility for implementation based on landowner access permissions, the area to be enhanced is expanded to include between the RIX outfall and Hidden Valley Wildlife Area (or as approved by USFWS and CDFW).

The Supplemental BA proposes an additional 0.5 acre of microhabitat enhancements (total of 2.0 acres) to be maintained temporarily during dry rainfall years (<14.7 inches<sup>2</sup>) until Upper Watershed Santa Ana Sucker Population Establishment has occurred (see CM 21.b.v). Enhancement of a minimum of 1.5 acres of microhabitat will be implemented in perpetuity.

#### 4.1 Location, Timing, and Implementation Materials and Methods

Santa Ana sucker are currently threatened by water diversions; alteration of stream channels; changes in the watershed that result in erosion and debris flows; pollution; habitat fragmentation and predation by nonnative fishes (USFWS 2010). The physical stabilization of riverbanks associated with urbanization increases river flow velocities, exacerbating downstream bank erosion, and leading to channel narrowing and bed degradation (EDAW and SMEA 2009). Narrowing results in loss of shallow-water riverine habitat and floodplain connections, eliminating variation in water depth, stream flow velocity, temperature regimes, and sediment size necessary to maintain habitat complexity required for different SAS size classes (Even and Baskin 2010).

Santa Ana sucker have a wide range of life stage specific habitat requirements needed to sustain SAS populations in good health. Habitat needs range from shallow, sandy edgewater habitat for larval rearing, to medium-depth mid-channel habitat with gravel substrate for spawning, to deepwater habitat for adult holding. Habitat suitability parameters in **Table 4-1** were developed by Aspen (2016) from a habitat suitability assessment of the Big Tujunga Wash SAS population (Appendix A), in addition to a literature review of previous SAS habitat suitability studies.

---

<sup>2</sup> Measured in San Bernardino, CA.

**TABLE 4-1  
SANTA ANA SUCKER HABITAT SUITABILITY CRITERIA**

<b>Microhabitat Type</b>	<b>Life Stage</b>	<b>Use</b>	<b>Substrate Type</b>	<b>Depth (cm.)</b>
Shallow edge water	Larval	Rearing/holding	Silt/Sand	0.2-5.0
Mid channel	Juv/Adult	Rearing/feeding	Gravel/Cobble	11.0 to 65.0
Scout Pools	Juv/Adult	Holding	Sand/Gravel/Cobble	31.0-71.0

Annual habitat assessment monitoring will be conducted in the SAS-occupied reach of the Santa Ana River to assess the quality of habitat available to support all life stages of SAS (See Monitoring and Adaptive Management section below). Stream reaches lacking suitable habitat for one or more life stages of SAS will be targeted for habitat enhancement (contingent on access permissions from landowners). This could include placement of wooden stake arrays, and/or large boulders/large woody debris (nodes) to increase velocity of flow, placement of gravel bar patches to provide substrate for spawning and food production, as well as creation of deeper water areas. A minimum of six (6) nodes would be installed along approximately 2.5 miles of the SAS-occupied reach of the mainstem Santa Ana River downstream of the RIX discharge (location of nodes will be subject to landowner access permissions). The nodes would create a minimum of 1.5 acres of habitat, as measured in fall. The Supplemental BA identifies an additional 0.5 acre of microhabitat enhancements (total of 2.0 acres) to be maintained temporally during dry rainfall years ( $\leq 14.7$  inches) until Upper Watershed Population Establishment has occurred (CM 21.b.v). Nodes would be reinstalled on an as-needed basis to maintain habitat enhancement target acreages.

Based on fish-habitat relationships observed in the Big Tujunga Wash SAS population, along with habitat suitability relationships from previous SAS studies, Aspen (2016) provided target parameters for microhabitat enhancements in the SNRC project area. **Table 4-2** details the primary habitat components recommended for microhabitat enhancements, modified from Aspen (2016) Table 2. Occupied reaches within the mainstem Santa Ana River lacking these key target physical parameters would be prioritized for microhabitat enhancements (subject to landowner access permissions).

**TABLE 4-2  
TARGET PHYSICAL PARAMETERS AND SUCCESS CRITERIA FOR MICROHABITAT ENHANCEMENTS**

<b>Habitat Component</b>	<b>Habitat Description</b>	<b>Success Criteria</b>
Riffle/Scour Pool	Swift and/or turbulent flows (1.2 to 2.4 ft/sec).	Present (flow velocity able to transport sand)
Coarse Substrate	Gravel/Cobble/Boulder	1.5 acres minimum. Substrate cover: minimum 10% gravel/cobble Additional 0.5 acre (for a total of 2.0 acres minimum) (during dry years, until implementation of CM 21.b.v)

The location of microhabitat enhancements within the SNRC project area would be informed by habitat assessments that identify reaches lacking one or more key target physical parameters detailed in **Table 4-3**. Nodes would be sited within the mainstem river or side channels to create “stepping stones” or patches of habitat to link tributary restoration projects proposed under the HCP. An example of a stepping stone habitat patch includes the creation of an island or gravel bar in a streambed composed primarily of sand.

In early 2022 a pilot microhabitat enhancement study was initiated along the Santa Ana River using rounded wooden stakes (SBVMWD 2022; Appendix A). The stakes provided the opportunity to study a low-cost, low-impact, and timely strategy to manipulate velocity to enhance microhabitat conditions for SAS. Based on preliminary results from this effort an expanded project was initiated. To support the expanded effort a Section 401 Water Quality Certification for Small Habitat Restoration Projects was received from the Santa Ana Regional Water Quality Control Board on April 4, 2022 (Appendix A), with concurrence received from the California Department of Fish and Wildlife under the Habitat Restoration and Enhancement Act on May 25, 2022 (Appendix A).

Stake arrays were installed in two project locations along the Santa Ana River between October and December 2022. The arrays were monitored weekly from October through December 2022. Substrate data (gravel cover) was collected during each site visit, and water quality data was collected a three time points. Data from this study indicated that the stake arrays can have a beneficial effect on enhancing stream habitat for native fishes. Though results were observed to vary between features, all stake arrays produced an increase in gravel cover (see SBVMWD 2022; Appendix A).

Based on success of the 2022 pilot microhabitat enhancement, the project was expanded in 2023. Six microhabitat nodes were established in the Santa Ana River, between the Riverside County line and Hidden Valley Wildlife Area, with each node comprised of multiple stake arrays. To date 22 stake arrays are installed across the six habitat node locations. Data were collected monthly throughout 2023. As of mid-October 2023, 1.5 acres of microhabitat enhancement for the benefit of Santa Ana sucker have been created, with sucker observed occupying the enhancement areas (SBVMWD 2023).

**TABLE 4-3**  
**MICROHABITATS ENHANCEMENT SCHEDULE**

Monitoring Year	Timing
Year 1	<p>Late Summer through late Winter (August - February).</p> <p>Installation of a minimum of six node areas, or sufficient quantity to create a minimum of 1.5 acres of microhabitat enhancement. Installation of large projects will be conducted during the summer-winter to avoid the spawning season and high flow events during construction. Small projects may be constructed year-round to achieve acreage targets but will minimize impacts to SAS to the greatest extent practicable.</p> <p>Additional 0.5 acre of microhabitat enhancement (for a total of 2.0 acres minimum) during dry years, until implementation of CM 21.b.v.</p>

Years 2+	Year-round (depending on severity of potential impacts) Maintenance of enhancement sites or creation of additional enhancement sites to achieve acreage targets may be conducted year-round but will minimize impacts to SAS to the greatest extent practicable.
----------	---

## 4.2 Monitoring and Adaptive Management

Habitat assessment monitoring will be conducted throughout the year to track the suitability of habitat for SAS before, during, and following microhabitat enhancements. Quantification to demonstrate achievement of acreage targets will be measured in the fall by area of pools created, gravel/cobble substrates exposed, and other functional SAS habitat features created/enhanced.

Annual monitoring will include water quality, visual estimates of substrate cover, and fish surveys.

Ongoing monitoring and adaptive management will be employed to ensure successful creation and maintenance of suitable habitat for SAS. **Table 4-4** summarizes the timing of the microhabitat enhancement monitoring schedule.

**TABLE 4-4  
MICROHABITATS ENHANCEMENT MONITORING SCHEDULE**

Year	Timing
Years 1	Monthly or more frequently to detect development of suitable habitat. Fall (September) metrics will provide data for success criteria.
Years 2+	Fall (September) surveys will track suitability of habitat. Adaptive management measures will be implemented should acreage targets not be achieved/maintained.

## 4.3 Maintenance

Ongoing surveys may trigger additional maintenance of microhabitat enhancement sites. If microhabitat enhancement sites are observed to not provide suitable habitat as expected during annual habitat assessment surveys, or if SAS are not observed using habitat enhancement areas created by the nodes, maintenance of enhancement sites will be conducted to further modify the habitat to better support SAS (**Table 4-5**). Ongoing surveys will trigger adaptive management as needed.

**TABLE 4-5  
MICROHABITATS ENHANCEMENT MAINTENANCE SCHEDULE**

Maintenance	Interval
All Years (1+) – Site maintenance	Ongoing maintenance, as needed.

## 4.4 Performance Criteria and Reporting

The goal of the microhabitat enhancement work is to enhance perennial stream habitat within the occupied reach of the mainstem Santa Ana River. At least 1.5 acres of habitat will be enhanced and maintained in-perpetuity. The Supplemental BA identifies an additional 0.5 acres of enhancement (total of 2.0 acres) to be created and maintained during dry rainfall years (<14.7 inches) temporally until Upper Watershed Population Establishment has occurred (see Chapter 9). Quantification of acreage enhanced will be measured in the fall, by area of pools created, gravel/cobble substrates exposed (minimum of 10% gravel/cobble coverage), and other functional SAS habitat features created/enhanced. Enhanced habitat is anticipated to provide suitable habitat for all life stages of SAS, in perpetuity. Successful enhancement will be demonstrated through achievement of acreage goals and presence of SAS, as shown in **Table 4-6**.

**TABLE 4-6**  
**MICROHABITATS ENHANCEMENT SUCCESS CRITERIA**

<b>Milestone</b>	<b>Success Criteria</b>	<b>Remedial Measures</b>
All years	Habitat nodes installed/constructed as designed.	Modify installation/construction to meet initial design criteria.
	Microhabitat enhancement areas support SAS physical parameters (see Table 4-2) and encompass a minimum of 1.5 acres.	Modify enhancement sites to provide SAS target physical parameters.
	An additional 0.5 acres (total of 2.0 acres) will be maintained during dry rainfall years until Upper Watershed Population Establishment has occurred.	Modify enhancement sites to provide SAS target physical parameters.
	Documented presence of SAS utilizing or within the vicinity of enhanced habitat.	

The HMMP annual monitoring report will include field notes and datasheets from individual monitoring visits throughout the year. The annual report will include summaries of the project area habitat assessments, documented occurrences of SAS, detailed habitat characteristics of each microhabitat enhancement site, a review of progress of attainment of the performance criteria, and any recommended remedial measures.

## 4.5 In-Perpetuity Monitoring and Management

Once the monitoring associated with the microhabitat enhancements has met the Year 1 performance criteria, and concurrence of achievement of success criteria has been received from the USFWS and CDFW, monitoring associated with this conservation measure will continue in perpetuity. If the HCP is adopted prior to or during implementation of this HMMP, the monitoring and reporting associated with this measure will be carried forward into the HCP's monitoring and reporting program.



## CHAPTER 5

---

# Aquatic Predator Control Program (CM 21.b.ii., SAS-2)

The goal of this Conservation Measure is to reduce the abundance of nonnative aquatic predators within the Santa Ana River, thereby increasing the amount of suitable habitat for SAS. The goal will be achieved through the implementation of field methodology to reduce the abundance and distribution of SAS aquatic predators. A minimum of one control effort, focusing on areas identified during native fish surveys as needing aquatic predator control along the Santa Ana River will be implemented immediately preceding the start of the SAS spawning season.

The Supplemental BA proposes a minimum of two control efforts per year, to be implemented temporally until Upper Watershed Santa Ana Sucker Population Establishment has occurred (Chapter 9), at which point the effort will be reduced to a minimum of one time per year. Control will be implemented in-perpetuity. Relevant permitting from the USFWS and/or CDFW (e.g., state scientific collection permit, MOU, etc.), as appropriate, will be secured prior to implementation of the Aquatic Predator Control Program.

### 5.1 Location, Timing, and Target Exotic Species

The SAS recovery plan identifies predation by nonnative species as a threat to SAS population recovery (USFWS 2017). Therefore, an aquatic predator control program will be implemented to target and remove concentrated densities of potential nonnative predator species, including exotic fish, amphibians, and reptiles. Targeted removal efforts and targeted species shall be based on the most recent native fish survey data.

Annual native fish surveys conducted since 2015 in the Santa Ana River have identified multiple nonnative aquatic predators of SAS (USGS 2023). The four most abundant nonnative aquatic predators observed were mosquito fish (*Gambusia affinis*), American bullfrog (*Lithobates catesbeianus*), largemouth bass (*Micropterus salmoides*), and yellow bullhead catfish (*Ameiurus natalis*).

If predator hotspots are identified, nonnative aquatic predators will be removed at least one time per year, occurring immediately preceding the spawning season using electrofishing or other techniques identified in the Nonnative Aquatic Species Control Plan (ICF 2023; Appendix B). The Supplemental BA proposes to temporally increase the number of control efforts to a minimum of two times per year until implementation of the Upper Watershed Santa Ana Sucker Population Establishment has occurred (Chapter 9). See below for a proposed schedule for conducting nonnative aquatic control (**Table 5-1**).



**TABLE 5-1  
NONNATIVE AQUATIC PREDATOR CONTROL SCHEDULE**

<b>Monitoring Year</b>	<b>Timing</b>
Year 1	August 1 to February 14 Control efforts will occur outside of the SAS spawning season focusing on areas of highest ecological value to SAS or areas that may provide source populations of predators.
Years 2+	Same as above, or expanded effort as warranted, in perpetuity.

Aquatic predator control efforts were initiated in 2015 and have occurred on an annual basis coincident with annual native fish surveys. Table 5-2 provides a summary of aquatic predator control efforts.

**TABLE 5-2  
ANNUAL COUNT OF NONNATIVE AQUATIC PREDATORS REMOVED FROM THE SANTA ANA RIVER**

<b>Species</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>Total</b>
<b>African Clawed Frog</b>	0	0	13	0	1	2	0	2	2	20
<b>Black Bullhead</b>	0	0	0	0	12	18	1	0	0	31
<b>Bluegill Sunfish</b>	0	0	0	0	0	0	1	1	0	2
<b>Bullfrog</b>	0	182	15	1	1	4	30	36	0	269
<b>Channel Catfish</b>	0	0	0	0	0	3	12	479	50	544
<b>Common Carp</b>	0	0	0	0	16	12	3	8	5	44
<b>Fathead Minnow</b>	0	0	0	1	1	0	16	0	0	18
<b>Green Sunfish</b>	0	16	1	0	35	0	48	7	12	119
<b>Largemouth Bass</b>	0	1	0	9	497	237	206	101	22	1073
<b>Prickly Sculpin</b>	0	0	1	0	3	0	0	0	1	5
<b>Red Swamp Crayfish</b>	3	45	39	0	2	8	89	339	0	525
<b>Red-Eared Slider</b>	0	0	0	0	1	0	0	2	0	3
<b>Softshell Turtle</b>	0	0	1	0	1	0	1	0	0	3
<b>Tilapia</b>	0	0	1	0	0	0	0	0	0	1
<b>Western Mosquitofish</b>	414	4154	1236	34	376	58	280	2533	210	9295
<b>Yellow Bullhead</b>	496	1254	121	39	620	1006	525	2328	91	6480
<b>Total</b>	<b>913</b>	<b>5652</b>	<b>1428</b>	<b>84</b>	<b>1566</b>	<b>1348</b>	<b>1212</b>	<b>5836</b>	<b>393</b>	<b>18432</b>

## 5.2 Control Methods

See the Nonnative Aquatic Species Control Plan (ICF 2023; Appendix B) for various methods to control predator species. Relevant permitting from the USFWS and/or CDFW (e.g., state scientific collection permit, MOU, etc.), as appropriate, will be secured prior to implementation of control measures.

## 5.3 Monitoring and Adaptive Management

As shown in the monitoring schedule in **Table 5-3**, at minimum, annual surveys will be conducted as part of juvenile and/or adult native fish surveys to identify the species, distribution, and density of nonnative aquatic predators. The identification of predator hotspots will trigger the planning for removal efforts following surveys.

Survey monitoring may also identify habitat features supporting the presence of nonnative aquatic predators, such as deep pools. Habitat features supporting predator hotspots may be recommended for modification to reduce the threat to SAS. Subsequent surveys following modifications can monitor the effectiveness of habitat modification efforts.

**TABLE 5-3**  
**NONNATIVE AQUATIC PREDATOR CONTROL MONITORING SCHEDULE**

Year	Timing
Year 1+	Minimum annual survey to identify potential nonnative aquatic predator hotspots(fall), and minimum of one control effort annually. Supplemental BA proposes temporal increase in control effort to two times per year until the Upper Watershed Santa Ana Sucker Population Establishment has occurred).

## 5.4 Performance Criteria and Reporting

The SAS recovery plan calls for implementation of management to reduce competition and predation by nonnative species to levels determined to be necessary for the maintenance of viable SAS populations. See **Table 5-4** for success criteria associated with nonnative aquatic species management.

**TABLE 5-4**  
**NONNATIVE AQUATIC PREDATOR CONTROL SUCCESS CRITERIA**

Milestone	Success Criteria	Remedial Measures
Year 1	Densities of aquatic predators are low and not causing localized extirpation of native fishes within the mainstem river	Conduct targeted removal efforts at locations with high densities of aquatic predators. Potential habitat manipulation if habitat features are identified that support high predator densities.

Milestone	Success Criteria	Remedial Measures
Year 2+	Same as above but will also include mainstem tributary streams.	Same as above, as necessary. Tributary streams will be sequentially enhanced through targeted removal efforts.

The HMMP annual monitoring report will include field notes and datasheets from individual monitoring visits throughout the year. The annual report will include the list of detected nonnative aquatic predators, their relative abundance and distribution, a review of progress of attainment of the performance criteria and recommended remedial measures, where relevant.

## 5.5 In-Perpetuity Monitoring and Management

Monitoring and control of nonnative aquatic predators within the Santa Ana River will continue in-perpetuity. Monitoring and management activities will be summarized in the HMMP annual report submitted to the USFWS and CDFW. If the HCP is adopted prior to or during implementation of this HMMP, the monitoring and reporting associated with this measure will be carried forward into the HCP’s monitoring and reporting program.

## CHAPTER 6

# Exotic Weed Management Program (CM 21.b.iii., SAS-3)

The goal of this Conservation Measure is to reduce competitive stress to native vegetation by decreasing nonnative plant cover along approximately 4.2 miles of the Santa Ana River between Rialto Channel and the Mission Boulevard Bridge. The goal will be achieved through the implementation of field methodology to reduce the abundance and distribution of perennial, targeted nonnative plant species, with a focus on giant reed (*Arundo donax*), tamarisk (*Tamarix* spp.), and castor bean (*Ricinus communis*). Total cover of nonnative perennial riparian vegetation will total less than 25 percent and total cover of giant reed, tamarisk, and castor bean, of which these three species make up a portion of the total nonnative vegetation cover, will total less than 5 percent.

To provide greater flexibility for implementation based on landowner access permissions, the area to be managed has been revised to encompass between Market Street Bridge and Anza Creek, in Riverside County.

### 6.1 Location, Timing, and Implementation Methods

Nonnative plant removal efforts will occur within a 4.2-mile stretch of the Santa Ana River between Rialto Channel and the Mission Boulevard Bridge, or, depending on landowner permissions, along a similar length of river downstream of the Riverside County-San Bernardino County line (e.g., Market Street downstream to Anza Creek) (see Figure 2-2). Predominant habitats within this area of the Santa Ana River are willow-cottonwood woodland and riparian scrub (dominated by mulefat and willow), along with sandy un-vegetated areas, patches of freshwater emergent and marsh habitat, and seasonal open water. The majority of the plant canopy and cover is from native species including black willow (*Salix gooddingii*), Fremont cottonwood (*Populus fremontii*), and mule fat (*Baccharis salicifolia*), however Nonnative plant species are also present.

The exotic weed management program will be implemented in-perpetuity. During the first three years, management efforts will occur within approximately one-third of the total 4.2-mile stretch (approximately 1.4 miles) each year, to achieve management along the entire length after three years. These initial focused management efforts will be followed by regularly timed maintenance and monitoring visits to verify target exotic plants are kept under control. This is discussed further later in this section.

For the purposes of this plan, invasive exotic species are defined as species listed by the California Invasive Plant Council (Cal-IPC 2006) as High or Moderate threats to California

wildlands, and species considered to be potentially problematic within this stretch of the river (e.g., castor-bean [*Ricinus communis*]). Problematic perennial exotic species previously detected along the Santa Ana River within this stretch of the river include tamarisk (*Tamarix* sp.), castor-bean, tree of heaven (*Ailanthus altissima*), tree tobacco (*Nicotiana glauca*), and African fountain grass (*Pennisetum setaceum*).

**Table 6-1** reviews nonnative plant species (i.e., ‘target’ species) that have been detected or have the potential to occur along the Santa Ana River, along with potential control methods. Information on life form, growth habitat, and removal/eradication methods are provided from *Invasive Plants of California’s Wildlands* (Bossard et al. 2000) and the California Invasive Plant Council (Cal-IPC). Potential control methods are presented to help illustrate possible methods within this plan. Specific management methods applied will consider best available science and may be modified over time. Use of herbicides would be limited to those approved for aquatic settings (e.g., Rodeo® and Garlon® 3A, etc.). This list will be verified on an annual basis to ensure the plan only utilizes approved products. Because of the sensitivity of aquatic organisms, physical removal of target species with hand tools will be prioritized to the extent feasible. However, selective use of herbicides is considered necessary to conduct effective control due to the ecology of the target species. All herbicide use shall be conducted and in accordance with product label instructions and applicable County of San Bernardino/County of Riverside and state laws and requirements. Herbicides shall only be applied by personnel with a qualified applicator license (QAL) and care shall be taken to avoid accidental over-spray on non-target (i.e., native) species.

**TABLE 6-1**  
**PERENNIAL EXOTIC WEED SPECIES DETECTED OR POTENTIALLY OCCURRING**  
**IN THE HMMP TREATMENT AREA**

Scientific Name <sup>1</sup>	Common Name	Life Form	General Treatment Approach	Cal-IPC Rating <sup>2</sup>
<i>Ailanthus altissima</i>	Tree of heaven	Perennial tree	Hand-pull seedlings if the root system can be removed, foliar spray of smaller sprouts in spring with glyphosate, direct application of triclopyr to bark of young stems, or cut larger stems and direct application of glyphosate	Moderate
<i>Arundo donax</i>	Giant reed	Perennial grass	Foliar spray of leaves or direct application of glyphosate to cut stems between late spring and fall	High
<i>Coraderia</i> sp.	Pampas grass	Perennial grass	Physically remove ensuring the entire crown and top section of roots are removed, or apply postemergent glyphosate	High
<i>Eucalyptus</i> sp.	Eucalyptus	Perennial tree	Stump cut and grind, or direct application of triclopyr or glyphosate to outer portion of cut stump (best results in fall). Foliar application of triclopyr or glyphosate to resprouts when 3 to 5 feet tall.	Moderate
<i>Lepidium latifolium</i>	Perennial pepperweed	Perennial	Foliar application of glyphosate, triclopyr or chlorsulfuron (Telar®)	High

<i>Nicotiana glauca</i>	Tree tobacco	Perennial tree	Hand-pull if the root system can be removed, or cut stem and apply triclopyr or glyphosate	Moderate
<i>Myoporum laetum</i>	Myoporum (Ngaio)	Perennial tree	Hand-pull seedlings, or cut mature specimens at ground level and saturate cut stem surface with glyphosate	Moderate
<i>Pennisetum setaceum</i>	African fountain grass	Perennial grass	Foliar or direct application of postemergent glyphosate	Moderate
<i>Phoenix canariensis</i>	Canary island palm	Perennial tree	Hand-pull seedlings, cut mature specimens at stem base, or apply triclopyr	Limited
<i>Ricinus communis</i>	Castor-bean	Perennial scrub	Hand-pull if the root system can be removed, or cut stem and apply glyphosate	Limited
<i>Schinus molle</i>	Peruvian pepper tree	Perennial tree	Frill cuts (ax or hatchet cuts on downward angle through the bark into the sapwood) and apply triclopyr in cuts, or cut stem and apply triclopyr	Limited
<i>Schinus terebinthifolius</i>	Brazilian pepper tree	Perennial tree	Frill cuts (hatchet or ax cuts on downward angle through the bark into the sapwood) and apply triclopyr in cuts, or cut stem and apply triclopyr	Limited
<i>Tamarix</i> spp.	Tamarisk	Perennial tree	Very small specimens can be hand-pulled if the entire root system can be removed, or cut the stem close to the ground and apply triclopyr	High

1. If additional problematic nonnative plant species not included in this table are detected, they will be addressed and controlled in accordance with the project performance standards.

2. California Invasive Plant Council (Cal-IPC 2006) lists nonnative species that are High, Moderate, or Limited threats to California wildlands.

A qualified biologist (botanist or restoration ecologist with at least five years of experience) and landscape contractor (with successful experience on at least five projects involving exotic plant treatment and native habitat restoration) will be retained to implement the exotic plant treatment program. The initial exotic plant removal effort will be conducted outside the bird nesting season (i.e., September 16 to March 14), or the project biologist will conduct pre-activity surveys (within three days of treatments) to verify nesting birds will not be disturbed by the work. The contractor may carry equipment (e.g., chainsaw) and hand tools into the treatment area but no vehicles will enter the riverbed. Prior to the commencement of work, the biologist and contractor will coordinate and review health and safety protocols, project goals and performance criteria, staging areas and access routes, treatment methods for different target species, and measures to protect native plants, wildlife and water quality.

Some target species will be killed in place and allowed to decompose. Additionally, some nonnative plant debris may be left as beneficial organic matter and larger cut stems (e.g., logs and branches; large woody debris [LWD]) may be used to improve in-stream micro-habitat structure and function. Any nonnative plant debris with seed and/or live vegetative material (i.e., stolons and rhizomes) will be removed and properly disposed offsite. Once the initial exotic plant

removal effort is complete, as documented by the project biologist, the project will enter the maintenance phase.

The exotic plant treatment program is scheduled to commence in 2023 and will continue in perpetuity. Methodology will follow those outlined herein, and in Exotic Weed Management Plan (IERCD 2023; Appendix C).

## 6.2 Maintenance

Maintenance will encompass ongoing treatment and removal of nonnative plant species on an as needed basis in perpetuity. If other problematic perennial nonnative plant species (other than those listed in Table 6-1) are detected, they will be treated and controlled in accordance with the goals of this plan. Due to the prevalence of native plant species in the treatment area, it is expected that native plants will readily volunteer in locations where exotic plants are removed.

**TABLE 6-2  
EXOTIC PLANT CONTROL MAINTENANCE SCHEDULE**

<b>Maintenance</b>	<b>Interval</b>
Years 1-3 – Site maintenance	Three times per year (minimum)
Years 4+ – Site maintenance	Twice per year, or more frequently, as required

As a guideline, nonnative plant species management actions will occur approximately three times during Years 1, 2, and 3, and bi-annually (twice a year) in perpetuity. The general framework maintenance schedule is provided in Table 6-2; however it is anticipated that frequency may vary based on monitoring results, presence of nonnative plant species, and continuing attainment of success criteria. An important component of the maintenance phase is consistent monitoring on the presence of nonnatives plant species, appropriate methods and timing of control, and addressing issues in a timely manner. It is anticipated that maintenance will occur in the late winter and early fall outside of the bird nesting season (March 15 to September 1) to maximize the effectiveness of treatments. Follow-up treatments of re-sprouts and new volunteers are expected to create minimal disturbance (i.e., hand-pulling and direct/spot application of herbicide).

Consistent with the initial nonnative plant removal phase, some nonnative plant debris may be killed and left in place as beneficial organic matter/structure. However, any nonnative plant debris with seed and/or live vegetative material (i.e., stolons and rhizomes) will be removed and properly disposed offsite.

## 6.3 Monitoring and Adaptive Management

Prior to initial treatment all habitat areas that may be managed and monitored through this HMMP will be assessed for the baseline ground cover of perennial nonnative vegetation. Aerial imagery will be used, followed by field-verification using a global positioning system to

document patch location and size (area), to quantify the approximate area occupied by each nonnative plant species of interest. Methods to quantify vegetation cover using transects (line/belt) or releve will not be used. Success will be determined when comparing the overall ground cover of perennial nonnative vegetation within the management area to that of the baseline condition, not to a non-managed control site. A control site will not provide a meaningful comparison, nor will a non-managed site be protected in a degraded state. Aerial imagery will also be used to document the overall amount of native habitat found with treatment areas. The amount of native vegetation will not be used to determine success.

Following initial treatment efforts and attainment of success criteria, monitoring and adaptive management will continue in-perpetuity. On going monitoring will document the presence and location of nonnative plant species for implementation of management actions. A list of nonnative plant species detected, relative abundance, location, treatment methodology and treatment effectiveness will be maintained.

Monitoring will support an adaptive management approach. Adaptive management (AM), also known as adaptive resource management (ARM), is a structured, iterative process of optimal decision making in the face of uncertainty, with an aim of reducing uncertainty over time via site monitoring. As part of this process, it is important to anticipate potential (unforeseen or unpredictable) problems and utilize formal and informal monitoring information to learn and adapt in order to tailor maintenance (remedial measures) and management decisions to address specific site conditions. This form of management will allow for response to unforeseen or unpredictable problems early and maintain progress toward the performance criteria and project goals. For example, an anticipated solution to a problem in Years 1 through 3 of the nonnative plant management program may be adjusted or replaced with another solution in Year 4 as monitoring results provide new insight to understanding/addressing management strategies. Examples of potential problems and solutions that may be implemented during the post-implementation maintenance and monitoring phase are provided below. Although potential solutions are listed these may evolve over time based on monitoring and adaptive management. The actual problems encountered, when relevant, and the adaptive management approach taken will be discussed in each annual monitoring report.

- *Potential Problem:* Nonnative plant treatment deemed ineffective for one or more species.  
*Potential Solutions:* Identify and implement one or more alternative treatment methods and monitor effectiveness.
- *Potential Problem:* Cover of one or more nonnative plant species exceeds performance criteria.  
*Potential Solutions:* Implement alternative treatment method(s), increase frequency of maintenance visits, installation of native plant cuttings (e.g., willow, cottonwood, and/or mule fat) to occupy space that may be otherwise occupied by nonnative plant species.
- *Potential Problem:* Offsite (e.g., upstream) uncontrolled population of nonnative plant species causing significant adverse establishment of nonnative plant species in project treatment area.  
*Potential Solutions:* Confirm property ownership of location(s) where uncontrolled population of nonnative plant species occurs and determine if the property owner is required



or willing to treat the population, or would provide access permissions to other entities for treatment (contingent on right-of-entry permission).

If nonnative plant species performance criteria are not met, remedial measures will be implemented, as necessary. The specific approach for remedial measures would be determined by site conditions, progress toward attainment of performance criteria, and recommendations collaboratively developed by the biologist, maintenance contractor, and the Project Sponsor.

## 6.4 Performance Criteria and Reporting

Performance criteria are provided to verify the exotic plant management program successfully achieves appropriate standards for this mitigation conservation measure. Success criteria established in the Biological Opinion states that total cover of nonnative riparian plant species will total less than 25 percent, and total cover of giant reed, tamarisk, and castor bean will total less than 5 percent (**Table 6-3**).

**TABLE 6-3**  
**EXOTIC PLANT MANAGEMENT PROGRAM SUCCESS CRITERIA<sup>1</sup>**

Milestone	Success Criteria	Remedial Measures
Years 1-3 (Initial treatment phase)	Treatment of target species (see Table 6-2) within approximately one-third of the total 4.2-mile stretch (approximately 1.4 miles) each year to achieve management along entire length after three years. Total cover of targeted, perennial nonnative riparian plant species will total <25% and total cover of giant reed, tamarisk, and castor bean will total <5%.	Increase frequency of treatment. Revise management actions that are ineffective.
Year 4+	Maintain success criteria along 4.2 mile stretch: total targeted, perennial nonnative riparian plant cover <25%, total cover of giant reed, tamarisk, and castor bean <5%.	Intensify treatment and control (i.e., man hours and/or frequency of maintenance visits) as needed. Revise management actions that are ineffective. Remain current on best available science on treatment methodologies.

<sup>1</sup>. For this project perennial exotics are defined as species listed as “Moderate” or “High” threats to California wildlands by the California Invasive Plant Council (Cal-IPC 2006) and species considered to be potentially problematic within this stretch of the river (e.g., castor-bean [*Ricinus communis*]).

Observations of nonnative plant species will be recorded incidentally in the entire treatment area during annual survey efforts occurring along the Santa Ana River (native fish surveys, microhabitat enhancement, avian surveys, Riverwalk, etc.). The HMMP annual monitoring report will include field notes and datasheets from individual monitoring visits throughout the year. The annual summary will include a list of nonnative plants documented within the project area, estimates of cover, the type and location of management treatments applied, a review of progress of attainment of the performance criteria, any recommended remedial measures, and representative photographs. Aerial imagery will be taken at minimum once every 5-years to assess progress across the landscape. Changes to the landscape (e.g., fire, flood, etc.) may confer a need to take additional aerial imagery.

## **6.5 In-Perpetuity Monitoring and Management**

Monitoring and management of nonnative riparian plant species within the 4.2-mile stretch of the Santa Ana River will continue in-perpetuity. Monitoring and management activities will be summarized in the annual HMMP report submitted to the USFWS and CDFW. If the HCP is adopted prior to or during implementation of this HMMP, the monitoring and reporting associated with this measure will be carried forward into the HCP's monitoring and reporting program.

# CHAPTER 7

## High Flow Pulse Events (SAS-4)

---

The goal of mitigation measure SAS-4 from the SNRC EIR is to create high flow pulse events to flush fine sediment from within the SAS occupied reach of the Santa Ana River. The EIR anticipated that specific methodology to achieve this goal would be identified in the HMMP:

*SAS-4: High Flow Pulse Events. The HMMP will identify means to create high flow pulse events as needed based on substrate conditions, up to 2 times per year. These augmented flow events would be designed to flush out fine sediment from the upstream reach of the affected river segment, and could be implemented through a cooperative agreement with the City of San Bernardino Municipal Water Department or another method.*

Based on recent field efforts in the Santa Ana River, smaller, discretely timed pulse events<sup>3</sup>, and small-scale manipulation of velocity, have been observed to achieve the intent of this measure: flushing fine sediment from within the SAS occupied reach of the Santa Ana River, thereby increasing the surface area of foraging and spawning habitat by exposing gravels and cobbles that were previously covered by silts and sands. These alternate strategies (explained in more detail below) have the benefit of being readily implementable and can achieve results in targeted locations. Consequently, for the remainder of this chapter the use of “high flow” has been omitted, instead the focus is on pulse events.

### 7.1 Location, Timing, and Implementation Methods

In natural channels, periodic flow pulse events are essential to SAS recovery because they deliver new, coarse (gravel and cobble) substrate and scour encroaching vegetation and fine sediment from occupied habitat. Substrate complexity is necessary to support a viable population, as habitat requirements often change depending on life stage. Optimal stream conditions consist of coarse substrates, with a mixture of gravel or cobble and sand, and a combination of shallow riffle and deeper run and pool habitat (USFWS 2017). Shallow riffles with gravel are necessary for spawning, as fertilized eggs often adhere to the gravel substrate (Greenfield et al. 1970). Riffles are also often utilized as rearing habitat by early life stage SAS, especially in areas with adequate riparian cover, however as individuals mature into adulthood there is strong selection for larger, deeper pool habitat (Moyle and Yoshiyama 1992; Moyle 2002). Regardless of habitat preference (riffle, pool, run) substrate complexity is crucial for the success of SAS populations.

A discharge study conducted by Environmental Science Associates (ESA) concluded that a diversion of 6-10 MGD (9.3-15.5cfs) from the Santa Ana River at the RIX discharge would

---

<sup>3</sup> Sourced from RIX/Rialto Treatment Plants. During nonnative aquatic predator control efforts in Rialto Channel and in the vicinity of the confluence of Rialto Channel and the Santa Ana River, and the RIX outfall location, a request is made to Rialto/RIX to cease discharge for the duration of the predator control effort (typically no more than several hours in duration). Ceasing discharge allows for increased efficiency in capturing nonnative predators and removing them from the system. When the treatment plants resume discharge, this creates the references pulsed event.

reduce total instream flow by 18-21 percent (ESA 2015). The results also suggest that while flow reductions up to around 12 MGD (18.5cfs) at RIX would not markedly change the velocity and sediment patterns in the Santa Ana River, reductions of more than 12 MGD would begin to make significant changes in the swifter, coarser substrate upper reaches that would change them to resemble the slower, sandier lower reaches. Additionally, incremental effects of sand deposition resulting from a reduction in velocity could reduce egg development/survival, increase egg predation, or reduce the fitness of adults as they expend greater energy in search of suitable spawning habitat. As such, conservation measures *SAS-1 Microhabitat Enhancements* (**Chapter 1**) and *SAS-4* were developed to offset these potential impacts.

As mentioned above, flow pulse events will be generated as needed (up to two times per year), based on substrate conditions, to flush out fine sand/sediment and supply or uncover coarser gravel and cobble within the mitigation site. Pulsed flows may be facilitated through a cooperative agreement between EVWD and a local HCP partner such as the City of Rialto, through the use of local groundwater wells, and/or potential manipulation of discharge from the Rialto and/or RIX treatment plants. Valley District, on behalf of EVWD is investigating alternative sources of water (e.g., wells) that could be sited adjacent to Rialto Channel and/or along the Santa Ana River to serve as a source of supplemental water supply for various habitat improvement projects. The alternative source(s) could be used for multiple purposes including reducing water temperature in Rialto Channel and the Santa Ana River during summer months, or artificially creating pulse flow events to refresh substrate conditions. Though this EIR mitigation measure references “high” flow pulse events, should manipulation of discharge from the RIX/Rialto Treatment Plants or supplemental flow from other sources, achieve desired beneficial substrate condition outcomes using lower flow volumes (compared to a high flow event), this option may be pursued.

Timing of flow pulses will consider the SAS reproductive season to facilitate improvements to spawning substrate (**Table 7-1**). SAS spawn over gravel beds in flowing water where females deposit eggs in the fine gravel substrate. Eggs typically hatch within 360 hours (15 days) (Greenfield et al. 1970) and larval hatchlings congregate in the shallow, slow-moving water along the stream margin (Moyle 2002).

This measure will initially be implemented using pulsed flows from the Rialto and/or RIX Treatment Plants. Three representative reaches, each 100 meters (m) long, downstream of the RIX outfall, will be selected to measure substrate conditions prior to and after the pulsed event. Substrate conditions will be documented prior to and immediately following the pulsed event to determine potential changes to percent coverage of sand, gravel, and cobble. Based on observations, changes to the timing and intensity of the pulses may be recommended. As other sources of supplemental flow become available, releases from these sources will also be tested to determine methodology that produces the greatest desired effect. Pulse events occurred in fall 2019 and fall 2022, associated with nonnative aquatic predator removal events.

**TABLE 7-1  
FLOW PULSE SCHEDULE**

Monitoring Year	Timing
Year 1	Prior to February 15 and/or after June 15 (depending on storm season and presence of larval native fishes)
Years 2+	Same as in Year 1 – If the monitoring program determines appropriate substrate and/or flow conditions are not being met under the current flow pulse program, future timing and intensity of pulses will be modified. Alternate sources of supplemental flow to create pulsed flow events will be tested as they become available.

## 7.2 Monitoring and Adaptive Management

Substrate conditions within each 100m reach will be measured prior to and following each flow pulse event. Monitoring will consist of measuring (estimating) percent cover of sand, gravel, and cobble. As mentioned, pulsed events will initially rely on manipulation of discharge from the Rialto and/or RIX Treatment Plants. Other sources of supplemental flow to create pulsed events will be investigated as they become available. Implementation of pulsed events up to two times per year will initially fulfill performance criteria; however as alternative sources of supplemental water become available to create pulsed events, data collected from monitoring tested strategies will be used to inform the implementation of methodology that produces the greatest benefit to SAS substrate conditions (as measured by highest percent increase in gravel and cobble cover following the implementation of pulsed flow event) (**Table 7-2**).

**TABLE 7-2  
HYDROLOGY MONITORING SCHEDULE**

Monitoring Year	Timing
Year 1	At least 2 monitoring surveys (pre- /post-monitoring per pulse event)
Years 2+	Annually (post-pulse event)

## 7.3 Performance Criteria and Reporting

Performance criteria during initial years will largely be based on implementation of up to two pulsed events per year using manipulation of discharge from the Rialto and/or RIX Treatment Plants. During these initial years, different strategies will be employed to effect the greatest habitat uplift. Data collected following implementation of these different pulsed flows will be used to direct future/ongoing implementation.

If performance criteria are not met, implementation of remedial measures will be investigated. The specific approach to remedial measures will be determined by site conditions, progress toward attainment of performance criteria, and recommendations collaboratively developed between the Project Sponsor, the USFWS and CDFW.

**TABLE 7-3  
FLOW PULSE PERFORMANCE CRITERIA**

<b>Milestone</b>	<b>Success Criteria</b>	<b>Remedial Measures</b>
Year 1	Mean gravel cover >10% upstream of Riverside Avenue Bridge	Modify flow pulse timing and/or intensity to facilitate appropriate substrate conditions.
Year 2+	Same as above	Same as above, as necessary

The HMMP annual monitoring report will include field notes and datasheets from individual monitoring visits throughout the year. The annual report will include a description of hydrologic monitoring methods and collected data, a review of progress of attainment of the performance criteria, any recommended remedial measures related to flow pulses, and representative photographs.

## **7.4 In-Perpetuity Monitoring and Management**

Monitoring and management of pulsed flow events will continue in-perpetuity. Monitoring and management activities will be summarized in the annual HMMP report submitted to the USFWS and CDFW. If the HCP is adopted prior to or during implementation of this HMMP, the monitoring and reporting associated with this measure will be carried forward into the HCP's monitoring and reporting program.



## CHAPTER 8

---

# Rialto Channel / Santa Ana River Water Temperature Amelioration Project (CM 21.b.iv, SAS-5)

The biological opinion calls for the installation of groundwater wells/storage tank adjacent to Rialto Channel to provide supplemental cool water to reduce water temperatures in Rialto Channel to tolerable levels (less than 86 degrees Fahrenheit) during summer months. Significant effort was employed to determine an appropriate location for wells/tank(s); however, a number of constraints impeded a final solution: lack of willing landowners to sell or lease property; the presence of Delhi Sands flower-loving fly habitat adjacent to Rialto Channel; close proximity to the City of San Bernardino's wastewater treatment plant and the potential for a well to interfere with operations. A temporal solution was also investigated: the use of water-cooling towers sited within the Rialto Treatment Plant to cool the effluent prior to its discharge into Rialto Channel. However, this proposal was not financially viable, and would require significant consumption of power. New data received from the City of Rialto also highlighted that a new approach to this measure may be warranted: comparison of influent and effluent water temperature from the City of Rialto's treatment plant identified that wastewater is entering the treatment plant at high temperatures. This discovery raised the question of whether it might be better to identify locations within Rialto's wastewater pipeline system where mitigation measures could be implemented to reduce temperatures prior to reaching the treatment plant.

As a result of the aforementioned constraints, and as required in the opinion, we have submitted a Supplemental BA with a revised Conservation Measure that will achieve the biological objectives analyzed in the opinion. The revised Conservation Measure proposes funding to be committed by EVWD to contribute towards implementation of a measure(s) (project) to ameliorate Rialto Channel and/or Santa Ana River water temperatures to <86 degrees Fahrenheit. Proposed measures/strategies to reduce water temperature will be developed following completion of a larger-scale water temperature monitoring study (described below, but to be completed by the Upper Santa Ana River HCP applicants).

### 8.1 Location, Timing, and Implementation Methods

#### 8.1.1

Water temperature monitoring will be implemented along Rialto Channel, from the Rialto Treatment Plant outlet to the confluence of Rialto Channel and the Santa Ana River, and downstream along the Santa Ana River to River Road (Figure 8-1). Temperature data loggers (e.g., HOBO Pendant Temp/Light 64K) will be deployed and will record on 1-hr interval



frequency. The loggers will remain in place year-round but may be temporarily removed during storm events to prevent loss of equipment. Lost/stolen data loggers will be replaced as necessary. Data will be downloaded monthly. The goal is to generate a continuous water temperature dataset for Rialto Channel and the Santa Ana River which will be used to develop management actions.

Water temperature data will be used to create a heat map to identify locations, seasonality, timing, and duration of water temperatures >86 degrees Fahrenheit (water temperatures above 86 °F are likely a limiting factor to movement and distribution of SAS (USFWS 2010)). The heat map will be reviewed to investigate potential locations where water temperature amelioration actions may be undertaken. Modeling will also be completed to determine locations, seasonality, timing, and volumes of cool water input needed to reduce water temperatures to <86 degrees Fahrenheit. Potential measures to cool water may include installation of a liner and/or shading along Rialto Channel, and installation of new wells/refurbishment of existing wells along the Santa Ana River to provide cool water environmental flow releases. The proposed implementation schedule for the study is provided in **Table 8-1**.

**TABLE 8-1**  
**WATER TEMPERATURE STUDY, AMELIORATION PLAN DEVELOPMENT, AND AMELIORATION MEASURE IMPLEMENTATION SCHEDULE**

Monitoring Year	Timing
Year 1	Deploy data loggers within Rialto Channel, and along the Santa Ana River from Rialto Channel downstream to River Road Bridge.
Year 1, 2	Analyze water temperature data and create a spatial and temporal heat map of Rialto Channel and the Santa Ana River. Model potential locations, timing, and volume of cool water input needed to ameliorate water temperatures to <86 degrees Fahrenheit. Investigate and recommend other potential strategies/measures that can be implemented to ameliorate water temperatures to <86 degrees Fahrenheit. Implement Same as in Year 1 – If the monitoring program determines appropriate temperature conditions are not being met under the current supplemental water program, future timing, water supply, and temperature requirements may be modified. Continue water temperature monitoring, replace lost/damaged data loggers on an as-needed basis.
Year 3+	Implement at least one water temperature amelioration measure/action/project prior to the end of Year 3. Ongoing collection and analysis of water temperature data to develop a better understanding of spatial and temporal trends in water temperature along the Santa Ana River and ensure that implementation of water temperature amelioration methodology continues to be deployed at appropriate locations.

Success criteria are identified below, EVWD will contribute \$1,000,000<sup>4</sup> towards the implementation of at least one water temperature amelioration measure (Table 8-2).

## 8.2 Monitoring and Adaptive Management

Water temperature monitoring within Rialto Channel and the Santa Ana River will occur in-perpetuity. As previously described, data will be used to generate a spatial and temporal heatmap of Rialto Channel and the Santa Ana River to identify locations and seasonality of water

<sup>4</sup> Cost estimate is based on approximate costs to install a new well.

temperatures  $\geq 86$  °F. Following development of the heatmap, modeling will be conducted to determine potential locations, timing, and volumes of cool water input needed to reduce water temperatures to  $< 86$  °F. Other strategies will also be investigated. This work will culminate in the development of a Water Temperature Amelioration and Implementation Plan. Recommended measures would then be constructed/implemented.

### 8.3 Performance Criteria and Reporting

Performance criteria are provided to ensure ongoing water temperature monitoring, and implementation of water temperature amelioration strategies continue in perpetuity (**Table 8-2**). At least one water temperature amelioration strategy will be implemented within two (2) years of completion of the Water Temperature Amelioration and Management Plan. This strategy will ameliorate water temperature to  $\leq 86$  °F within an area of no less than 0.5 acres within the SAS-occupied portion of the Santa Ana River.

If annual performance criteria are not met, the Project Sponsor will coordinate with the USFWS and CDFW to develop remedial measures, as appropriate. The specific approach to remedial measures will be determined by site conditions, progress toward attainment of performance criteria, and recommendations collaboratively developed by the Project Sponsor, the USFWS and CDFW.

**TABLE 8-2**  
**WATER TEMPERATURE STUDY AND AMELIORATION PLAN PERFORMANCE CRITERIA**

Milestone	Success Criteria	Remedial Measures
Year 1	Development of a preliminary water temperature heat map of Rialto Channel and the Santa Ana River	
Year 2	Completion of Water Temperature Amelioration and Implementation Plan	
Year 3	Water temperature reduced to $\leq 86$ °F within a minimum of 0.5 acres within SAS-occupied Santa Ana River.	If the monitoring program determines appropriate temperature requirements are not being met following deployment of the amelioration measure, increased effort, or other strategies will be implemented.
Year 4+	Maintain water temperature at $\leq 86$ °F within a minimum of 0.5 acres of SAS-occupied Santa Ana River in-perpetuity.	Increase effort/implement additional measures.

Reporting will consist of annual technical memorandums summarizing water temperatures in Rialto Channel and Santa Ana River for the 12-month reporting period, generated heatmaps, results of modeling, and results from implementation of water temperature amelioration strategies. An annual summary of monitoring activities will be incorporated into the HMMP annual monitoring report.

## 8.4 In-perpetuity Monitoring and Management

Water temperature monitoring within Rialto Channel and the Santa Ana River will continue in-perpetuity. The maintenance of water temperature to  $\leq 86$  °F within a minimum of 0.5 acres of SAS-occupied Santa Ana River will also continue in-perpetuity. Once the water temperature amelioration has met the Year 3 performance criteria, as documented in the annual monitoring report and approved by the Project Sponsor, the USFWS and CDFW, monitoring and management associated with this conservation measure will continue in perpetuity. If the HCP is adopted prior to or during implementation of this HMMP, the monitoring and reporting associated with this measure will be carried forward into the HCP's monitoring and reporting program.

## CHAPTER 9

---

# Upper Watershed Santa Ana Sucker Population Establishment (CM 21.b.v., SAS-6)

The goal of this Conservation Measure is to increase the abundance, distribution, and resilience of Santa Ana sucker in the Santa Ana River Watershed by establishing redundant populations in upper watershed tributaries. The biological opinion identifies the establishment of two new locations of SAS within City Creek and Hemlock Creek, or other suitable watershed tributary, with at least one translocation occurring and data indicating that the nascent population is healthy, reproducing, and appears to be successfully establishing prior to diversion of flow. However, because of a number of constraints, translocation has not yet occurred. As required in the biological opinion, we have submitted a Supplemental BA with a revised Conservation Measure that will achieve the biological objectives analyzed in the opinion. The revised Conservation Measure proposes that translocation occur as soon as possible and identifies a financial security to provide assurances to the USFWS that the translocations will occur.

Though not yet implemented, significant progress has been made in preparation of the translocations: the Santa Ana sucker Translocation Plan has been prepared and approved by the USFWS and CDFW, multiple translocation streams have been assessed to verify their suitability for receipt of Santa Ana sucker, and two fish raceways have been constructed at the Riverside-Corona Resource Conservation District's Greenbelt Facility. Relevant permitting from the USFWS and/or CDFW (e.g., state scientific collection permit, MOU, etc.), as appropriate, will be secured prior to implementation of Upper Watershed Santa Ana Sucker Population Establishment.

### 9.1 Location, Timing, and Implementation Methods

One of the four SAS recovery plan objectives involves expanding the range of the species by restoring habitat and reestablishing occurrences within its historical range (USFWS 2017). In addition to the recovery plan, the Upper Santa Ana River Habitat Conservation Plan (HCP) will be implementing the translocation of SAS into formerly occupied mountain tributaries of the Santa Ana River (Appendix D; Dudek 2022). A key goal of the SAS Recovery Plan is to expand the current range of the species through modification or removal of existing barriers, restoration of suitable habitat, and/or reintroduction of the species to areas within its historical range in a configuration that ensures reasonable certainty the remaining genetic makeup of the species has been preserved and can withstand catastrophic events in the watershed.

This HMMP outlines the translocation and establishment of two populations of SAS within City Creek and Hemlock Creek, or other suitable unoccupied location within the historic range of the species within the Santa Ana River watershed as approved by the USFWS and CDFW. City Creek is expected to be the first tributary to receive translocated SAS. Goals and success criteria of the establishment plan are identified below, along with the amount of financial assistance to be provided by EVWD to contribute towards a regionally beneficial SAS population translocation and establishment program.

### 9.1.1 Native Fish Raceway Facility

The RCRC Native Fish Stream and Raceway Facility provides recovery and research opportunities for Inland Empire native fish populations and supports restoration and recovery projects in local streams (Dudek 2022). Three native fish species are being studied at the facility: Santa Ana speckled dace (*Rhinichthys osculus* ssp.), arroyo chub (*Gila orcutti*), and Santa Ana sucker (Dudek 2022). A second facility has also been constructed, the Greenbelt Off-site Aquatic Facility (Greenbelt Facility), to help facilitate, augment, and sustain the continued survival and recovery of SAS (Dudek 2022). The Greenbelt Facility is proposed to be used as a SAS headstart / “grow out” facility: young-of-year will be captured from the Santa Ana River, transferred to the Greenbelt Facility, and temporarily held for no more than 24 months (*i.e.*, no more than one spawning season) prior to translocation to proposed mountain tributary receiver site(s).

The Greenbelt Facility currently has two 300-foot, 30,000-gallon raceways, a chilled 1,500-gallon emergency unit, and two sources of water from both city supply and groundwater well sources (Dudek 2022). The site has the capacity to accommodate four additional raceways (six in total). The Facility is protected by perimeter fencing, cross fencing of the runs, and security cameras. Back-up generator units have been installed to maintain pump function. Back-up generator units will operate on propane so power outages, natural disasters, or equipment failure can be ameliorated through mechanical offset. The units are tested monthly to ensure proper operation. Back-up fish units will also be used to hold fish if there is ever a failure or equipment issue.

### 9.1.3 Source of Santa Ana Sucker for Relocation

SAS should be sourced from multiple areas along the mainstem river to maximize genetic diversity of the receiver population. Details regarding the source and capture methods of SAS broodstock for the translocation program are provided in Dudek (2022; Appendix D).

### 9.1.4 Translocation Site Background and Description

A single CNDDDB record of Santa Ana sucker occurs in City Creek from 1982. It was recorded approximately 0.5 mile upstream of the Forest Service Road 1N22 crossing by Hoover F. Currently there is a large rock pool on the West Fork of City Creek at this approximate location.

Site investigations conducted based on the Santa Ana Sucker Translocation Plan Phase 1 evaluation and Phase 2 field assessments for City Creek indicate that suitable habitat for SAS is present within the evaluated stream reaches and likely throughout much of the City Creek drainage. Based on the results of the spring and fall biological assessments, suitable habitat for spawning, larval and juvenile rearing, adult holding, and refugia are all present (to varying

degrees) within the evaluated reaches. The hydrology of City Creek is sufficient to support all SAS life stages. The presence of Santa Ana speckled dace within City Creek attests to the maintenance of sufficient hydrology for native fish.

Water quality parameters in the spring and fall were within the range of values documented in streams occupied by SAS, with the exception of lower pH values, typical of Santa Ana River tributary streams. Based on a comparison of food resources utilized by SAS and documented in Big Tujunga Creek, suitable food resources (primarily diatoms) are present and abundant in both the spring and fall in City Creek. Additionally, autecological information on the four most abundant algal species (83% of the community) in the spring and fall Surface Water Ambient Monitoring Program (SWAMP) samples indicates that all of these diatoms are sensitive to nutrient and organic enrichment and are less tolerant of pollution and degraded conditions. Benthic Macroinvertebrates (BMI) community data also indicates good stream conditions, especially the large percentage of Ephemeroptera, Plecoptera and Trichoptera taxa (49.7% in the spring and 23.0% in the fall), which are associated with good water quality and habitat conditions.

Based on site assessment performed at City Creek, this tributary appears to contain relatively high-quality stream habitat capable of supporting a translocated population of SAS. Additionally, the presence of speckled dace (which have similar habitat requirements) at the SWAMP and supplemental reach stations also indicates appropriate habitat conditions for SAS. Finally, historical flow data indicates that outflows during the late summer and fall in most years (although very low) is likely sufficient to maintain water quality and suitable habitat to support the species.

### 9.1.5 Capture, Hold, and Release Strategy

Santa Ana sucker will be collected from the Santa Ana River and transferred to native fish raceways at the Greenbelt Facility or translocated directly to receiver sites. Capture will focus primarily on young-of-year, however other age classes may also be collected. Number of individuals captured and transferred to the Greenbelt Facility will be consistent with approved permits issued by the USFWS and CDFW. Fish will be held at the Greenbelt Facility for no more than 24 months (no more than one spawning season) prior to translocation to mountain tributary receiver sites. The entire cohort within each raceway will be translocated. Release strategy methods for translocated SAS are briefly described below. Full details on the release strategy are provided in the Santa Ana Sucker Translocation Plan (Dudek 2022; Appendix D).

Depending on the temporary holding time, and age classes of fish captured from the Santa Ana River, it is likely that each translocated cohort will consist of multiple age classes. Total number of individuals translocated will be dependent on multiple factors, including temporary hold duration at the Greenbelt Facility, and reproductive rate and survival while in captivity. Both breeding age adults (1+ years old) and young-of-the-year (YOY) SAS will be released together. Cohorts to be released together will be raised in the same raceway. YOY fish will make up a majority of the translocation population (up to 80%) due to the high fecundity of the species. The number of fish needed to establish and sustain a new population will vary based on location, stream outflow, water velocity, food sources, and substrate composition, but we are assuming at

least 400 fish will constitute the size of the founding population. Serial translocations will be used to enhance population genetics. The timing of fish release will be based on the number and size of fish to be released, and streamflow (e.g., too little or too much flow will delay fish release). In general, translocations will occur following the end of high-flow/flood events in winter and early spring, but preferably before the winter/spring spawning period. Depending on the timing of rainfall events, snowmelt runoff, and SAS spawning, this window could be very short in wet years or protracted in drier years. In existing low elevation populations spawning can begin in January and continue through July, depending on the rainfall year. At higher elevations, spawning usually occurs from March through May.

In the event that fish cannot be released prior to the spawning period, fish should be released as soon as possible on the declining arm of the hydrograph in that specific watershed. A third release period will occur September through November dependent on weather conditions. Young-of-the-year SAS will be large enough by September to manage winter storms and runoff in upper tributary streams. The success of these release windows will be compared to determine if there is an optimal period. A proposed schedule for translocation is shown in **Table 9-1**.

### 9.1.6 Population Establishment Schedule

**TABLE 9-1  
POPULATION ESTABLISHMENT SCHEDULE**

Monitoring Year	Timing
Year 1	Dependent on climate and site conditions. Preferred: February and March. Alternative: June-November (One or more serial translocations). <sup>1</sup>
Years 2+	Same as above. Additional translocations will be performed as needed based on results of Population Establishment Monitoring (Table 9-3).

<sup>1</sup> Timing of release will be compared to determine if there is an optimal period for release.

## 9.2 Monitoring and Adaptive Management

Below is a summary of monitoring and adaptive management plan for translocated SAS. Full details on post-translocation monitoring are provided in the Santa Ana Sucker Translocation Plan (Dudek 2022; Appendix D).

Monitoring requirements were determined for multiple demographic elements to evaluate SAS translocation goals and objectives (Dudek 2022). **Table 9-2** provides SAS monitoring elements, data required, and data collection methods, and **Table 9-3** provides a monitoring schedule. See Dudek (2022; Appendix D) for monitoring details for each element.

**TABLE 9-2  
POPULATION ESTABLISHMENT MONITORING OBJECTIVES AND METHODS<sup>1</sup>**

Element	Data Needed	Method
Reproduction and recruitment (larvae and juveniles)	Abundance and age class/presence of YOY	Snorkel survey/bank observation
Fish condition	Fish body shape observations or weight and length data	Snorkel survey/bank observation or electrofishing sample

Element	Data Needed	Method
Relative abundance	Catch per unit effort	Snorkel survey or electrofishing <sup>2</sup>
Density	Population estimate	Snorkel survey or electrofishing <sup>2</sup>
Distribution	Presence-absence data	Snorkel survey or electrofishing <sup>2</sup>
Genetics	Genetic variation	Fin clip

<sup>1</sup> Table modified from Table 1 in section 7.2 from Dudek (2022). Data needs and sampling methods are proposed and may change based upon sampling constraints.

<sup>2</sup> Snorkeling will be the preferred methodology to reduce impacts on fish when handling is not needed. Electrofishing would be used when appropriate.

**TABLE 9-3**  
**POPULATION ESTABLISHMENT MONITORING SCHEDULE**

Year	Timing
Year 1+	Semi-annual (late-spring and fall): fish, water quality, habitat surveys
Every 5 years	Same as above and genetic sampling

Adaptive management, in the context of this translocation plan, is intended to facilitate decision making and resolving uncertainties associated with translocating SAS into currently unoccupied streams (Dudek 2022). The key to effective adaptive decision making is the identification of alternative hypotheses about resource dynamics for SAS when translocation objectives are not being met, assessment of these hypotheses with monitoring data, and then implementing new management actions at the translocation stream/reach. The goal of the adaptive management process is ultimately to improve management of translocated SAS populations and inform future translocation efforts. An adaptive management decision tree is provided in Figure 5 of Dudek (2022) that is designed to assist translocation project managers in determining an appropriate course of action when monitoring data suggests a translocation effort is not resulting in the expected outcome (i.e., no recruitment).

Southern California streams within the historical range of SAS are flashy in nature and are subject to periodic severe flooding or high flow events, which can displace fish and alter habitat through substrate and vegetative scouring, channel rearrangement, and sediment deposition (Dudek 2022). Because SAS translocation sites are currently primarily isolated from downstream reaches, they may not support sufficient refugia to provide an opportunity for recolonization. As a result, emergency fish rescues (which are expected to be very rare) may need to be considered for translocated populations<sup>5</sup>. Fish rescue efforts would be dependent on climate and translocation site conditions. Climate and translocation site conditions will be monitored to determine if an emergency rescue effort is warranted. Rescue efforts will be coordinated with USFWS, CDFW,

<sup>5</sup> For example, where fish are washed downstream of barriers or where they are washed into areas subject to emergency activities (e.g., areas requiring the movement of streambed/basin materials to restore facility function) and would likely expire if not relocated back upstream.



and the land managers of the watershed. Fish rescues for streams typically involve netting and electrofishing of fish out of the stream and placement into transport vessels with suitable water quality. Prior to conducting a rescue, the release destination for rescued fish must be determined. Release locations could include other potential or current translocation streams within the same watershed as the RCRC facilities, or currently occupied habitat in the watershed.

### 9.3 Performance Criteria and Reporting

A successful translocation program will expand the range of the Santa Ana sucker by reestablishing occurrences within its historical range and preserving the genetic makeup of the species to withstand catastrophic events in the watershed (Dudek 2022). The SAS Recovery Plan calls for “persistent occurrences of healthy fish” with one delisting criteria of “stable or increasing population averaged over 15 years in multiple tributaries of the Santa Ana River, including City Creek (USFWS 2017).

The Santa Ana Sucker Translocation Plan provides a set of objectives for individual translocations of SAS into Santa Ana River tributaries (See section 7.1.2. of Dudek 2022). Below in **Table 9-4**, the translocation objectives have been modified into success criteria for establishment of a SAS population in City Creek.

If annual performance criteria are not met, the Project Sponsor and/or a qualified biologist will coordinate to determine if remedial measures are necessary. The specific approach to remedial measures will be determined by site conditions, progress toward attainment of performance criteria, and recommendations collaboratively developed by the biologist, Project Sponsor, the USFWS and CDFW.

The biologist will prepare succinct memoranda after each monitoring visit for submittal to the maintenance contractor and Project Sponsor, and an annual report of activities which will be incorporated into the HMMP annual monitoring report. The annual report will include summaries of all fish surveys and habitat assessments.

**TABLE 9-4  
POPULATION ESTABLISHMENT SUCCESS CRITERIA**

<b>Milestone</b>	<b>Success Criteria</b>	<b>Remedial Measures</b>
Year 1	SAS present Distributed along >10% of the occupiable stream	Additional translocation(s) of SAS
Years 2-4	SAS present Distributed along >25% of the occupiable stream or 2 or more age classes present Body index similar to that of San Gabriel fish	Additional translocation(s) of SAS Examine threats to species success Same as above.
Every 5 Years	Occupiable habitat available for SAS beyond occupied range (species is able to expand range) Same as above Genetic diversity is the same or contains greater diversity than founding population	Same as above. As needed, conduct additional translocations to increase genetic diversity.

### 9.3.1 Translocation Cost and Financial Assurances

To provide assurances that the translocations will be implemented, and progress made towards achievement of success criteria, the Supplemental BA proposes the funding of a financial security to be held on deposit until the translocations are complete. The estimated cost to implement the translocations and five years of monitoring and management is identified in Appendix D. For the purposes of the cost estimate it was assumed that EVWD would fund a one-quarter-time position with CDFW for a period of five years. Appendix D also includes approximate costs for field equipment and vehicle use.

EVWD will provide Consumer Price Index (CPI) adjustments/adjustments for changes in CDFW salaries, to the financial security on an annual basis to ensure that sufficient funding is secured should the security need to be drawn on by CDFW.

EVWD will fully fund the financial security prior to diversion.

## 9.4 In-Perpetuity Monitoring and Management

Monitoring associated with this conservation measure will continue for the duration of diversion (anticipated to be in perpetuity). If the HCP is adopted prior to or during implementation of this HMMP, the monitoring and reporting associated with this measure will be carried forward into the HCP's monitoring and reporting program.

The estimated costs associated with implementation of a regional population establishment program are identified in Appendix D. Many of the costs associated with this breakdown will be assumed by the Upper SAR HCP once finalized; consequently, the estimate represents the maximum. EVWD's maximum contribution to the regional population establishment program is estimated at \$360,509.

## **CHAPTER 10**

---

# **Annual Monitoring of Santa Ana River (CM 21.b.vi., SAS-7)**

The goal of this measure is to report on the hydrological and biological conditions and activities completed under this HMMP.

### **10.1 Location, Timing and Monitoring Methods**

This measure will provide reporting on all of the long-term monitoring and management activities completed under this HMMP. The annual reporting will include a summary of all activities completed over the previous 12 months. The report will summarize all activities implemented, methodology employed, timing of implementation, success/failure of monitoring/management actions, and recommendations for adjustments to future monitoring/management actions.

### **10.2 Analysis and Reporting**

The HMMP annual monitoring report will provide an annual summary of hydrologic monitoring methods, a comprehensive analysis of collected data, a review of progress of attainment of the performance criteria, and any recommended remedial measures needed to achieve performance criteria. The report will also include representative photographs.

### **10.3 In-Perpetuity Monitoring and Management**

Monitoring and management presented in this HMMP will occur in-perpetuity. If the HCP is adopted prior to or during implementation of this HMMP, the monitoring and reporting associated with this measure will be carried forward into the HCP's monitoring and reporting program.

## **CHAPTER 12**

---

# **Summary of Reporting and Agency Coordination**

## **12.1 Compilation of Reporting for All Measures**

EVWD will be responsible for implementation and report compilation of the requirements contained in this HMMP.

## **12.2 Resource Agency Coordination**

### **12.2.1 Reporting**

An annual progress report, as described in Chapter 10 will be prepared by the Project Sponsor or qualified contractors and submitted to USFWS and CDFW. The annual report will summarize the monitoring program and data collected for that calendar year, update prior reports in a cumulative fashion, and include raw data as well as data analysis and comparison with compliance and performance criteria, as applicable. The annual report will describe operations, GIS maps of sampling locations, data for each monitoring action, habitat conditions and environmental data during monitoring, and any recommendations for improvement of monitoring methods or actions. Monitoring results that prompt consideration of immediate adaptive management or maintenance actions will be communicated in a timely manner, in advance of annual report preparation.

### **12.2.2 Review and Feedback**

Monitoring results will be reviewed by the Project Sponsor, USFWS, CDFW and SAS experts to determine whether project objectives and/or success criteria are being met. If project objectives and/or success criteria are not being met, possible actions may include: more detailed diagnostic monitoring; corrective actions if known, necessary and feasible; adjustment of short-term operations or long-term management plans; and/or further study if necessary to reduce uncertainties.

## **12.3 In-Perpetuity Monitoring and Management**

Monitoring, adaptive management and reporting requirements identified in this HMMP will continue in perpetuity. If the HCP is adopted prior to or during implementation of this HMMP, the requirements outlined in this document will be carried forward into the HCP's monitoring and reporting program.



# CHAPTER 13

---

## References

- Bossard, Carla., John M. Randall, and Marc C. Hoshovsky. 2000. *Invasive Plants of California Wildlands*. University of California Press, Berkeley, California.
- California Invasive Plant Council (Cal-IPC). 2006. *Exotic Invasive Species of Greatest Ecological Concern*.
- Dudek. 2022. *Santa Ana Sucker Translocation Plan*. Dudek Environmental.
- Environmental Science Associates (ESA). 2016. *Sterling Natural Resource Center Biological Assessment*. June.
- ICF International (ICF). 2023. *Upper Santa Ana River Watershed Nonnative Aquatic Species Control Program*. June.
- U.S. Fish and Wildlife Service (USFWS). 2010. *Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for Santa Ana Sucker; Final Rule*. 50 CFR Part 17 [Docket No. FWS-R8-ES-2009-0072; 92210-1117-0000-B4].
- U.S. Fish and Wildlife Service (USFWS). 2017. *Recovery Plan for the Santa Ana Sucker*. U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California.
- U.S. Geological Survey (USGS). 2023. *Native Fish Population and Habitat Studies, Santa Ana River, California*: U.S. Geological Survey data release collection, <https://doi.org/10.5066/P9W7SV9M>. July.
- Williams, B.K., R.C. Szaro, and C.D. Shapiro. 2009. *Adaptive management: The U.S. Department of the Interior technical guide*. Adaptive Management Working Group, U.S. Department of the Interior, Washington, DC.



## **APPENDIX A FILES**

---

Habitat Parameters for Various Life History Stages of Santa Ana Sucker – Sterling Natural Resources Center

Permitting for Microhabitat Enhancement along the Santa Ana River

Annual Report: Santa Ana River Stream Habitat Improvement Pilot Project (SBVMWD 2022)



## **APPENDIX B**

---

# Nonnative Aquatic Predator Control Plan (ICF 2023)

# **APPENDIX C**

---

## **Exotic Weed Management Plan (IERCD 2023)**

## **APPENDIX D**

---

# Rialto Channel/Santa Ana River Water Temperature Amelioration Project Cost Estimate

## **APPENDIX E FILES**

---

Santa Ana Sucker Translocation Plan (Dudek  
2022)

EVWD Translocation Financial Security

Santa Ana Sucker Regional Population  
Establishment Program Endowment Estimate



## United States Department of the Interior

### U.S. FISH AND WILDLIFE SERVICE

Ecological Services  
Carlsbad Fish and Wildlife Office  
2177 Salk Avenue, Suite 250  
Carlsbad, California 92008



In Reply Refer to:  
FWS-SB-16B0182-17F0387-R002

January 3, 2022  
*Sent Electronically*

Ms. Lily Lee  
Manager, Infrastructure Section  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street  
San Francisco, California 94105

Attention: Mimi Soo-Hoo

Subject: Re-initiation of Formal Section 7 Consultation on the Proposed Sterling Natural Resource Center, San Bernardino County, California

Dear Ms. Lee:

We are writing in response to your October 14, 2021, letter requesting reinitiation of consultation for the proposed Sterling Natural Resources Center (SNRC or Project) because of a change in the Project's location (*see paragraph* four) in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). Our original biological opinion (FWS-SB-16B0182-17F0387, 2017 Biological Opinion) for the Project addressed impacts to the federally endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*; SBKR) and the federally threatened Santa Ana sucker (*Catostomus santaanae*; SAS) and their respective designated critical habitats and was issued on March 9, 2017. We also issued an amendment to our biological opinion on August 11, 2017 (FWS-SB-16B0182-17F0387-R001, 2017 Amendment) that addressed the roles and responsibilities of both the EPA and State Water Board associated with the implementation of the SNRC conservation measures.

On September 1, 2021, the Clean Water State Revolving Fund (CWSRF) informed the U.S. Environmental Protection Agency (USEPA) that the East Valley Water District (EVWD) in cooperation with the San Bernardino Valley Municipal Water District (Valley District) was modifying the Project. Specifically, Valley District added a new recharge basin, and removed from the Project the conveyance pipeline for discharge into City Creek, Santa Ana River pipeline, and Redlands Basins. These modifications are changes to the physical location of the proposed Project, and therefore changes the location of the action area. Correspondingly, the USEPA updated its findings of effects to listed species from the Project's new action area. On October 14, 2021, in light of changes to the proposed Project, the USEPA reinitiated consultation.

## REVISED PROJECT DESCRIPTION

Valley District is proposing to construct the SNRC facility in the City of Highland to treat wastewater generated in the EVWD service area for groundwater recharge in the upper Santa Ana River watershed. EVWD currently conveys its wastewater to the City of San Bernardino for secondary treatment at the San Bernardino Water Reclamation Plant (SBWRP) and tertiary treatment at the Rapid Infiltration and Extraction (RIX) facility which discharges to the Santa Ana River. The proposed Project would instead treat, recycle and reuse the wastewater for multiple beneficial uses within the upper Santa Ana River watershed. Valley District proposes to divert up to six million gallons per day (MGD) of wastewater from the RIX facility. This wastewater would not be discharged into the Santa Ana River after treatment, as happens currently.

The diverted six MGD would be treated at the Sterling Natural Resource Center and then discharged into the newly proposed Weaver basins in the City of Highland, California. The originally proposed SNRC discharge was into City Creek and Redlands Basins. The original discharge locations had effects to SBKR. The Weaver basin modification does not. The proposed Project also includes a habitat conservation area in the southeastern portion of the Weaver Basin site. The conservation lands are in SBKR designated critical habitat which may provide suitable habitat for San Bernardino kangaroo rat and Santa Ana River woolly-star

There would be one emergency overflow discharge location into an outfall to Weaver Channel, which is located east of the Weaver Basin site. Overflow discharge would flow from Weaver Channel into Plunge Creek, and then City Creek, and ultimately the Santa Ana River. However, the Weaver Basins are being designed to eliminate the need to use the emergency overflow. Under an emergency shut down scenario, the basins and emergency overflow tank, should it be needed, would receive a transient surge of water. However, because no more than three of the five basins are expected to be in operation at the same time, there will always be capacity within the basins themselves. Inclusion of the tank and outlet is a requirement for emergency purposes and when localized high ground water conditions are present. Because there is sufficient capacity in the basins, and the water supply to Weaver could be shut down at the SNRC treatment plant in the case of an emergency, it is highly unlikely that use of the emergency overflow would ever be needed.

This amended biological opinion is based on information provided in the following documents and communications: biological assessment (ESA 2016a; BA), supplemental biological assessment (ESA 2021; supplemental BA), Habitat Maintenance and Monitoring Plan (ESA 2016c; HMMP) and an amendment to the HMMP (Valley District 2017), Reduced Flow Model (ESA 2015b), focused survey reports, trapping results, and conversations with Valley District.

Change in discharge location to the Weaver basins does not change Project effects on Sucker. The sucker analysis in the 2017 Biological Opinion remains valid. The change in discharge location to the Weaver basins does change effects to SBKR and its' designated critical habitat. The revised analysis is provided below. This amendment addresses the change in the project description (*above*), changes to the conservation measures for SBKR and Santa Ana River

Woolly Star, changes to the action area, changes to the effects of the action on SBKR, and changes to the incidental take statement for SBKR. All other portions of the 2017 Biological Opinion and the 2017 Amendment remain valid and in force.

## CONSERVATION MEASURES

The general and species-specific conservation measures (CM) listed below have been included in the Project to avoid and minimize impacts to federally listed species and their designated critical habitats or to offset impacts that may otherwise adversely affect a listed species or designated critical habitat. The proposed modifications to the physical location of discharge locations and groundwater recharge areas have made some conservation measures from the 2017 Biological Opinion unnecessary and other measures have been revised. Conservation measures listed in this document are exhaustive and supersede any conservation measures listed in our 2017 Biological Opinion for the Project. Eliminated Conservation Measures include those intended to minimize effects to SBKR and Santa Ana River Woolly-Star. For comparison, the Conservation Measures are provided in Appendix B with the changes from our 2017 Biological Opinion indicated in bold and strikethrough text.

### *General Measures*

- CM 1. Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) will be provided to work crews by a qualified biologist(s) prior to the commencement of construction activities. Each worker will receive the WEAP training prior to beginning work on the Project. Training materials and briefings will include but not be limited to, discussion of the federal and state Endangered Species Acts, the consequences of noncompliance with Project permitting requirements, identification of special-status plant and wildlife species and sensitive natural plant community habitats present in or adjacent to the work areas, a contact person in the event of the discovery of dead or injured wildlife, and review of construction-related avoidance and minimization requirements. Maps showing the location of special-status plants and wildlife, exclusion areas, or other construction limitations (i.e., limited operating periods) will be provided to the environmental monitors and work crews prior to ground disturbance.
- CM 2. Limits of Disturbance. Prior to construction in or adjacent to sensitive habitat areas and under the direction of a qualified biologist, Valley District will clearly delineate the construction right-of-way (stake, flag, fence, etc.) that restricts the limits of construction to the minimum necessary to implement the Project.
- CM 3. Biological Monitoring. Prior to the start of construction, Valley District will retain a qualified biological monitor on site (Weaver Basins) during the initial ground disturbance and on an as-needed basis to ensure that construction activity is being confined to the delineated area and to verify that the barrier fencing (CM 6) is intact. The biological monitor will be a qualified biologist with species expertise appropriate for this project. The biological monitor will ensure compliance with

the Project description evaluated in the biological opinion, including all CMs and terms and conditions, and will have the authority to halt or suspend all activities until appropriate corrective measures have been taken. The biological monitor will report any non-compliance immediately to the USFWS.

- CM 4. Construction Best Management Practices. The Contractor will implement the following Best Management Practices during construction of pipelines and discharge structures to protect any adjacent sensitive natural communities that provide habitat for special-status species.
- a. The following water quality protection measures will be implemented during construction:
    - i. Stationary engines, such as compressors, generators, light plants, etc., will have drip pans beneath them to prevent any leakage from entering runoff or receiving waters.
    - ii. All construction equipment will be inspected for leaks and maintained regularly to avoid soil contamination. Leaks and smears of petroleum products will be wiped clean prior to use.
    - iii. Any grout waste or spills will be cleaned up immediately and disposed of off-site.
    - iv. Spill kits capable of containing hazardous spills will be stored on-site.
  - b. To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered with tarp, plywood or similar materials at the close of each working day and will be inspected visually to confirm animals would be excluded, to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow for animals to escape, if necessary. Before such holes or trenches are backfilled, they should be thoroughly inspected for trapped animals. If trapped wildlife is observed, escape ramps or structures will be installed immediately to allow escape.
- CM 5. On Site Overnight Storage. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods should be thoroughly inspected for birds and other wildlife before the pipe is subsequently buried, capped, or otherwise used or moved.

### ***San Bernardino Kangaroo Rat***

- CM 6. For avoidance of SBKR at the Weaver Basin site barrier fencing will be erected between and suitable SBKR habitat located south of the Project site. The fencing configuration and materials do not need to meet the specifications found in Appendix



- A. An alternative fence design or material may be used. Proposed fence installations may be submitted to the USFWS for review
- b. The integrity of the fencing will be maintained in good working order throughout the duration of the Project.
- c. Construction access openings, if included within the barrier fence, will be closed and secured at the end of each work day using the at-grade fencing method.
- d. The fence will remain in place for the duration of construction activities and removed at the completion of the relevant Project activity.

CM 16. Nighttime construction and night lighting will not be allowed.

CM 17. Valley District will prepare and implement a revegetation plan to replace temporarily impacted habitat in proposed impact areas located within designated SBKR critical habitat. The revegetation plan will be submitted to the USFWS a within 120 days of commencing construction activities in SBKR critical habitat. At minimum, the revegetation plan will include the following elements:

- a. Relevant conditions of Project permits and this biological opinion.
- b. Clear guidelines and quantifiable success criteria to measure progress toward fulfilling relevant conditions and to determine that implementation has been successfully completed.
- c. Performance standards to set appropriate quantitative and qualitative measurements of coverage and diversity of the scalebroom scrub vegetation and non-native vegetation to assure that the effort is progressing toward replacement of habitat to pre-Project levels of cover and diversity, or high quality as approved by the USFWS. Within 5 years after commencing revegetation efforts, cover and diversity should have progressed toward an intermediate phase of scalebroom scrub. Both early and intermediate stages of scalebroom scrub (native perennial plant cover 30 to 50 percent) and limited non-native plant species cover (less than 10 percent) provide suitable habitat for SBKR and woolly-star.
- d. Guidelines and specifications for salvage and redistribution of topsoil, vegetative debris, and organic material (“duff”), as well as other pertinent planting specifications.
- e. Guidelines for controlling and monitoring invasive, non-native plants.
- f. Specifications for seed application including guidance for materials and source material, rates of application, and appropriate application methods and timing specifications, and methods will be based on locally successful SBKR habitat restoration Projects within the watershed.

- g. Descriptions of maintenance and monitoring methods to promote successful implementation of the plan.

CM 18. Permanent impacts to unoccupied designated critical habitat for SBKR-at Weaver Basins (approximately 16.93 acres), will be offset onsite through permanent conservation of approximately 17 acres of unoccupied designated SBKR critical habitat in the southeastern portion of the Weaver Basins site.-Temporary impacts to designated SBKR critical habitat at Weaver Basins will be-restored in place. All SBKR habitat temporarily impacted during construction will be restored in accordance with the approved revegetation plan. Santa Ana River Woolly-Star

*Santa Ana Sucker*

- CM 21. The following measures will avoid, minimize, and offset Project-related impacts to SAS associated with up to 1.21 acres of permanent degradation of occupied designated critical habitat in the mainstem of the Santa Ana River from the RIX outfall downstream to approximately Mission Boulevard.
- a. Valley District will prepare and implement the HMMP which will identify habitat improvement actions and methods for implementation, monitoring, and maintenance. The diversion of wastewater flow from the RIX Facility to the SNRC will not occur until Valley District’s Santa Ana Sucker HMMP has been approved by the USFWS and the actions proposed in this measure have been completed or show evidence of significant progress toward successful implementation such as engineering design(s) and/or other regulatory compliance such as the California Environmental Quality Act, or consultation with the USFWS will be reinitiated.
  - b. The HMMP will include the measures listed below to offset direct and indirect impacts to SAS and its habitat resulting from the loss of up to 22.3 percent (6.43 MGD of 28.4 MGD calculated from the November 2014 to May 2016 discharge) discharge from the RIX outfall into the Santa Ana River. The HMMP will contain measures to increase the number of individual SAS in the Santa Ana River, increase the area of suitable and occupied habitat in this watershed, and establish two new populations in the watershed. It will be implemented by a contracted, qualified, and permitted entity in coordination with the USFWS. The HMMP will specify goals and performance criteria for each conservation measure and include the following elements:
    - i. Habitat Node Creation (microhabitat enhancements) to offset the potential reduction of suitable habitat available to sucker, including the above listed habitat features, resulting from decreased flow, decreased water velocity, and decreased sand transport.

Objective: Increase the total area of suitable habitat available to sucker, including riffles, small scour pools, and exposed patches of gravel/cobble

substrate by strategically placing a series of structures within the stream flow to manipulate water movement and create these microhabitat areas.

This measure is expected to enhance perennial stream habitat within at least 1.5 acres of occupied habitat along about 2.5 miles of river, as measured by the area of pools created, gravel/cobble substrates exposed, and other functional SAS habitat features created/enhanced. The creation of all 6 habitat nodes will occur prior to any water diversions. If future data suggests that impacts to the species are either greater than expected or habitat nodes cannot be created to functionally offset Project impacts, the Project will obtain technical assistance from the USFWS to develop a new or revised CM that will achieve the biological objective(s) as analyzed in this opinion, or consultation with the USFWS will be reinitiated.

The Project will implement microhabitat enhancements (habitat nodes) within ecologically valuable segments of the Santa Ana River downstream of the RIX discharge location to improve the abundance and distribution of the above mentioned SAS habitat features. Enhancements will include the use of natural materials to increase scour and pool formation. Substrate augmentation (e.g., river gravel and cobble) may also occur in the same area to enhance perennial stream habitat function. Examples may include placement of large boulders and/or large woody debris to increase velocity of flow and gravel bar patches as well as deep pool refugia areas. A minimum of six habitat nodes will be created.

One naturally occurring riffle/pool feature (natural node) in the Santa Ana River was observed to enhance the stream habitat for SAS for approximately 330 feet (100 meters, 0.25 acres). Between 2015 and 2016 the USGS Native Fishes Survey found that the relative abundance of exposed gravels increased in this area suggesting that the size of the affected area associated with the node is subject to fluctuate based upon environmental conditions and the abundance of fine sediment in the inset channel (SAS occupied stream) (Brown and May 2016, 2017). Although all nodes will be unique in design, each will serve to replicate the scale and provide similar ecological functions as the natural node discussed above.

The nodes will be located in the Santa Ana River mainstem between the RIX outfall and River Road Bridge. To maximize habitat value and function locations should be associated with mainstem tributaries (Evan's Lake, Arroyo Tequesquite, Sunnyslope Drain, Anza Drain, Hole Creek, etc.). Locations will need to be further refined by field survey data.

Habitat nodes will be monitored annually and the survey data will be used to assess the need for corrective measures. Annual monitoring will

include, at minimum, water quality, visual estimates of substrate cover types, and fish surveys. When the cumulative cover of boulder, cobble, and gravel is found to be less than 35 percent for any habitat node (mean cover measured over a 0.25 acre reach associated with a node), maintenance and/or reinstallation of nodes will be conducted to maintain a minimum of 0.25 acres of habitat enhancement for every node or a cumulative enhancement of 1.5 acres for all six nodes. All work conducted in the Santa Ana River will be done in coordination with the USFWS and CDFW.

If vegetation removal is required for ingress, egress, or other work areas associated with Habitat Node creation and maintenance it will be revegetated. Quantitative and qualitative performance standards addressing vegetation cover and diversity will be included in the HMMP. Within 3 and at most 5 years after commencing revegetation efforts, cover and diversity should have progressed toward pre-Project levels of cover and diversity, or higher quality for the benefit of vireo and SAS. It is not anticipated that maintenance work, requiring vegetation removal, will be needed more frequently than every 5 years.

- ii. Aquatic Predator Control Program to offset the potential increase in non-native predator habitat (pools or other microhabitats that provide relatively deep and slow velocity water flow) resulting from reduced discharge volume.

Objective: Reduce the abundance of non-native predators in the reach of river affected by the Project so as to maximize native fish survival. The non-native predator removal program will be focused on reducing the abundance of non-native aquatic predators immediately preceding the start of the sucker spawning season (approximately March 1). Species to be removed may include non-native fish, amphibians, and reptiles such as mosquitofish, largemouth bass, black bullhead catfish, green sunfish, red-eared slider, African clawed frog, and American bullfrog. This activity will occur at minimum of one time per year outside of the SAS spawning season (August 1 to February 28). The most recent fish and/or other surveys conducted upstream of Prado Basin in the Santa Ana River will provide the locations of where to conduct electroshocking.

Electroshocking will be carried out by a USFWS-approved SAS biologist authorized to use electroshock sampling methods. Pre-spawning predator removal will occur annually prior to February 15 in areas of highest ecological value to SAS reproduction, currently from Rialto Channel downstream to approximately Mission Boulevard and in mainstem tributaries. If aquatic predators are found in abundance after pre-spawning predator removal, a second predator removal will be conducted after August 1.

- iii. Exotic Weed Management Program to reduce competitive stress for native vegetation within the riparian community in order to offset the impacts associated with reduced water availability resulting from the Project.

Objective: Maintain a low abundance and cover of non-native vegetation along the Santa Ana River and in City Creek within the Project impact area (RIX outlet to Mission Boulevard and Boulder Avenue to Alabama Street, respectively), focusing on the removal of giant reed, tamarisk, and castor bean.

The exotic weed management program will be carried out by a qualified and experienced entity and will focus on controlling the non-native vegetation within the riparian corridor between the Rialto Channel and the Mission Boulevard Bridge (approximately 4.2 miles). This measure will establish and maintain weed control in one-third of the area (approximately 1.4 miles) per year, so as to complete the weeding of the entire area once every 3 years. Annual work plan meetings between the USFWS, Valley District staff, and contractor will identify areas of concern and focus work efforts on those areas. A successful program will maintain total cover of non-native riparian species to less than 25 percent and total cover of giant reed, tamarisk, and castor bean to less than 5 percent. Percent cover will be assessed relative the total area of the weeded riparian corridor for that year. Although they are native species, cattails (*Typha* spp.) and bulrush (*Schoenoplectus* spp.) may increase in abundance over time as their preferred habitat type (slow, shallow water or marsh) is expected to increase due to Project reductions of flow. These plant species may degrade sucker habitat by further reducing water velocity and trapping fine sediment. Problem areas will be identified as part of the Riverwalk survey (see below for more on Riverwalk survey) and if certain areas have become problematic they will be managed in coordination with the USFWS and CDFW.

- iv. Rialto Channel Water Temperature Management to offset the potential loss of suitable habitat downstream in the Project impact area during times of the year when habitat will be most affected from the cumulative impacts from reduced discharge and drought effects, particularly in summer and fall.

Objective: Reduce water temperatures in Rialto Channel to tolerable levels (less than 86 degrees Fahrenheit) during summer months.

In recent years the temperatures within the natural bottom reach of Rialto Channel (not concrete lined section) were found to be generally greater than 80 degrees Fahrenheit in summer and fall (USGS 2015) and often warm enough to be outside of the tolerable range for sucker (USFWS

2010b). In order to decrease the water temperature in Rialto Channel to tolerable levels for SAS relatively cool groundwater (67 – 70 degrees Fahrenheit, temperature range derived from local nearby well operators), from up to 4 wells or other water sources will be added to the flows in Rialto channel.

In order to implement this measure most effectively, two water quality monitoring stations will be established in Rialto Channel. An upstream, real-time gage will measure the water temperature at the well input location (plunge pool downstream of Agua Mansa Bridge). At 85 degrees Fahrenheit the groundwater wells will automatically turn on and release directly into the plunge pool. Another real-time gage will be installed downstream of the plunge pool Rialto Channel just before the confluence with the Santa Ana River and. Once the water temperature at this downstream gage is less than 82 degrees Fahrenheit the well input will be turned off. Initiation and cessation of well water input (discharge) will be phased over a period of time to reduce sudden changes in flow and temperature in Rialto Channel. The well input and controls will be constructed and tested prior to diversion of flows from the RIX facility to the SNRC. This program will be deemed successful if there are 5 or fewer days between June 22 and September 21 that the daily maximum water temperature exceeds 82 degrees Fahrenheit and SAS are present in the channel during the same period. Water temperature will be measured in Rialto Channel upstream of the RIX outfall. If success criteria are not met within 2 years of signing the biological opinion, the Project will obtain technical assistance from the USFWS to develop a new or revised CM that will achieve the biological objective(s) as analyzed in this opinion.

- v. Upper Watershed SAS Population Establishment to offset potential losses of suitable habitat in the Project's impact area, and to offset unknown and/or cumulative impacts to the species and its habitat that may be associated with the reduction of flow to the Santa Ana River.

Objective: Increase the abundance, distribution and resilience of the sucker population in the Santa Ana River Watershed by establishing redundant populations in upper watershed tributaries.

Subject to the availability of sufficient source fish, the Project will establish two new locations of sucker within City Creek and Hemlock Creek, or another suitable unoccupied location within the former range of the species within the Santa Ana River watershed as approved by the USFWS. Both City and Hemlock creeks have been analyzed as part of the Santa Ana Sucker Translocation Plan (Dudek 2016a, 2017). Valley District has assessed the habitat availability and appropriateness for SAS in City and Hemlock creeks (Dudek 2016b). These documents show that

portions of each of these streams have the necessary primary constituent elements (PCEs) to support SAS, as well as additional factors found to be important to SAS (Aspen 2016). The Translocation Plan is currently under review by the USFWS, CDFW, and U.S. Forest Service (USFS).

Prior to Project flow reduction to the Santa Ana River, at least one translocation of SAS will have occurred and Valley District will provide data indicating that the nascent population is healthy, reproducing, and appears to be successfully establishing. Successful establishment of SAS will have occurred when there are surviving and reproducing fish in at least two size classes, the population of SAS is stable or increasing in population as averaged over 5 years, and the translocated population is distributed throughout the appropriate habitat in the translocation stream<sup>1</sup>.

If success criteria are not met in both translocation tributaries within 5 years of signing the biological opinion, the Project will obtain technical assistance from the USFWS to develop a new or revised CM that will achieve the biological objective(s) as analyzed in this opinion.

The HMMP will identify and further detail the goals and success criteria of SAS re-establishment and include the amount of financial assistance to be provided by Valley District for the regionally-beneficial population establishment program, including additional measures found below.

1. Valley District will contract with a USFWS-approved entity that can demonstrate the ability to re-introduce captive-bred SAS to a suitable unoccupied location with the intent of establishing a new self-sustaining population within the former range of the species on the Santa Ana River. The Contract requirements will include the following: (1) rearing and maintaining a sufficient number of breeding adults to support re-introduction of a minimum of 500 juvenile SAS into the target area per year (or alternate numbers agreed to by the USFWS); (2) annual relocations for the first 3 years, then as needed to maintain a stable population size and genetic diversity; and (3) monitoring, adaptive management, and annual reporting.
2. Valley District may reintroduce captive-bred SAS if (1) captive breeding documentation has been approved by the USFWS and CDFW and (2) the captive breeding facility has adequate numbers of appropriate sized SAS. If these conditions are not met or if additional fish are needed for translocation purposes SAS may be translocated from the Santa Ana River to the west fork of City Creek and one other historic tributary in the Santa Ana River watershed<sup>2</sup>.

3. If, at any time, SAS are found located downstream Highland Avenue Bridge, Valley District will be responsible for relocating all SAS back upstream within the boundaries of the San Bernardino National Forest or out of locations that where their presence might affect other entities who do not have incidental take exemptions for this species. This measure will be implemented for the life of the Project or until another entity, such as the HCP, takes over this responsibility.
- vi. Annual Monitoring of the Santa Ana River to track the suitability and habitat for SAS following implementation of the Project and its conservation measures.

Objective: Identify any key effects to the hydrology or biology of the River that may result from reduced flow due to this Project.

The HMMP will outline a monitoring program to collect hydrology data in the segment of river between the RIX outlet and Mission Boulevard and within the habitat node creation reaches. Hydrology data will include water quality (flow velocity, temperature, and depth), visual observations of substrate, and other surface topography, and fish surveys. Annual reporting will include summaries of the non-native plant and aquatic predator removals and any adaptive management actions taken in the past year, and will be submitted to the USEPA, State Water Board, and USFWS by April 30 for review and comment. All long-term monitoring and management activities will be completed by the Project proponent per the commitments included in the HMMP and required by this biological opinion until the HCP is finalized and permitted or until incidental take associated with the Project becomes covered by another mechanism.

In order to make best use of the existing Riverwalk habitat survey dataset, (Riverwalk which has been conducted annually in the fall for the past 11 years), the Project will provide support to Riverwalk organizers, whether financial or in-kind services and develop the long-term monitoring methodology to be complementary to the Riverwalk survey data collection to provide a greater understanding of habitat availability throughout the entire system. The locations of the habitat nodes, as described above, will be added to the Riverwalk survey area as non-random transects. At least one year's worth of baseline data that captures the entire river corridor (Riverwalk points 9 to 118) will be recorded prior to a reduction in discharge flow from RIX.



### **Action Area**

Regulations implementing the Act (50 CFR § 402.02) describe the action area as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. Revisions in the project description have resulted in a change in the action area from the 2017 BO. The Project will no longer discharge water into City Creek and Redlands Basins discharge locations. Instead, the new discharge location is at the new Weaver Basins site.

We have defined the action area to include the Sterling Natural Resource Center west of North Del Rosa Drive; the pipeline corridor along 6<sup>th</sup> Street, 5<sup>th</sup> Street, and Greenspot Road; the discharge location at Weaver Basin east of Merris Street; and the potential areas of direct and indirect effects to the listed species, including the Santa Ana River from Rialto Channel downstream to River Road Bridge; the area downstream of emergency overflow discharge from Weaver Channel into Plunge Creek, and then City Creek; and the receiver streams for the proposed translocation of SAS, Hemlock Creek in the San Bernardino National Forest and City Creek upstream of Highland Avenue bridge.

The Weaver Basin site is the only addition to the action area. The 68.4-acre site is vegetated by remnant alluvial fan sage scrub that has been heavily invaded by non-native annual grasses. It is not occupied by SBKR, but 38.6 of the site are within the Sant Anan River Unit (Unit 1) of designated SBKR critical habitat.

### **EFFECTS OF THE ACTION**

You have requested our concurrence with your determination that the proposed Project as revised is not likely to adversely affect Southwestern willow flycatcher (*Empidonax traillii extimus*; flycatcher) and its designated critical habitat, Least Bell's vireo (*Vireo bellii pusillus*; vireo) and its designated critical habitat, and designated critical habitat for the San Bernardino kangaroo rat (*Dipodomys merriami parvus*; SBKR).

#### ***Flycatcher, Vireo, And Their Designated Critical Habitats***

In our 2017 Biological Opinion we determined there would be beneficial effects to flycatcher and vireo from the development of approximately 8.2 acres of riparian woodland in City Creek which was expected to result from the discharge of treated water into City Creek from the SNRC. The anticipated woodland habitat would have offset any loss of riparian habitat in the mainstem of the Santa Ana River. Because Valley District has modified the project description, this beneficial effect will not occur, and we do not expect beneficial effects from the new Weaver basins site for flycatcher or vireo. Similarly, discharge from the emergency overflow at the Weaver basins will be rare, if at all, so we do not expect riparian woodland to develop downstream of the emergency overflow. The best available information indicates that up to 1.21 acres of wetted habitat will be permanently lost with Project related reduced discharge into the Santa Ana River downstream of RIX. However, we expect the associated loss of riparian habitat to be diffusely distributed along about 4.2 stream miles from the RIX outlet downstream to Mission Boulevard and will vary by location, depending on river depth. We do not expect a detectable change in the distribution of riparian woodland habitat downstream of the RIX outfall.

Conservation Measure 17b.i is included in the Project description to enhance portions of the perennial stream habitat for SAS in the mainstem of the Santa Ana River. This activity may temporarily remove riparian vegetation in ingress, egress, and work areas at six locations downstream of the Riverside County Flood Control and Water Conservation District-maintained Riverside Levee System but will be conducted in areas not occupied by flycatcher or vireo. Removal of riparian woodland vegetation will be minimized in coordination with the USFWS to avoid incidental take of flycatcher and vireo.

### ***San Bernardino Kangaroo Rat Critical Habitat***

The 68.4-acre Weaver basins site is currently unoccupied by SBKR, and approximately 38.6 acres of it are designated SBKR critical habitat. Construction of the basins will result in permanent loss of about 16.93 acres and temporary impacts to about 0.87 acres of designated SBKR critical habitat. The temporary impact area will be revegetated with native scrub. Valley District will permanently conserve approximately 17 acres of designated SBKR critical habitat within the Weaver basins site. The basins will eliminate 0.87 acres on the northern edge of designation. The 17-acre conservation area is contiguous to other SBKR critical habitat.

### ***San Bernardino Kangaroo Rat***

With the change in the project description, the proposed action will no longer result in effects to SBKR. The SBKR effects analysis in our 2017 Biological Opinion is therefore no longer valid, as the analyzed effects will not occur.

## **CONCLUSION**

We concur with your determination that the proposed action is not likely to adversely affect flycatcher or vireo. We have made this determination because 1) the Project-induced reduction in discharge into the Rialto Channel and Santa Ana River downstream of RIX is not expected to detectably reduce the available flycatcher and vireo foraging or nesting habitat, 2) we do not expect the Project to reduce the amount of habitat in any specific location that would negatively affect an occupied territory or rise to the level of take, 3) the absence of vireo, flycatcher, and their respective designated critical habitat from the new Weaver Basin site, and 4) conservation measure 17b.i which the USEPA has included to avoid and minimize effects to vireo and flycatcher from removal of riparian vegetation.

We also concur with your determination that the proposed action is not likely to adversely affect SBKR designated critical habitat. We concur with your determination because 1) the loss of SBKR critical habitat is a small impact to SBKR critical habitat overall and discountable, 2) Valley District will conserve in perpetuity an approximately 17 acres of SBKR critical habitat (CM 14) that is contiguous with adjacent SBKR designated critical habitat, 3) Valley District will restore the small area of temporary impacts to SBKR critical habitat (CM 13), and 4) the SBKR designated critical habitat within the Weaver basins site is unoccupied.

The analysis and conclusion in our 2017 Biological Opinion for sucker remain valid.

## INCIDENTAL TAKE STATEMENT

The incidental take statement in our 2017 Biological Opinion is amended as provided below. The Incidental Take Statement provided here supersedes the one provided in the 2017 Biological Opinion. For comparison, the Incidental Take Statement is provided in Appendix C with the changes from our 2017 Biological Opinion indicated in bold and strikethrough text.

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened animal species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. The Service further defines “harm” to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not the purpose of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the proposed protective measures and the terms and conditions of an incidental take statement and occurs as a result of the action as proposed.

The measures described below are non-discretionary and must be undertaken by the USEPA so that they become binding conditions of any grant or permit issued to the EVWD, for the exemption in section 7(o)(2) to apply. The USEPA has a continuing duty to regulate the activity covered by this incidental take statement. If the USEPA: (1) fails to assume and implement the terms and conditions, or (2) fails to require the EVWD to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the USEPA or EVWD must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR § 402.14(i)(3)].

### AMOUNT OR EXTENT OF TAKE

#### **Santa Ana Sucker**

The regulations for section 7(a)(2) clarify that the Service may use surrogates to express the amount or extent of anticipated take when “exact numerical limits on the amount of anticipated incidental take may be difficult” (80 FR 26832). The implementing regulations [50 CFR § 402.14(i)(1)(i)] require that the Service meet three conditions for the use of a surrogate. To use a surrogate, the Service must:

- 1. Describe the causal link between the surrogate and take of the listed species:**

The growth and survival of individual fish in a population depends on the physical and biological features of their niche habitat. Therefore, the physical features of water quality, flow, substrate, and sediment transport can be related to take of the SAS. Consequently, we consider a long-term deviation from the typical water quality parameters generally found within the Santa Ana River to be a reasonable surrogate. It

is anticipated that the reduction of aquatic habitat, reduced depth, and lower velocities associated with the reduction of 6.43 MGD to the Santa Ana River will result in incremental effects of sand deposition that will reduce SAS egg development/survival, increase egg predation, reduce fitness of adults that may expend more energy finding suitable spawning habitat, and reduce survival of SAS at all life stages.

**2. Describe why it is not practical to express the amount of anticipated take or to monitor take-related impacts in terms of individuals of the listed species:**

We cannot express the amount of anticipated take or to monitor take-related impacts in terms of individuals of the listed species for several reasons. Since the SAS is small, cryptic, and aquatic, detection of taken individuals is not always possible. Larvae of SAS may be too small to detect if taken. Taken individuals may be swept downstream, obscured by turbid waters, buried, or consumed by predators or scavengers shortly after death. The presence of aquatic vegetation may also hinder visibility and detection. Santa Ana sucker have a boom-bust population demographic and their numbers can vary widely from year to year.

**3. Set a clear standard to determine when the proposed action has exceeded the anticipated amount or extent of the taking:**

Take of SAS may be exceeded if the amount of acres of habitat is exceeded, or if the amount of water diverted from SAS habitat is exceeded.

The exact distribution and population size of SAS is difficult to estimate due to the dynamic conditions associated with their habitat and biology. Some SAS may be injured or killed as a result of the capture and relocation efforts during habitat node creation, during long-term monitoring, during electroshocking activities for predator removal, or for the purposes of salvage in City Creek or another translocation stream. Because we do not have site-specific data regarding the density of SAS at the site of the proposed action, the precise number of animals that will be affected by the proposed action is difficult to quantify. Nevertheless, based on the best available information, we have established the following take exemptions for SAS:

- IT 1. Death or injury of adult and/or young SAS from displacement due to channel constriction and habitat loss of up to 1.21 acres resulting from up to 6.43 MGD of discharge flow reduction from the RIX facility. The amount or extent of incidental take will be exceeded if more than 1.21 acres of aquatic habitat is permanently lost from discharge flow reduction.
- IT 2. Capture and relocation of all SAS from within construction areas during construction and/or reconstruction of six habitat nodes in the mainstem of the Santa Ana River. Incidental take will be exceeded if more than six SAS are injured or killed during capture and relocation activities during construction and/or reconstruction of the six habitat nodes (1 fish per node) in any one calendar year.

- IT 3. Capture of SAS from the Santa Ana River for translocation to the upper watershed or to supplement the captive-population, for purposes of breeding and subsequent relocation. Incidental take will be exceeded if more than 25 percent of the Santa Ana River population or 400 SAS per year are removed for translocation/relocation purposes, per the programmatic consultation on SAS recovery permits (USFWS 2015a).
- IT 4. Capture and measurement of SAS from the mainstem of the Santa Ana River and from the two new populations created in the species' historic range for long-term monitoring and management. Incidental take will be exceeded if more than six SAS are injured or killed during long-term species monitoring in the Santa Ana River watershed per calendar year, or a mean of two (2) fish per metapopulation.
- IT 5. Capture and relocation of all SAS for the purpose of salvage from drying habitat or other threats that subject them to imminent mortality. There is no limit on the numbers of SAS that may be relocated during salvage efforts.

### **EFFECT OF THE TAKE**

In this biological opinion, we have determined the level of anticipated take is not likely to result in jeopardy to SAS, or adversely modify SAS critical habitat.

### **CONCLUSION**

After reviewing the current status of the SAS, environmental baseline for the action area, effects of the proposed action, and cumulative effects, it is the USFWS's biological opinion that the proposed action is not likely to jeopardize the continued existence of SAS, or adversely modify SAS critical habitat. Our conclusion is based on the following:

1. The permanent loss of designated SAS critical habitat will be offset by the creation and maintenance of habitat nodes and cooling of summer water temperature in Rialto Channel; thus, the ecological function and values of designated critical habitat will be maintained in this unit and within the overall designation;
2. The enhancement of Santa Ana River aquatic and riparian habitats, reintroduction to portions of its historic range, and long-term management of existing and new populations to offset the displacement of SAS in the river by the proposed action will support the range-wide conservation (recovery) of SAS.

### **REASONABLE AND PRUDENT MEASURES**

We have determined that the following reasonable and prudent measures are necessary and appropriate to minimize the impact of the incidental take of SBKR and Santa Ana sucker:

- RPM 1. The USEPA and or EVWD will monitor and report on compliance with the established take threshold for federally listed wildlife species associated with the proposed action.
- RPM 2. The USEPA and or EVWD will monitor and report on compliance with, and the effectiveness of, the proposed conservation measures for the Project.

## **TERMS AND CONDITIONS**

To be exempt from the prohibitions of section 9 of the Act, the USEPA must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline monitoring and reporting requirements. These terms and conditions are non-discretionary.

To implement reasonable and prudent measure number 1 (monitor and report on compliance with established take thresholds), the USEPA and or EVWD will:

- TC 1.1 Ensure the Authorized Biologist(s) or Biological Monitor(s) who will trap or handle federally listed species are qualified and have been pre-approved by PSFWO for work on this Project.
- TC 1.2 Implement the CMs as specified in the Project description evaluated in this biological opinion. If the Biological Monitor detects impacts to federally listed species from Project-related activities in excess of that described in the above incidental take statement, the USEPA, EVWD, or the Biological Monitor will contact the PSFWO within 24 hours. At that time, the PSFWO and the USEPA or EVWD must review the circumstances surrounding the incident to determine whether additional protective measures are required. Project activities may continue pending the outcome of the review, provided that the proposed protective measures and any appropriate terms and conditions of this biological opinion have been and continue to be fully implemented.
- TC 1.3 If the amount of authorized take for any federally listed species as defined in the Incidental Take Statement is exceeded, the USEPA must reinstate consultation, pursuant to the implementing regulations for section 7(a)(2) of the Endangered Species Act at 50 CFR 402.16, on the proposed action.

To implement reasonable and prudent measure number 2 (monitor and report on compliance with, and the effectiveness of, the proposed conservation measures), the USEPA or Valley District will:

- TC 2.1 Within 45 days of the completion of the proposed action, the USEPA or Valley District must provide a report to the PSFWO that provides details on the effects of the action on the federally listed species. Specifically, the report must include information on any instances when federally listed species were killed, injured, or handled; the circumstances of such incidents; and any actions undertaken to prevent similar instances from re-occurring.

- TC 2.2 Ensure USFWS personnel have the right to access and inspect the Project site during Project implementation (with prior notification from us) for compliance with the Project description, conservation measures, and terms and conditions of this biological opinion.

*Santa Ana sucker*

To implement reasonable and prudent measure number 1 (monitor and report on compliance with established take thresholds), the USEPA and/or Valley District will:

1. In addition to the CMs outlined in this biological opinion, when capturing and releasing any SAS found in the construction area, the Qualified Biologist will implement the following measures:
  - a. Only the use of fine mesh (2 to 4 millimeter) knot-less seine nets, fine mesh (4 to 6 millimeter) knot-less hoop nets, modified hoop nets, or similar traps, or dip nets of 0.5 millimeter or finer mesh will be used for capturing SAS.
  - b. Survey methods will be selected to minimize potential injury or mortality to SAS and potential disturbance or damage to breeding areas.
  - c. If seines are used, particular care will be taken to avoid incidental injury or mortality to SAS that may be caught and suffocated in algal mats or sand.
  - d. Care will also be taken to keep SAS in river water as much as possible and they should be released as close to the point of capture as possible.
  - e. Use of non-conventional sampling gear must first be approved by the PSFWO.
  - f. Electrofishing may be employed with the following restrictions upon following under the following conditions:
    - i. Electrofishing activities will not be conducted from March 1 through July 31.
    - ii. A Qualified Biologist will be the crew leader during electrofishing. The crew leader must have at least 100 hours of electrofishing experience in the field using similar equipment.
    - iii. The crew leader will provide basic training in electrofishing for the crew consisting of:
      1. Definitions of basic terminology (e.g., galvonotaxis, narcosis, and tetany).
      2. An explanation of how electrofishing attracts fish.

3. An explanation of how gear can injure fish and how to recognize signs of injury.
  4. A review of these terms and conditions as well as the manufacturer's recommendations.
  5. A demonstration of the proper use of electrofishing equipment, the role each crew member performs, and basic gear maintenance.
  6. A review of safety considerations.
- iv. Prior to conducting electrofishing activities, visual surveys will be conducted to search for small, young SAS. If more than 100 small SAS (less than 30 millimeters in total length) occur within the sampling site, electrofishing activities will not be conducted.
  - v. To avoid potential suffocation of SAS, electrofishing will not occur in areas where algal mats are located.
  - vi. All captured suckers collected and retained will be placed in river water in insulated, aerated, and covered containers. Temperature, dissolved oxygen levels, and fish behavior (e.g., fish gulping at the surface indicating low dissolved oxygen levels) should be recorded to ensure that ambient river water quality levels are maintained.
  - vii. Valley District or the Qualified Biologist will coordinate research or long-term monitoring activities with fisheries personnel from other agencies to avoid duplication of effort and unnecessary stress to SAS. Specific stream reaches will be electrofished no more than once every 3 months.
  - viii. Only direct current or pulsed direct current will be used.
  - ix. Each session will begin with pulse width and rate set to the minimum needed to capture SAS. These settings will be gradually increased, if necessary, only to the point where SAS are immobilized and captured. Initial pulse width will be no more than 500 microseconds and is not to exceed 5 milliseconds. Care will be taken when exceeding a pulse rate of 30 Hertz. In general, exceeding 30 Hertz will injure more fish.
  - x. Fish will be netted and removed from the electric fields as quickly as possible.
  - xi. Sampling will be terminated if injuries or abnormally long recovery times are observed.



- xii. Prior to activities that may involve handling SAS, all biologists will ensure that hands are free of sunscreen, lotion, or insect repellent.
  - xiii. Handling may involve taking length and weight measurements to assess size and age classes of individuals and fish health, and will require minimal exposure out of water. Bagged portions of seines and nets will remain in that water until all SAS are removed, or SAS will be transferred to shallow containers of clean water, aerated if necessary, and placed in a location that will not result in exposure to extreme temperatures.
  - xiv. Any SAS exhibiting signs of physiological stress will be immediately released at the point of capture or as close to that location as possible. All fish will be returned in good condition to the point of capture unless an adverse disturbance is occurring, in which case they may be relocated away from disturbance areas and moved to the nearest part of the stream with appropriate habitat. Nets may be used to temporarily preclude individuals from returning to the immediate capture site.
  - xv. In the event that the number of individuals allowed to be incidentally injured or killed is exceeded during the performance of permitted activities, the Qualified Biologist must immediately cease the activity until reauthorized by the Carlsbad Fish and Wildlife Office (CFWO) or PSFWO.
2. In addition to the CMs outlined in this biological opinion, when capturing SAS for captive rearing and translocation purposes, the Qualified Biologist will implement the measures discussed in the Draft Captive Breeding and Translocation Plan for Santa Ana Sucker (Dudek 2016a) and in the programmatic consultation for SAS recovery permits (USFWS 2015a) including but not limited to:
- a. A survey will be conducted to determine the general health of the donor SAS population prior to attempting collection for translocation purposes;
  - b. To maximize genetic diversity within a collected population, SAS will be taken from multiple locations (e.g., pools/sampling areas) within a stream, as feasible;
  - c. SAS will be visually examined for disease and signs of spawning (e.g., tubercles and lateral stripes). SAS with signs of disease, spawning, or behavior issues such as flashing or lethargy will not be used for translocation. In addition, fish with physical abnormalities, such as fungal lesions, white spot, skin hemorrhage or lesions, darkened skin, eroded fins, or excessive mucus production will also not be used in translocation.

### REINITIATION NOTICE

Reinitiation of consultation is required and will be requested by the Federal agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and:

1. If the amount or extent of taking specified in the incidental take statement is exceeded;
2. If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
3. If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this biological opinion; or
4. If a new species is listed or critical habitat designated that may be affected by the identified action.

If you have any questions about this biological opinion, or the consultation process, please contact [William Sherwin](#) of the Palm Springs Fish and Wildlife Office, 777 E. Tahquitz Canyon Way, Suite 208, Palm Springs, California 92262 at 760-322-2070, extension 409.

Sincerely,

For

Rollie White  
Assistant Field Supervisor

## APPENDIX C

### INCIDENTAL TAKE STATEMENT

The incidental take statement in our 2017 Biological Opinion is amended as provided below. The Incidental Take Statement provided here supersedes the one provided in the 2017 Biological Opinion. For clarity portions of the 2017 Incidental Take Statement that are no longer valid no longer valid and indicated with ~~striketrough~~ text and additions are provided in **bold** text.

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened animal species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. The Service further defines “harm” to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not the purpose of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the proposed protective measures and the terms and conditions of an incidental take statement and occurs as a result of the action as proposed.

The measures described below are non-discretionary and must be undertaken by the USEPA so that they become binding conditions of any grant or permit issued to the EVWD, for the exemption in section 7(o)(2) to apply. The USEPA has a continuing duty to regulate the activity covered by this incidental take statement. If the USEPA: (1) fails to assume and implement the terms and conditions, or (2) fails to require the EVWD to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the USEPA or EVWD must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR § 402.14(i)(3)].

#### AMOUNT OR EXTENT OF TAKE

##### ~~San Bernardino Kangaroo Rat~~

~~The exact distribution and population size of SBKR is difficult to estimate due to the dynamic conditions associated with their habitat and biology. Moreover, finding dead or injured SBKR within the construction area is unlikely as the individuals may be underground during construction activities.~~

~~Exclusion fencing will be erected, and SBKR will be captured and relocated outside of the construction footprint. However, some animals may be missed and subsequently die as a result of Project clearing and grading activities. Some SBKR may also be injured or killed as a result of the capture and relocation efforts. Because we do not have site specific data regarding the density of SBKR at the site of the proposed action, the precise number of animals that will be affected by the proposed action is difficult to quantify. Nevertheless, based on the best available information, we have established the following take exemptions for SBKR:~~

- ~~1. Death or injury of adult and/or juvenile SBKR from ground disturbance of up to 0.9 acres resulting from construction of the 24-inch pipeline and associated outlet structures at City Creek and at Redlands Basins. The amount or extent of incidental take will be exceeded if more than 0.9 acres is disturbed or more than one SBKR is known to be injured or killed from ground disturbance during construction of the 24-inch pipeline or the associated outlet structures in City Creek and the Redlands Basins.~~
- ~~2. Death or injury of SBKR as a direct result of the capture and release efforts from within the fenced work areas associated with City Creek and the Redlands Basins. Incidental take will be exceeded if more than one SBKR is known to be injured or killed by the capture/relocation efforts during construction of the 24-inch pipeline and associated outlet structures.~~
- ~~3. Death or injury of adult and/or juvenile SBKR from water inundation of up to 8.2 acres of potentially occupied habitat resulting from the initial flushing of effluent into City Creek. The amount or extent of incidental take will be exceeded if more than 8.2 acres is inundated in the initial flushing of effluent into City Creek.~~

### **Santa Ana Sucker**

The regulations for section 7(a)(2) clarify that the Service may use surrogates to express the amount or extent of anticipated take when “exact numerical limits on the amount of anticipated incidental take may be difficult” (80 FR 26832). The implementing regulations [50 CFR § 402.14(i)(1)(i)] require that the Service meet three conditions for the use of a surrogate. To use a surrogate, the Service must:

- 1. Describe the causal link between the surrogate and take of the listed species:**

The growth and survival of individual fish in a population depends on the physical and biological features of their niche habitat. Therefore, the physical features of water quality, flow, substrate, and sediment transport can be related to take of the SAS. Consequently, we consider a long-term deviation from the typical water quality parameters generally found within the Santa Ana River to be a reasonable surrogate. It is anticipated that the reduction of aquatic habitat, reduced depth, and lower velocities associated with the reduction of 6.43 MGD to the Santa Ana River will result in incremental effects of sand deposition that will reduce SAS egg development/survival, increase egg predation, reduce fitness of adults that may expend more energy finding suitable spawning habitat, and reduce survival of SAS at all life stages.

- 2. Describe why it is not practical to express the amount of anticipated take or to monitor take-related impacts in terms of individuals of the listed species:**

We cannot express the amount of anticipated take or to monitor take-related impacts in terms of individuals of the listed species for several reasons. Since the SAS is small, cryptic, and aquatic, detection of taken individuals is not always possible. Larvae of SAS may be too small to detect if taken. Taken individuals may be swept downstream, obscured by turbid waters, buried, or consumed by predators or scavengers shortly after death. The presence of aquatic vegetation may also hinder visibility and detection.

Santa Ana sucker have a boom-bust population demographic and their numbers can vary widely from year to year.

**3. Set a clear standard to determine when the proposed action has exceeded the anticipated amount or extent of the taking:**

Take of SAS may be exceeded if the amount of acres of habitat is exceeded, or if the amount of water diverted from SAS habitat is exceeded.

The exact distribution and population size of SAS is difficult to estimate due to the dynamic conditions associated with their habitat and biology. Some SAS may be injured or killed as a result of the capture and relocation efforts during habitat node creation, during long-term monitoring, during electroshocking activities for predator removal, or for the purposes of salvage in City Creek or another translocation stream. Because we do not have site-specific data regarding the density of SAS at the site of the proposed action, the precise number of animals that will be affected by the proposed action is difficult to quantify. Nevertheless, based on the best available information, we have established the following take exemptions for SAS:

- IT 1. Death or injury of adult and/or young SAS from displacement due to channel constriction and habitat loss of up to 1.21 acres resulting from up to 6.43 MGD of discharge flow reduction from the RIX facility. The amount or extent of incidental take will be exceeded if more than 1.21 acres of aquatic habitat is permanently lost from discharge flow reduction.
- IT 2. Capture and relocation of all SAS from within construction areas during construction and/or reconstruction of six habitat nodes in the mainstem of the Santa Ana River. Incidental take will be exceeded if more than six SAS are injured or killed during capture and relocation activities during construction and/or reconstruction of the six habitat nodes (1 fish per node) in any one calendar year.
- IT 3. Capture of SAS from the Santa Ana River for translocation to the upper watershed or to supplement the captive-population, for purposes of breeding and subsequent relocation. Incidental take will be exceeded if more than 25 percent of the Santa Ana River population or 400 SAS per year are removed for translocation/relocation purposes, per the programmatic consultation on SAS recovery permits (USFWS 2015a).
- IT 4. Capture and measurement of SAS from the mainstem of the Santa Ana River and from the two new populations created in the species' historic range for long-term monitoring and management. Incidental take will be exceeded if more than six SAS are injured or killed during long-term species monitoring in the Santa Ana River watershed per calendar year, or a mean of two (2) fish per metapopulation.
- IT 5. Capture and relocation of all SAS for the purpose of salvage from drying habitat or other threats that subject them to imminent mortality. There is no limit on the numbers of SAS that may be relocated during salvage efforts.

## EFFECT OF THE TAKE

In this biological opinion, we have determined the level of anticipated take is not likely to result in jeopardy to ~~SBKR~~ or SAS, or adversely modify ~~SBKR~~ or SAS critical habitat.

## CONCLUSION

After reviewing the current status of the ~~SBKR~~ and SAS, environmental baseline for the action area, effects of the proposed action, and cumulative effects, it is the USFWS's biological opinion that the proposed action is not likely to jeopardize the continued existence of ~~SBKR~~ or SAS, or adversely modify ~~SBKR~~ or SAS critical habitat. Our conclusion is based on the following:

1. ~~Direct and indirect impacts to SBKR will be minimized through the implementation of the conservation measures;~~
2. ~~The acquisition of long-term conservation of habitat to offset the impacts of the proposed action will support the range-wide conservation (recovery) of SBKR;~~
3. ~~The temporary loss of SBKR habitat, including designated critical habitat is relatively small and will be restored, thus minimizing effects to individuals and their territories, and connectivity across the Project area;~~
4. ~~The permanent loss of SBKR designated critical habitat represents a small proportion of the critical habitat within the affected unit; thus, the ecological function and values of designated critical habitat will be maintained in this unit and within the overall designation;~~
5. The permanent loss of designated SAS critical habitat will be offset by the creation and maintenance of habitat nodes and cooling of summer water temperature in Rialto Channel; thus, the ecological function and values of designated critical habitat will be maintained in this unit and within the overall designation;
6. The enhancement of Santa Ana River aquatic and riparian habitats, reintroduction to portions of its historic range, and long-term management of existing and new populations to offset the displacement of SAS in the river by the proposed action will support the range-wide conservation (recovery) of SAS.

## REASONABLE AND PRUDENT MEASURES

We have determined that the following reasonable and prudent measures are necessary and appropriate to minimize the impact of the incidental take of ~~SBKR~~ and Santa Ana sucker:

- RPM 1. The USEPA and or EVWD will monitor and report on compliance with the established take threshold for federally listed wildlife species associated with the proposed action.
- RPM 2. The USEPA and or EVWD will monitor and report on compliance with, and the effectiveness of, the proposed conservation measures for the Project.

## TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, the USEPA must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline monitoring and reporting requirements. These terms and conditions are non-discretionary.

To implement reasonable and prudent measure number 1 (monitor and report on compliance with established take thresholds), the USEPA and or EVWD will:

- TC 1.1 Ensure the Authorized Biologist(s) or Biological Monitor(s) who will trap or handle federally listed species are qualified and have been pre-approved by PSFWO for work on this Project.
- TC 1.2 Implement the CMs as specified in the Project description evaluated in this biological opinion. If the Biological Monitor detects impacts to federally listed species from Project-related activities in excess of that described in the above incidental take statement, the USEPA, EVWD, or the Biological Monitor will contact the PSFWO within 24 hours. At that time, the PSFWO and the USEPA or EVWD must review the circumstances surrounding the incident to determine whether additional protective measures are required. Project activities may continue pending the outcome of the review, provided that the proposed protective measures and any appropriate terms and conditions of this biological opinion have been and continue to be fully implemented.
- TC 1.3 If the amount of authorized take for any federally listed species as defined in the Incidental Take Statement is exceeded, the USEPA must reinstate consultation, pursuant to the implementing regulations for section 7(a)(2) of the Endangered Species Act at 50 CFR 402.16, on the proposed action.

To implement reasonable and prudent measure number 2 (monitor and report on compliance with, and the effectiveness of, the proposed conservation measures), the USEPA or Valley District will:

- TC 2.1 Within 45 days of the completion of the proposed action, the USEPA or Valley District must provide a report to the PSFWO that provides details on the effects of the action on the federally listed species. Specifically, the report must include information on any instances when federally listed species were killed, injured, or handled; the circumstances of such incidents; and any actions undertaken to prevent similar instances from re-occurring.
- TC 2.2 Ensure USFWS personnel have the right to access and inspect the Project site during Project implementation (with prior notification from us) for compliance with the Project description, conservation measures, and terms and conditions of this biological opinion.

### ***San Bernardino kangaroo rat***

~~To implement reasonable and prudent measure number 1 (monitor and report on compliance with established take thresholds), the USEPA and or Valley District will:~~

1. ~~In addition to the conservation measures outlined in this biological opinion, when trapping, collecting, and releasing any SBKR found in the construction area or vicinity during the course of work, the Qualified Biologist/Biological Monitor will implement the following measures:~~
  - a. ~~Provide traps in sufficient numbers to provide adequate coverage of the construction area to ensure that any SBKR which are present are captured. Mark all trap locations with flagging, reflective tape, or other technique that is visible under day and night conditions.~~
  - b. ~~Use only 12 inch Sherman or wire mesh live traps; 9 inch models may be used only if obtained before March 13, 1990. Ensure all trap models are modified to eliminate or substantially reduce the risk of SBKR injury (e.g., tail lacerations or excisions). Do not place any batting in the traps.~~
  - c. ~~Sterilize traps previously used outside of San Bernardino County.~~
  - d. ~~Conduct trapping only if the nightly low temperature is forecast to be 50 degrees Fahrenheit or above, and if no extended periods of wind, rain, fog, or other inclement weather will occur to make conditions unsuitable for trapping or will unduly imperil the lives of the animals.~~
  - e. ~~Adjust traps by hand each time they are placed, set, and baited, at a sensitivity level appropriate for capturing SBKR. Visually inspect all traps before closing, and close them by hand.~~
  - f. ~~Check all traps at least twice each night, once near midnight and again at sunrise.~~
  - g. ~~Identify all trap locations with a unique identification code on a log sheet, note the date and time each trap is checked, and periodically review the log sheet to ensure no traps are inadvertently missed. Field documentation will be available to USFWS personnel upon request.~~
  - h. ~~Hold individual SBKR for no longer than 1 hour before releasing them, and relocate them as quickly as possible; this will mean selecting release locations in advance of trapping. Do not place the animal in a plastic bag; transfer it in a clean, structurally sound, breathable container with adequate ventilation. Do not at any time allow the animal to become stressed due to temperature extremes (either hot or cold).~~

### *Santa Ana sucker*

To implement reasonable and prudent measure number 1 (monitor and report on compliance with established take thresholds), the USEPA and/or Valley District will:

1. In addition to the CMs outlined in this biological opinion, when capturing and releasing any SAS found in the construction area, the Qualified Biologist will implement the following measures:



- a. Only the use of fine mesh (2 to 4 millimeter) knot-less seine nets, fine mesh (4 to 6 millimeter) knot-less hoop nets, modified hoop nets, or similar traps, or dip nets of 0.5 millimeter or finer mesh will be used for capturing SAS.
- b. Survey methods will be selected to minimize potential injury or mortality to SAS and potential disturbance or damage to breeding areas.
- c. If seines are used, particular care will be taken to avoid incidental injury or mortality to SAS that may be caught and suffocated in algal mats or sand.
- d. Care will also be taken to keep SAS in river water as much as possible and they should be released as close to the point of capture as possible.
- e. Use of non-conventional sampling gear must first be approved by the PSFWO.
- f. Electrofishing may be employed with the following restrictions upon following under the following conditions:
  - i. Electrofishing activities will not be conducted from March 1 through July 31.
  - ii. A Qualified Biologist will be the crew leader during electrofishing. The crew leader must have at least 100 hours of electrofishing experience in the field using similar equipment.
  - iii. The crew leader will provide basic training in electrofishing for the crew consisting of:
    1. Definitions of basic terminology (e.g., galvanotaxis, narcosis, and tetany).
    2. An explanation of how electrofishing attracts fish.
    3. An explanation of how gear can injure fish and how to recognize signs of injury.
    4. A review of these terms and conditions as well as the manufacturer's recommendations.
    5. A demonstration of the proper use of electrofishing equipment, the role each crew member performs, and basic gear maintenance.
    6. A review of safety considerations.
  - iv. Prior to conducting electrofishing activities, visual surveys will be conducted to search for small, young SAS. If more than 100 small SAS (less than 30 millimeters in total length) occur within the sampling site, electrofishing activities will not be conducted.

- v. To avoid potential suffocation of SAS, electrofishing will not occur in areas where algal mats are located.
- vi. All captured suckers collected and retained will be placed in river water in insulated, aerated, and covered containers. Temperature, dissolved oxygen levels, and fish behavior (e.g., fish gulping at the surface indicating low dissolved oxygen levels) should be recorded to ensure that ambient river water quality levels are maintained.
- vii. Valley District or the Qualified Biologist will coordinate research or long-term monitoring activities with fisheries personnel from other agencies to avoid duplication of effort and unnecessary stress to SAS. Specific stream reaches will be electrofished no more than once every 3 months.
- viii. Only direct current or pulsed direct current will be used.
- ix. Each session will begin with pulse width and rate set to the minimum needed to capture SAS. These settings will be gradually increased, if necessary, only to the point where SAS are immobilized and captured. Initial pulse width will be no more than 500 microseconds and is not to exceed 5 milliseconds. Care will be taken when exceeding a pulse rate of 30 Hertz. In general, exceeding 30 Hertz will injure more fish.
- x. Fish will be netted and removed from the electric fields as quickly as possible.
- xi. Sampling will be terminated if injuries or abnormally long recovery times are observed.
- xii. Prior to activities that may involve handling SAS, all biologists will ensure that hands are free of sunscreen, lotion, or insect repellent.
- xiii. Handling may involve taking length and weight measurements to assess size and age classes of individuals and fish health, and will require minimal exposure out of water. Bagged portions of seines and nets will remain in that water until all SAS are removed, or SAS will be transferred to shallow containers of clean water, aerated if necessary, and placed in a location that will not result in exposure to extreme temperatures.
- xiv. Any SAS exhibiting signs of physiological stress will be immediately released at the point of capture or as close to that location as possible. All fish will be returned in good condition to the point of capture unless an adverse disturbance is occurring, in which case they may be relocated away from disturbance areas and moved to the nearest part of the stream with appropriate habitat. Nets may be used to temporarily preclude individuals from returning to the immediate capture site.

- xv. In the event that the number of individuals allowed to be incidentally injured or killed is exceeded during the performance of permitted activities, the Qualified Biologist must immediately cease the activity until reauthorized by the Carlsbad Fish and Wildlife Office (CFWO) or PSFWO.
2. In addition to the CMs outlined in this biological opinion, when capturing SAS for captive rearing and translocation purposes, the Qualified Biologist will implement the measures discussed in the Draft Captive Breeding and Translocation Plan for Santa Ana Sucker (Dudek 2016a) and in the programmatic consultation for SAS recovery permits (USFWS 2015a) including but not limited to:
- a. A survey will be conducted to determine the general health of the donor SAS population prior to attempting collection for translocation purposes;
  - b. To maximize genetic diversity within a collected population, SAS will be taken from multiple locations (e.g., pools/sampling areas) within a stream, as feasible;
  - c. SAS will be visually examined for disease and signs of spawning (e.g., tubercles and lateral stripes). SAS with signs of disease, spawning, or behavior issues such as flashing or lethargy will not be used for translocation. In addition, fish with physical abnormalities, such as fungal lesions, white spot, skin hemorrhage or lesions, darkened skin, eroded fins, or excessive mucus production will also not be used in translocation.

**REGIONAL RECYCLED WATER PIPELINE  
REIMBURSEMENT AGREEMENT**

This Reimbursement Agreement for the Regional Recycled Water Pipeline is entered into and effective as of \_\_\_\_\_, 2019, by and between EAST VALLEY WATER DISTRICT, a County Water District, organized and operating pursuant to California Water Code Section 30000 et seq. (EVWD) and SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT, a Municipal Water District, organized and operating pursuant to California Water Code Section 71000 et seq. (VALLEY DISTRICT) (Collectively "Parties").

**RECITALS**

**WHEREAS**, since 1969 VALLEY DISTRICT, together with a number of other public agencies including EVWD, have worked cooperatively to replenish the San Bernardino Basin Area (SBBA) and ensure that there are reliable sources of water for the residents of the San Bernardino Valley, among others; and

**WHEREAS**, VALLEY DISTRICT and EVWD have collaborated on the Sterling Natural Resource Center project (SNRC) which will be designed and constructed by EVWD and which includes a 10 million gallons per day (mgd) effluent discharge pipeline, (Discharge Line) which will transport recycled water to the Redlands Basins and City Creek for discharge; and

**WHEREAS**, VALLEY DISTRICT envisions that the SNRC Discharge Line is an integral part of regional recycled water infrastructure, including, but not limited to, combining recycled water flows from the SNRC and the Clean Water Factory, a project proposed by the city of San Bernardino, which would require expanding the Discharge Line and increasing its capacity to 15 mgd to accommodate the combined flows; and

**WHEREAS**, VALLEY DISTRICT has historically been responsible for the construction of regional infrastructure for conveying local and imported water supplies; and

**WHEREAS**, VALLEY DISTRICT wishes to reimburse EVWD for all expenses incurred in the design, including geotechnical work, of the Regional Recycled Water Pipeline;

**NOW THEREFORE**, the Parties agree as follows:

**AGREEMENT**

**1. Design and Construction.**

EVWD will design the Regional Recycled Water Pipeline as a component of the SNRC project at an expanded capacity of 15 MGD to accommodate recycled water flows from the

Clean Water Factory pursuant to VALLEY DISTRICT's request. A diagram depicting the Regional Recycled Water Pipeline is attached hereto as Exhibit A for reference. The current concept of the Regional Recycled Water Pipeline will be comprised of newly constructed pipeline tied into an existing 2,735 linear feet of 36-inch diameter ductile iron pipe originally constructed to serve EVWD Plant 150, but never used (Plant 150 Pipeline) and other associated appurtenances.

**2. Reimbursement.**

VALLEY DISTRICT shall reimburse EVWD for all actual fully burdened costs of design of the Regional Recycled Water Pipeline, including geotechnical work. The current estimated cost of the design of the Regional Recycled Water Pipeline is \$453,125.

**3. Review and Approval.**

Upon completion of the design, VALLEY DISTRICT shall have the opportunity to review and approve the design plans of the Regional Recycled Water Pipeline, which approval shall not be unreasonably withheld.

**4. Payments.**

VALLEY DISTRICT shall make progress payments, monthly in arrears, based on monthly invoices prepared by EVWD and supported by appropriate and sufficient documentation of cost. VALLEY DISTRICT shall have 10 days to review and pay the invoices. Upon completion of the design, EVWD shall submit a final invoice to VALLEY DISTRICT representing the total actual cost of design of the Regional Recycled Water Pipeline less payments previously made by VALLEY DISTRICT. VALLEY DISTRICT shall have 30 days within which to pay the final invoice.

**5. Construction, Title & Operation.**

The Parties intend to enter into a separate agreement for construction of the Regional Recycled Water Pipeline and reimbursement of costs of construction and the existing but repurposed 2,735 linear feet of 36-inch ductile iron pipeline. Title to the Regional Recycled Water Pipeline shall vest with VALLEY DISTRICT upon completion of construction as evidenced through a Notice of Completion filed by EVWD. In addition, the Parties intend to enter into a separate agreement through which VALLEY DISTRICT may contract with EVWD to operate, maintain and repair the Regional Recycled Water Pipeline under direction from VALLEY DISTRICT. VALLEY DISTRICT shall have full and complete discretion to determine whether recycled water shall be discharged to City Creek or to the Redlands Basins except when

the point of discharge is defined under the terms and conditions of the SNRC Final Environmental Impact Report (SCH 2015101058\_). VALLEY DISTRICT shall cause the Regional Recycled Water Pipeline to be operated by EVWD in full compliance with all applicable laws and regulations.

**6. Indemnification.**

(a) EVWD Indemnity.

EVWD shall indemnify VALLEY DISTRICT against and agrees to hold VALLEY DISTRICT harmless of and from all liabilities, obligations, actions, suits, proceedings or claims, and all costs and expenses, including but not limited to, reasonable attorney's fees (collectively, Claims and Costs), based upon or arising out of any negligent or intentional breach or failure of EVWD to observe or perform any obligation of EVWD as set forth in this Agreement.

(b) VALLEY DISTRICT Indemnity.

VALLEY DISTRICT shall indemnify EVWD against and agrees to hold VALLEY DISTRICT harmless of and from all liabilities, obligations, actions, suits, proceedings or claims, and all costs and expenses, including, but not limited to, reasonable attorney's fees (collectively, Claims and Costs), based upon or arising out of any negligent or intentional breach or failure of VALLEY DISTRICT to observe or perform any of the obligations of the VALLEY DISTRICT as set forth in this Agreement.

**7. Notices.**

All notices, requests, demands, or other communications required or permitted under this Agreement shall be in writing unless provided otherwise herein and shall be deemed to have been duly given and received if mailed to the parties to whom notices are to be given by first class mail, registered or certified, postage prepaid, addressed as follows:

Notice to VALLEY DISTRICT:

Douglas Headrick, General Manager  
San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, CA 92408

David R. E. Aladjem

Downey Brand, LLP  
621 Capital Mall  
Sacramento, CA 95814

Notice to EVWD:

John Mura, General Manager/CEO  
East Valley Water District  
31111 Greenspot Road  
Highland, CA 92346

Jean Cihigoyenetche  
JC Law Firm  
5871 Pine Avenue, Suite 200  
Chino Hills, CA 91709

**8. Binding Effect.**

This Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective successors and assigns.

**9. Entire Agreement.**

This Agreement shall constitute the entire agreement between the parties hereto with respect to its subject matter and supersedes all prior Agreements, understandings, negotiations, representations, and discussions, whether verbal or written, of the parties, pertaining to that subject matter.

**10. Severability.**

If any provision of this Agreement is determined to be illegal and unenforceable, all other provisions shall nevertheless be effective.

**11. Governing Law.**

This Agreement and the legal relations between the parties hereto shall be governed by and be construed in accordance with the laws of the state of California with venue in the Superior Court for the County of San Bernardino, California.


**12. Counterparts.**

This Agreement may be executed in several counterparts and all such executed counterparts shall constitute one document, binding on all the parties hereto, notwithstanding that all of the parties hereto are not signatories to the original or to the same counterpart.

///

IN WITNESS WHEREOF, the Parties, EVWD and VALLEY DISTRICT, have executed this Agreement as of the date first set forth above.

VALLEY DISTRICT:

By: 

Printed Name: Douglas D. Headrick

Its: General Manager

EVWD:

By: 

Printed Name: John Mura

Its: General Manager/CEO



# Exhibit A - Regional Recycled Water Pipeline Map



SNRC Site



**Legend**

- Re-Purposed Existing Pipeline
- Future Recycled Water Pipeline





**REGIONAL RECYCLED WATER PIPELINE  
CONSTRUCTION AND DESIGN REFINEMENT REIMBURSEMENT  
AGREEMENT**

This Regional Recycled Water Pipeline Construction and Design Refinement Reimbursement Agreement is entered into and effective as of \_\_\_\_\_, 2019, by and between EAST VALLEY WATER DISTRICT, a County Water District, organized and operating pursuant to California Water Code Section 30000 et seq. (EVWD) and SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT, a Municipal Water District, organized and operating pursuant to California Water Code Section 71000 et seq. (VALLEY DISTRICT) (Collectively "Parties").

**RECITALS**

**WHEREAS**, since 1969 VALLEY DISTRICT, together with a number of other public agencies including EVWD, have worked cooperatively to replenish the San Bernardino Basin Area (SBBA) and ensure that there are reliable sources of water for the residents of the San Bernardino Valley, among others; and

**WHEREAS**, VALLEY DISTRICT and EVWD have collaborated on the Sterling Natural Resource Center project (SNRC) which will be designed and constructed by EVWD and which includes an effluent discharge line, which will transport recycled water to the Redlands Basins and City Creek for discharge; and

**WHEREAS**, VALLEY DISTRICT and EVWD have agreed that the SNRC discharge line is an integral part of regional recycled water infrastructure, including, but not limited to, combining recycled water flows from the SNRC and the Clean Water Factory, a project proposed by the city of San Bernardino, which would require expanding the discharge line and increasing its capacity to 15 mgd to accommodate the combined flows and thereby creating the Regional Recycled Water Pipeline (RRWP) which is the subject of this agreement; and

**WHEREAS**, VALLEY DISTRICT has historically been responsible for the construction of regional infrastructure for conveying local and imported water supplies; and

**WHEREAS**, in or about January 2019, the Parties hereto entered into a Regional Recycled Water Pipeline Reimbursement Agreement by which VALLEY DISTRICT agreed to reimburse EVWD for all expenses incurred in the design, including geotechnical work, of the RRWP; and

**WHEREAS**, the design work for the segment to the Redlands Basins has now been completed while the alignment for the segment to the City Creek is being re-evaluated due to potential risks and complications associated with the I-210 freeway crossing, the

jurisdictional levee of the U.S. Army Corps of Engineer, and securing a pipeline easement from the County Flood Control District; and

**WHEREAS**, the segment of the RRWP project to the Redlands Basin is ready to enter the construction phase of development and VALLEY DISTRICT wishes to reimburse EVWD for all expenses incurred in the construction of the RRWP and design refinement for the segment to City Creek;

**NOW THEREFORE**, the Parties agree as follows:

## **AGREEMENT**

### **1. Construction.**

EVWD will construct RRWP as a component of the SNRC project at an expanded capacity of 15 MGD to accommodate recycled water flows from the Clean Water Factory pursuant to the design previously agreed to between the Parties. A diagram depicting the RRWP is attached hereto as Exhibit "A" for reference. The RRWP will be comprised of newly designed pipeline tied into an existing 2,735 linear feet of 36-inch diameter ductile iron pipe originally constructed to serve EVWD Plant 150, but never used (Plant 150 Pipeline) and other associated appurtenances. The existing ductile iron pipe shall become an integrated part of the RRWP and its cost of acquisition shall be part of the reimbursement amount paid by VALLEY DISTRICT under this agreement. EVWD shall oversee construction of the RRWP through its design-build entity Balfour-Beatty Arcadis, and construction shall be in conjunction with the construction of the SNRC. To the extent applicable, the terms and conditions set forth in the Progressive Design-Build Contract between EVWD and Balfour-Beatty Arcadis shall apply to the construction of the RRWP.

### **2. Design Refinement.**

EVWD will complete the design refinement with input from Valley District for the segment to City Creek but EVWD shall not proceed to construction without Valley District's written approval of the final engineering plans and specifications for that segment.

### **3. Reimbursement.**

VALLEY DISTRICT shall reimburse EVWD for all actual cost of construction of the RRWP plus Design-Build contractor mark-up and costs related to General Conditions and design refinement for the City Creek segment. The current estimated cost of construction of the RRWP and design refinement is estimated to be \$16,428,342, which includes the cost of acquisition of the 2735 linear feet of 36-inch diameter ductile iron pipe described above.

**4. Inspection and Change Order Approval.**

VALLEY DISTRICT shall have the right, at its sole expense, to perform site inspections of the work as it progresses. Any comments regarding the work, or requests for correction, shall be submitted to the EVWD SNRC project manager, in writing, within 24 hours from the inspection. VALLEY DISTRICT shall have the right to submit all change orders for the work. EVWD shall promptly approve all change orders submitted by Valley District and otherwise administer all change orders. All change orders shall be in writing and shall conform to the change order procedures and requirements set forth in the progressive design – build agreement for construction of the SNRC.

**4. Payments.**

VALLEY DISTRICT shall make progress payments, monthly in arrears, based on monthly invoices prepared by EVWD and supported by appropriate and sufficient documentation of cost. VALLEY DISTRICT shall have 10 days to review and pay the invoices. Upon completion of the construction, EVWD shall submit a final invoice to VALLEY DISTRICT representing the total actual cost of construction of the RRWP less payments previously made by VALLEY DISTRICT. VALLEY DISTRICT shall have 30 days within which to pay the final invoice.

**5. Title & Operation.**

Title to the Plant 150 Pipeline and RRWP shall vest with VALLEY DISTRICT upon completion of construction as evidenced through a Notice of Completion filed by EVWD. In addition, the Parties intend to enter into a separate agreement through which VALLEY DISTRICT may contract with EVWD or the City of San Bernardino Municipal Water Department to operate, maintain and repair the RRWP under direction from VALLEY DISTRICT. VALLEY DISTRICT shall have full and complete discretion to determine whether recycled water shall be discharged to City Creek or to the Redlands Basins except when the point of discharge is defined under the terms and conditions of the SNRC Final Environmental Impact Report (SCH 2015101058). EVWD, in operating the SNRC or operating, maintain, or repairing the RRWP, shall fully comply with all applicable laws and regulations.

**6. Indemnification.**

**(a) EVWD Indemnity.**

EVWD shall indemnify VALLEY DISTRICT against and agrees to hold VALLEY DISTRICT harmless of and from all liabilities, obligations, actions, suits, proceedings or claims, and all costs and expenses, including but not limited to, reasonable attorney's fees (collectively, Claims and Costs), based upon or arising out of any negligent or intentional breach or failure of EVWD to observe or perform any obligation of EVWD as set forth in

this Agreement.

(b) VALLEY DISTRICT Indemnity.

VALLEY DISTRICT shall indemnify EVWD against and agrees to hold VALLEY DISTRICT harmless of and from all liabilities, obligations, actions, suits, proceedings or claims, and all costs and expenses, including, but not limited to, reasonable attorney's fees (collectively, Claims and Costs), based upon or arising out of any negligent or intentional breach or failure of VALLEY DISTRICT to observe or perform any of the obligations of the VALLEY DISTRICT as set forth in this Agreement.

7. Notices.

All notices, requests, demands, or other communications required or permitted under this Agreement shall be in writing unless provided otherwise herein and shall be deemed to have been duly given and received if mailed to the Parties to whom notices are to be given by first class mail, registered or certified, postage prepaid, addressed as follows:

Notice to VALLEY DISTRICT:

Douglas Headrick, General Manager  
San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, CA 92408

David R. E. Aladjem  
Downey Brand, LLP  
621 Capital Mall  
Sacramento, CA 95814

Notice to EVWD:

John Mura, General Manager/CEO  
East Valley Water District  
31111 Greenspot Road  
Highland, CA 92346

Jean Cihigoyenetché  
JC Law Firm  
5871 Pine Avenue, Suite 200  
Chino Hills, CA 91709

**8. Binding Effect.**

This Agreement shall inure to the benefit of and shall be binding upon the Parties hereto and their respective successors and assigns.

**9. Entire Agreement.**

This Agreement shall constitute the entire agreement between the Parties hereto with respect to its subject matter and supersedes all prior Agreements, understandings, negotiations, representations, and discussions, whether verbal or written, of the Parties, pertaining to that subject matter.

**10. Severability.**

If any provision of this Agreement is determined to be illegal and unenforceable, all other provisions shall nevertheless be effective.

**11. Governing Law.**

This Agreement and the legal relations between the Parties hereto shall be governed by and be construed in accordance with the laws of the state of California with venue in the Superior Court for the County of San Bernardino, California.

**12. Counterparts.**

This Agreement may be executed in several counterparts and all such executed counterparts shall constitute one document, binding on all the Parties hereto, notwithstanding that all of the Parties hereto are not signatories to the original or to the same counterpart.

**IN WITNESS WHEREOF**, the Parties, EVWD and VALLEY DISTRICT, have executed this Agreement as of the date first set forth above.

VALLEY DISTRICT:

By: Douglas D. Headrick

Printed Name: Douglas D. Headrick

Its: General Manager

EVWD:

By: John Mura

Printed Name: John Mura

Its: General Manager/CEO

**SECOND ADDENDUM TO THE REGIONAL RECYCLED WATER FACILITIES  
REIMBURSEMENT AGREEMENT**

This Regional Recycled Water Facilities Reimbursement Agreement is entered into and effective as of April 28, 2021, by and between EAST VALLEY WATER DISTRICT, a County Water District, organized and operating pursuant to California Water Code Section 30000 et seq. (EVWD) and SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT, a Municipal Water District, organized and operating pursuant to California Water Code Section 71000 et seq. (VALLEY DISTRICT) (Collectively "Parties").

**RECITALS**

**WHEREAS**, since 1969 VALLEY DISTRICT, together with a number of other public agencies including EVWD, have worked cooperatively to replenish the San Bernardino Basin Area (SBBA) and ensure that there are reliable sources of water for the residents of the San Bernardino Valley, among others; and

**WHEREAS**, VALLEY DISTRICT and EVWD have collaborated on the Sterling Natural Resource Center project (SNRC) which will be designed and constructed by EVWD and which includes a 10 million gallons per day (mgd) effluent discharge pipeline, (Discharge Line) which was originally planned to transport recycled water to the Redlands Basins and City Creek for discharge. The Discharge Line was the subject of a Regional Recycled Water Reimbursement Agreement entered into between the Parties in January 2019; and

**WHEREAS**, in November 2019, the Parties entered into a Regional Recycled Water Pipeline Construction and Design Refinement Reimbursement Agreement for reimbursement of all expenses incurred in the construction of the RRWP and design refinement for the segment to City Creek; and

**WHEREAS**, more recently it has been determined that that the region's groundwater resources would be better served by the design and construction of new recharge basins referred to as the Weaver Basins Project (WBP) to replace the use of the Redlands Basins; and

**WHEREAS**, VALLEY DISTRICT envisions that the SNRC Discharge Line and WBP are integral parts of regional recycled water infrastructure, including, but not limited to, combining recycled water flows from the SNRC and the Clean Water Factory, a project proposed by the City of San Bernardino Municipal Water Department (SBMWD), which would require expanding the Discharge Line and increasing its capacity to 15 mgd to accommodate the combined flows, and which would be referred to as the Modified Regional Recycled Water Pipeline (MRRWP). The Parties envision that upon operation VALLEY DISTRICT shall have full and complete discretion to determine whether recycled water shall be discharged to the Weaver Basins or any other basin

1715600v1



except when the point of discharge is defined under the terms and conditions of the SNRC Final Environmental Impact Report (SCH 2015101058), and any amendments thereto; and Addendum No. 1 to the Final Environmental Impact Report SCH#:2015101058 dated July 2019 and Addendum No. 2 to the Final Environmental Impact Report SCH#:2015101058 dated January 2021.

**WHEREAS**, EVWD certified an environmental document pursuant to the California Environmental Quality Act for the work contemplated by this agreement; by Addendum No. 2 to the Final Environmental Impact Report SCH#:2015101058 dated January 2021.

**WHEREAS**, VALLEY DISTRICT has historically been responsible for the construction of regional infrastructure for conveying local and imported water supplies; and

**WHEREAS**, VALLEY DISTRICT wishes to reimburse EVWD for all expenses incurred in the design and construction, including survey and geotechnical work, of the MRRWP and WBP in accordance with the terms and conditions set forth herein, as an integrated project (Project);

**NOW THEREFORE**, the Parties agree as follows:

#### **AGREEMENT**

##### **1. Project Description, Design and Planning.**

1.1 Design of the Modified Regional Recycled Water Pipeline: Rather than going to the Redlands Basins, the Pipeline will be rerouted to the Weaver Basins generally following the Greenspot Road right-of-way. It is estimated that the design cost is approximately \$472,971 including geotechnical investigations based on a time and material not to exceed fee.

1.2 Design of the Weaver Basins: The design will be generally based on a conceptual design layout (attached) completed by Valley District staff, including five (5) basins, slide gates, overflow structures, and other associated appurtenances. It is estimated that the design cost is approximately \$524,009 including geotechnical investigations based on a time and material not to exceed fee. Additionally, it is proposed that an onsite well that is not functional to be abandoned properly with a proposed not-to-exceed fee of \$83,000.

1.3 Preliminary condition assessment for the Alabama Street Pipeline: It is proposed that the Pipeline that was constructed by the SBMWD in 1960s be investigated, rehabilitated if economical including life cycle costs and incorporated to be part of the RRWS. It is envisioned that the Pipeline will be used to conveyed recycled water from the CWF to the Weaver Basins for recharge during normal operation and will be used to convey SNRC recycled water to bypass the Weaver Basins should the High Groundwater condition reoccur in the future and discharge to Rapid Infiltration and Extraction Facility (RIX) owned by SBMWD. The first phase of the work involves preliminary condition assessment for sections of the Pipeline to get a general idea of the overall pipeline condition and evaluate and recommend alternatives for possible rehabilitation and reconstruction. It is estimated that the cost associated with the proposed work is approximately \$279,728.

## **2. Reimbursement.**

VALLEY DISTRICT shall reimburse EVWD for all actual fully burdened cost of design, management, permitting and construction of the Project, including surveying and geotechnical work, plus Design-Build contractor mark-up and costs related to General Conditions and design refinement for the MRRWP and WBP. The current estimated cost of the design, management, permitting and construction of the Project is \$1,359,708.

## **3. Review and Approval.**

Upon completion of the Project design, VALLEY DISTRICT shall have the opportunity to review and approve the design plans of the Project, which approval shall not be unreasonably withheld.

## **4. Payments.**

VALLEY DISTRICT shall make progress payments, in arrears, based on quarterly invoices prepared by EVWD and supported by appropriate and sufficient documentation of cost. VALLEY DISTRICT shall have 30 days to review the invoices and notify EVWD of any disputes. The parties will meet and confer in good faith to resolve any disputes. VALLEY DISTRICT will pay invoices within 30 days of receipt or within 30 days of resolution of disputes, whichever is later. Upon completion of the design, EVWD shall submit a final invoice to VALLEY DISTRICT

1715600v1

representing the total actual cost of design of the Project less payments previously made by VALLEY DISTRICT. VALLEY DISTRICT shall have 30 days within which to pay the final invoice.

**6. Indemnification.**

(a) EVWD Indemnity.

EVWD shall indemnify VALLEY DISTRICT against and agrees to hold VALLEY DISTRICT harmless of and from all liabilities, obligations, actions, suits, proceedings or claims, and all costs and expenses, including but not limited to, reasonable attorney's fees (collectively, Claims and Costs), based upon or arising out of any negligent or intentional breach or failure of EVWD to observe or perform any obligation of EVWD as set forth in this Agreement.

(b) VALLEY DISTRICT Indemnity.

VALLEY DISTRICT shall indemnify EVWD against and agrees to hold EVWD harmless of and from all liabilities, obligations, actions, suits, proceedings or claims, and all costs and expenses, including, but not limited to, reasonable attorney's fees (collectively, Claims and Costs), based upon or arising out of any negligent or intentional breach or failure of VALLEY DISTRICT to observe or perform any of the obligations of the VALLEY DISTRICT as set forth in this Agreement.

**7. Notices.**

All notices, requests, demands, or other communications required or permitted under this Agreement shall be in writing unless provided otherwise herein and shall be deemed to have been duly given and received if mailed to the parties to whom notices are to be given by first class mail, registered or certified, postage prepaid, addressed as follows:

Notice to VALLEY DISTRICT:

Heather Dyer, General Manager  
San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, CA 92408

Meredith Nikkel  
Downey Brand, LLP  
621 Capital Mall  
Sacramento, CA 95814

1715600v1

Notice to EVWD:

John Mura, General Manager/CEO  
East Valley Water District  
31111 Greenspot Road  
Highland, CA 92346

Jean Cihigoyenetché  
JC Law Firm  
5871 Pine Avenue, Suite 200  
Chino Hills, CA 91709

**8. Binding Effect.**

This Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective successors and assigns.

**9. Severability.**

If any provision of this Agreement is determined to be illegal and unenforceable, all other provisions shall nevertheless be effective.

**10. Governing Law.**

This Agreement and the legal relations between the parties hereto shall be governed by and be construed in accordance with the laws of the state of California with venue in the Superior Court for the County of San Bernardino, California.

///

///

///

**11. Counterparts.**

This Agreement may be executed in several counterparts and all such executed counterparts shall constitute one document, binding on all the parties hereto, notwithstanding that all of the parties hereto are not signatories to the original or to the same counterpart.

IN WITNESS WHEREOF, the Parties, EVWD and VALLEY DISTRICT, have executed this Agreement as of the date first set forth above.

VALLEY DISTRICT:

By: Heather P. Dyer  
Heather Dyer, General Manager

Digitally signed by Heather P. Dyer  
DN: cn=Heather P. Dyer, o=San Bernardino Valley Municipal Water District, ou=CEO/General Manager, email=heatherd@sbvmwd.com, c=US  
Date: 2021.06.22 18:49:27 -07'00'

EVWD:

By:   
John Mura, General Manager

**THIRD ADDENDUM TO THE REGIONAL RECYCLED WATER  
FACILITIES REIMBURSEMENT AGREEMENT**

This Third Addendum to Regional Recycled Water Facilities Reimbursement Agreement is entered into and effective as of January 12, 2022, by and between EAST VALLEY WATER DISTRICT, a County Water District, organized and operating pursuant to California Water Code Section 30000 et seq. (EVWD) and SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT, a Municipal Water District, organized and operating pursuant to California Water Code Section 71000 et seq. (VALLEY DISTRICT) (Collectively “Parties”).

**RECITALS**

**WHEREAS**, since 1969 VALLEY DISTRICT, together with a number of other public agencies including EVWD, have worked cooperatively to replenish the San Bernardino Basin Area (SBBA) and ensure that there are reliable sources of water for the residents of the San Bernardino Valley, among others; and

**WHEREAS**, VALLEY DISTRICT and EVWD have collaborated on the Sterling Natural Resource Center project (SNRC) which will be designed and constructed by EVWD and which includes a 10 million gallons per day (mgd) effluent discharge pipeline, (Discharge Line) which was originally planned to transport recycled water to the Redlands Basins and City Creek for discharge. The Discharge Line was the subject of a Regional Recycled Water Reimbursement Agreement entered into between the Parties in January 2019; and

**WHEREAS**, in November 2019, the Parties entered into a Regional Recycled Water Pipeline Construction and Design Refinement Reimbursement Agreement for reimbursement of all expenses incurred in the construction of the RRWP and design refinement for the segment to City Creek; and

**WHEREAS**, more recently it has been determined that that the region’s groundwater resources would be better served by the design and construction of new recharge basins referred to as the Weaver Basins Project (WBP) to replace the use of the Redlands Basins; and

**WHEREAS**, VALLEY DISTRICT envisions that the SNRC Discharge Line and WBP are integral parts of regional recycled water infrastructure, including, but not limited to, combining recycled water flows from the SNRC and the Tertiary Treatment System, formerly known as the Clean Water Factory, a project proposed by the City of San Bernardino Municipal Water Department (SBMWD), which would require expanding the Discharge Line and increasing its capacity to 15 mgd to accommodate the combined flows, and which would be referred to as the Modified Regional Recycled Water Pipeline (MRRWP). The Parties envision that upon

operation VALLEY DISTRICT shall have full and complete discretion to determine whether recycled water shall be discharged to the Weaver Basins or any other basin except when the point of discharge is defined under the terms and conditions of the SNRC Final Environmental Impact Report (SCH 2015101058), and any amendments thereto; and Addendum No. 1 to the Final Environmental Impact Report SCH#:2015101058 dated July 2019 and Addendum No. 2 to the Final Environmental Impact Report SCH#:2015101058 dated January 2021.

**WHEREAS**, EVWD certified an environmental document pursuant to the California Environmental Quality Act for the work contemplated by this agreement; by Addendum No. 2 to the Final Environmental Impact Report SCH#:2015101058 dated January 2021.

**WHEREAS**, in April 2021 the Parties approved the Second Addendum to the Regional Recycled Water Facilities Reimbursement Agreement which addressed the WBP description, design and planning of the Project; and

**WHEREAS**, the Parties now wish to provide for reimbursement relative to the construction aspect of the Project; and

**WHEREAS**, VALLEY DISTRICT has historically been responsible for the construction of regional infrastructure for conveying local and imported water supplies; and

**WHEREAS**, VALLEY DISTRICT wishes to reimburse EVWD for all expenses incurred in the design and construction, including survey and geotechnical work, of the MRRWP and WBP in accordance with the terms and conditions set forth herein, as an integrated project (Project);

**NOW THEREFORE**, the Parties agree as follows:

## **AGREEMENT**

### **1. Project Construction.**

EVWD will construct the Project as a component of the SNRC project. The Project shall include the following components:

- 1.1 The MRRWP extension beginning from a location generally at 3rd Street and Palm Av e. in Highland then easterly roughly following and south of Greenspot Road to the Weaver Basins.
- 1.2 New recharge basins at the Weaver Basin site.
- 1.3 All related permitting and Project inspection costs and geotechnical work, surveying and associated construction costs.

1767721v1

Third Addendum to The Regional Recycled Water Facilities  
Reimbursement Agreement  
December 9, 2021  
Page 2 of 5

EVWD shall be responsible for the construction of the Project, which will be in conjunction with the construction of the SNRC. EVWD shall be responsible for securing all permits and approvals from applicable regulatory agencies including, but not limited to the State and Regional Water Quality Control Boards and the Division of Drinking Water, U.S. Army Corps of Engineers, as well as California Department of Fish & Wildlife and U.S. Fish and Wildlife Service.

## **2. Reimbursement.**

VALLEY DISTRICT shall reimburse EVWD for all actual fully burdened cost of construction management, permitting and construction of the Project, including surveying and geotechnical work, plus contractor mark-up and costs related to General Conditions and design refinement for the MRRWP and WBP. The current estimated cost of construction of the Project is \$ 34,300,000 with a VALLEY DISTRICT controlled contingency of \$3,350,000 for a total reimbursement not to exceed \$37,650,000.

## **3. Review and Approval.**

Upon completion of the Project design, VALLEY DISTRICT shall have the opportunity to review and approve the design plans of the Project, which approval shall not be unreasonably withheld.

## **4. Payments.**

VALLEY DISTRICT shall make progress payments, in arrears, based on quarterly invoices prepared by EVWD and supported by appropriate and sufficient documentation of cost. VALLEY DISTRICT shall have 30 days to review the invoices and notify EVWD of any disputes. The parties will meet and confer in good faith to resolve any disputes. VALLEY DISTRICT will pay invoices within 30 days of receipt or within 30 days of resolution of disputes, whichever is later. Upon completion of the design, EVWD shall submit a final invoice to VALLEY DISTRICT representing the total actual cost of design of the Project less payments previously made by VALLEY DISTRICT. VALLEY DISTRICT shall have 30 days within which to pay the final invoice.

## **5. Title & Operation.**

Title to the Project shall vest with VALLEY DISTRICT upon completion of construction as evidenced through a Notice of Completion filed by EVWD. VALLEY DISTRICT retains all discretion to determine operations of the PROJECT, except EVWD, as a recycled water discharger, shall be responsible for any and all permitting and mitigation requirements associated with water quality or other environmental impacts resulting from recharge of its recycled water and VALLEY DISTRICT shall take no intentional action which

1767721v1

Third Addendum to The Regional Recycled Water Facilities  
Reimbursement Agreement

December 9, 2021

Page 3 of 5



would result in a violation of said permit or mitigation requirements.

**6. Indemnification.**

(a) EVWD Indemnity.

EVWD shall indemnify VALLEY DISTRICT against and agrees to hold VALLEY DISTRICT harmless of and from all liabilities, obligations, actions, suits, proceedings or claims, and all costs and expenses, including but not limited to, reasonable attorney's fees (collectively, Claims and Costs), based upon or arising out of any negligent or intentional breach or failure of EVWD to observe or perform any obligation of EVWD as set forth in this Agreement.

(b) VALLEY DISTRICT Indemnity.

VALLEY DISTRICT shall indemnify EVWD against and agrees to hold EVWD harmless of and from all liabilities, obligations, actions, suits, proceedings or claims, and all costs and expenses, including, but not limited to, reasonable attorney's fees (collectively, Claims and Costs), based upon or arising out of any negligent or intentional breach or failure of VALLEY DISTRICT to observe or perform any of the obligations of the VALLEY DISTRICT as set forth in this Agreement.

**7. Notices.**

All notices, requests, demands, or other communications required or permitted under this Agreement shall be in writing unless provided otherwise herein and shall be deemed to have been duly given and received if mailed to the parties to whom notices are to be given by first class mail, registered or certified, postage prepaid, addressed as follows:

Notice to VALLEY DISTRICT:

Heather Dyer, General Manager  
San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, CA 92408

Meredith Nikkel  
Downey Brand, LLP  
621 Capital Mall  
Sacramento, CA 95814

1767721v1

Third Addendum to The Regional Recycled Water Facilities  
Reimbursement Agreement  
December 9, 2021  
Page 4 of 5

Notice to EVWD:

John Mura, General Manager/CEO  
East Valley Water District  
31111 Greenspot Road  
Highland, CA 92346

Jean Cihigoyenette  
JC Law Firm  
5871 Pine Avenue, Suite 200  
Chino Hills, CA 91709

**8. Binding Effect.**

This Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective successors and assigns.

**9. Severability.**

If any provision of this Agreement is determined to be illegal and unenforceable, all other provisions shall nevertheless be effective.

**10. Governing Law.**

This Agreement and the legal relations between the parties hereto shall be governed by and be construed in accordance with the laws of the state of California with venue in the Superior Court for the County of San Bernardino, California.

**11. Counterparts.**

This Agreement may be executed in several counterparts and all such executed counterparts shall constitute one document, binding on all the parties hereto, notwithstanding that all of the parties hereto are not signatories to the original or to the same counterpart.

1767721v1

Third Addendum to The Regional Recycled Water Facilities  
Reimbursement Agreement  
December 9, 2021  
Page 5 of 5

IN WITNESS WHEREOF, the Parties, EVWD and VALLEY DISTRICT, have executed this Agreement as of the date first set forth above.

VALLEY DISTRICT:

By: Heather P. Dyer  
Heather Dyer, CEO/General Manager

EVWD:

By: John Mura  
John Mura, CEO/General Manager

1767721v1

Third Addendum to The Regional Recycled Water Facilities  
Reimbursement Agreement  
December 9, 2021  
Page 6 of 5



# Regional Recycled Water System Attachment N



SNRC - EVWD

Regional Recycled Water Pipeline

Emergency Basin

Emergency Basin

Weaver Basins



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



# Emergency Basins Attachment O



SNRC - EVWD

Regional Recycled Water Pipeline

Emergency Basin

Emergency Basin

Weaver Basins



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Comm



# Wildlife Hazard Management Plan Weaver Basins Infiltration Project

---

## Prepared for:



31111 Greenspot Road  
Highland, CA 92346

## Prepared by:



5020 Chesebro Road, Suite 200  
Agoura Hills, CA 91301

**December 2022**

# Contents

<b>1.0 Introduction .....</b>	<b>1</b>
1.1 Project Description .....	2
<b>2.0 Assessment Methods.....</b>	<b>3</b>
2.1 Literature Review.....	3
2.2 Field Assessment .....	3
2.3 Wildlife Attractants in the Project Vicinity .....	4
2.4 FAA Wildlife Strike Database Review.....	4
<b>3.0 Wildlife Strike Analysis .....</b>	<b>4</b>
3.1 Raptors (Eagles, Hawks, Falcons, and Vultures) .....	5
3.2 Waterfowl.....	6
3.3 Doves and Pigeons.....	6
3.4 Starlings and Blackbirds.....	7
3.5 Gulls .....	7
3.6 Swallows .....	8
3.7 Shorebirds and Waders .....	8
3.8 Herons and Egrets.....	9
3.9 Corvids .....	9
3.10 Small Songbirds.....	10
3.11 Mammals (predators and scavengers) .....	10
3.12 Mammals (prey).....	10
<b>4.0 Wildlife Hazard Reduction Plan .....</b>	<b>11</b>
4.1 Plan Implementation Authority.....	12
4.2 Site Design .....	13
4.2.1 WBI Project Facilities .....	13
4.2.2 Recharge Water Basins.....	13
4.2.3 Landscape .....	14
4.3 Wildlife Habitat Management .....	14
4.3.1 WBI Project Facilities .....	14
4.3.2 Recharge Water Basins.....	14
4.3.2 Landscape .....	15
4.3.3 Food and Prey Management .....	15
4.3.4 Staff Training.....	15
4.3.5 Land Use Changes.....	15
4.4 Wildlife Control Procedures .....	15
4.4.1 Wildlife Population Management .....	15
4.5 Plan Evaluation .....	16
<b>5.0 Wildlife Baseline Data and Monitoring.....</b>	<b>16</b>
<b>6.0 References.....</b>	<b>17</b>

## Tables

Table 1. Potential Problem Species in the WBI Site and SBN Vicinity. ....	5
Table 2. Overview of WBI Project Wildlife Management Tasks and Schedule.....	11
Table 3. Monitoring Schedule.....	17

## Figures

*(Figures appear in Attachment 1)*

Figure 1. Project Vicinity

Figure 2. Project Site

## Attachments

Attachment 1 Figures

Attachment 2 FAA Advisory Circular 150/5200-36A: Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments

Attachment 3 Federal Aviation Regulations Part 139.337: "Wildlife Hazard Management"

Attachment 4 Landscaping Near Airports: Special Considerations for Preventing or Reducing Wildlife Hazards to Aircraft – Riverside County Airport Land Use Commission

Attachment 5 WBI Species List

Attachment 6 FAA Advisory Circular 150/5200-33C: Hazardous Wildlife Attractants on or near Airports

Attachment 7 Wildlife Monitoring Data Forms



## 1.0 Introduction

This Plan provides an analysis of the potential hazards to aircraft at the San Bernardino International Airport (SBN) and the Redlands Municipal Airport (REI) from the development and operation of the Weaver Basins Infiltration (WBI) Project (Project) (Figure 1; see Attachment 1). The East Valley Water District (EVWD) and San Bernardino Valley Municipal Water District (Valley District) intend to construct and operate the WBI facility to support groundwater recharge. The WBI Project includes recharge basins and an emergency basin. Valley District will be responsible for the operation of the recharge basins and will consequently be responsible for compliance with this Wildlife Hazard Plan for the five recharge basins. EVWD will be responsible for the operation of the emergency basin and compliance with this Wildlife Hazard Plan for that facility. Treated water would be provided by the Sterling Natural Resource Center (SNRC) and the Tertiary Treatment System. The wildlife hazard analysis is based on an assessment of the avian species known from the WBI Project area and an evaluation of the facilities potential, once constructed, to attract or support birds that could pose a risk to aircraft. The Plan also provides remedial actions and monitoring requirements to ensure the WBI avoids and/or minimizes potential risk to air traffic at the SBN and REI from hazardous birds that could be attracted to the WBI.

Aspen Environmental Group (Aspen), under contract to EVWD, prepared this Plan in close cooperation with Eric Lichtwardt of LSA Associates. Mr. Lichtwardt is a qualified airport wildlife biologist (QAWB) as specified by FAA Advisory Circular (AC) 150/5200-36A (2012; see Attachment 2).

To the greatest extent feasible the Plan has been completed to follow the guidance of the Federal Aviation Administration (FAA) and to minimize the likelihood that the WBI Project would create an attractant to wildlife hazardous to aircraft at SBN or REI. Because the facility is located within 5 miles of the SBN, the SBN noted concerns about the facility acting as an attractant to birds which could increase the potential for bird strikes with local aircraft. These events can result in damage to aircraft or result in an aircraft crash.

This Plan describes the potential baseline bird hazards to aircraft that occur in the region and provides an analysis of future risk that may occur from the construction and operation of the WBI Project to the SBN. The WBI Project will be located at the intersection of Greenspot Road and Club View Drive (34°06'23.9" N 117°09'50.0" W) in the City of Highland, San Bernardino County, California. The WBI Project will be approximately three miles east of the SBN, 1.73 miles north of the REI, and approximately five miles east of the SNRC. The Project site is located outside the 10,000-foot (1.8 miles) wildlife hazard separation zone of the SBN airport per FAA AC No. 150/5200-33C, Hazardous Wildlife Attractants on or Near Airports.

However, FAA recommends for all airports a 5-mile separation between the closest point of the airport's aircraft operations area and a hazardous wildlife attractant. Special attention should be given to features that could cause hazardous wildlife movement into or across the approach or departure airspace. AC 150/5200-33C, Section 2.3.2, identifies new stormwater management facilities or infiltration basins, such as the WBI, as potential hazardous wildlife attractants.

Information related to land use compatibility was not found for the SBIA or REI. However, pursuant to the information obtained from Riverside County Airport Land Use Commission's (ALUC) brochure entitled Airports, Wildlife and Stormwater Management, infiltration/bioretenion basins are potentially suitable in Compatibility Zone D if designed with appropriate modifications, such as drawdown within 48 hours of a rainfall event (24-hour storm) or manufactured cover to prevent view and access to water by wildlife, as well as absence of landscaping or landscaping approved by a qualified biologist. Compatible basins also are required to have steep slopes, equal to or greater than a 3:1 slope. Compatibility zones describe land use activities that can occur within the airports area of influence. The ALUC guide notes that infiltration basins are unsuitable in areas close to an airport but are suitable in other locations provided they do not detain water for more than 48 hours. The WBI has been designed to meet these requirements.

The WBI would be in a Special Compatibility Concern for the REI. This area is outside of Compatibility Zone D which includes other areas within the airport vicinity which are overflowed less frequently or at a higher altitude by aircraft arriving and departing the airport. Zone D has no restrictions on water treatment facilities. However, Section 3.3 (Airspace Protection) of the REI Land Use Compatibility Plan (REI 2003), notes that land uses which may produce hazards to aircraft in flight, especially landfills and certain agricultural uses, which may attract large flocks of birds, shall not be permitted within the airport influence area. Special Compatibility Concern Policy 2.2.4. states that "These areas serve as a reminder that airport impacts should be carefully considered in any decision to change the current land use designations.

## 1.1 Project Description

The WBI will occur on approximately 36 acres of a 69-acre plot. The WBI will include six basins, five main basins and one emergency basin, that will have a maximum storage volume of approximately 200 acre-feet. The recharge basins would be excavated on site, with earthen berms placed between each recharge unit. Each of these facilities has some potential to attract birds and other wildlife depending on how the system is operated, the type of vegetation planted at or near the facilities, and the level of operation and maintenance activities that occurs. Generally, the key areas that could attract wildlife include:

- Five recharge water basins
- One emergency basin
- Main pumping plant and appurtenant facilities (pump station(s), surge tank, forebay tank, etc.)
- Native and ornamental landscaping

Each basin will be built to completely drain within 48-hours to reduce the potential to attract wildlife and include steep slopes that discourage loitering, foraging, or breeding. Partially buried concrete weirs and energy dissipation/flow control structures would be constructed on site. A pipeline (manifold) would be installed with multiple valves at a predetermined spacing to allow for easily controlled opening and closing to control incoming flow. The manifolds convey flows into the recharge basins.

The WBI would control the valves, metering, a storage tank, booster pump station, telemetry, basin emergency overflow culvert, and an outlet structure for emergency releases (see Figure 2; Attachment 1). The WBI site will also include additional appurtenant facilities such as a pumping plant(s), surge tank, and forebay tank for operational flexibility, as necessary. Cameras will be located throughout the WBI site to provide visual coverage of the basins and allow for remote monitoring of water levels within the recharge basins. The WBI site will be secured using wildlife deterrent fencing. The main access to the site will be through a security gate to be installed on Old Greenspot Road.

## 2.0 Assessment Methods

This section incorporates the results of the literature review and field assessment conducted in November 2021, as well as a review of applicable laws and regulations.

### 2.1 Literature Review

Aspen biologists reviewed available literature to identify potential wildlife hazards known from the vicinity. The following literature and databases listed below were reviewed:

- FAA Wildlife Strike Database for records of reported wildlife strikes at SBN since 1990,
- Addendum No. 2 to the Sterling Natural Resource Center Final Environmental Impact Report (SCH#: 2015101058),
- Updated General Biological and Spring Botanical Surveys Report for the Greenspot Partners Site West (L&L Environmental, Inc. 2015),
- SNRC Wildlife Hazard Management Plan,
- REI Land Use Compatibility Plan (2003),
- Redlands Airport Final Master Plan, and
- SBN Wildlife Hazard Assessment Report.

### 2.2 Field Assessment

The site evaluation and biological surveys were conducted by Aspen biologists Brady Daniels and Erik Waardenburg on November 11, 2021. During the survey, the biologists walked the Project site and perimeter where accessible. The Village Lakes Park One, a recreational park was also visited. The Park is located within one mile of the WBI on Greenspot Road. All wildlife species observed were recorded in field notes. All species noted in the study area are included in the attached species list (Attachment 5).

During the field survey 15 species of birds were detected (see Attachment 5). Some of these included, California quail (*Callipepla californica*), Mourning Dove (*Zenaida macroura*), Say's phoebe (*Sayornis saya*), common raven (*Corvus corax*), House Wren (*Troglodytes aedon*), California thrasher (*Toxostoma redivivum*), northern mockingbird (*Mimus polyglottos*), house sparrow (*Passer domesticus*), white-crowned sparrows (*Zonotrichia leucophrys*), and phainopepla (*Phainopepla nitens*). Large birds including red-tailed hawk (*Buteo jamaicensis*) and barn owl (*Tyto alba*) were also observed.

The SBN and WBI are in an area known to support a variety of wintering and migratory birds. Over 400 species of native birds are known from this region and may occur as a migrant, seasonal visitor, or resident bird. Some of these species include western kingbird (*Tyrannus verticalis*), California scrub jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), spotted towhee (*Pipilo maculatus*), great-tailed grackle (*Quiscalus mexicanus*), and bushtit (*Psaltriparus minimus*). Non-native species including Eurasian collared dove (*Streptopelia decaocto*) and rock pigeon (*Columba livia*) were also observed.

A variety of water birds are known from the region including mallard (*Anas platyrhynchos*), snowy egret (*Egretta thula*), great blue heron (*Ardea herodias*), and Canada goose (*Branta canadensis*). In addition to red-tailed hawk and barn owl, noted above other raptors known from the region include American kestrel

(*Falco sparverius*), Cooper's hawk (*Accipiter cooperii*), turkey vulture (*Cathartes aura*), and ferruginous hawk (*Buteo regalis*).

## 2.3 Wildlife Attractants in the Project Vicinity

Several parks and open space areas in the WBI vicinity provide wildlife habitat and may attract hazardous wildlife such as Canada geese to ponds, irrigated turf fields, or other features. The eastern edge of the WBI Project site is adjacent Weaver Creek, which conveys flow during storm events south towards the Santa Ana River where habitat can attract wildlife and provide a movement corridor for species that could pose hazards to aircraft operations (especially various shorebirds, wading birds, or herons and egrets during periods of inundation).

The WBI Project site is also approximately 1.2 miles south of the East Highland Reservoir, a 5-acre lake with stocked fish for recreational fishing. WBI Project is also approximately 0.6 miles east of the Village Lakes, a series of three small ponds surrounded by an approximately 15-acre open-turf park. It is currently unknown if this site stocks the ponds with fish, but Aspen biologists identified multiple fish-eating birds present when surveying the area, including a double-crested cormorant (*Nannopterum auritum*) in November 2021.

Canada goose is now a year-round resident in the area and have been detected in the open-turf area at Beattie Middle School/ Highland Grove Elementary School located approximately 0.6 miles from the WBI project site.

Standing water also appears to be present within property owned by CEMEX approximately 1 mile south of the Project site within the Santa Ana River channel. Seven additional parks and open spaces, without lakes, are within approximately 2 miles of the WBI Project site, in addition to numerous neighborhood, school, and agricultural fields. Wildlife using these local open space areas may also be attracted to the WBI site. However, by implementing the wildlife hazard management measures identified in this Plan, the WBI Project is not likely to result in an increase in hazardous wildlife in the local area, nor cause increased risk to aircraft.

## 2.4 FAA Wildlife Strike Database Review

The FAA wildlife strike database (2022) contains strike records at the SBN since 1990. The FAA records identify a total of 54 wildlife strikes at or near SBN. The greatest number of strikes occurred in 2006, when 18 strikes were recorded. Nearly all the wildlife strikes recorded at SBN (53 of 54 strikes) have been associated with birds. While most of these were unknown birds, thirteen strikes involved hawks and/or falcons, one involved a barn owl, and one involved a turkey vulture. From 2007 to February 2022 there have been 24 reported bird strikes at the SBN. Of these, eight were identified as ferruginous hawks, one red-tailed hawk, three rock pigeon, one mourning dove, one barn owl, one unidentified hawk species, two American kestrels, and five unknown birds. Two incidents have been reported in 2022. The [FAA Wildlife Strike Database](#) was accessed 28 April and October 2022.

## 3.0 Wildlife Strike Analysis

Most of the birds detected at the WBI consist of small resident passerines that do not pose a significant risk to aviation. These include small birds that do not typically aggregate in large flocks. However, hawks, crows, and various waterfowl are known from the area and their large size and flight behaviors pose a risk to aviation. In addition, residential development, parks, fields of turf grass at local elementary school, small

ponds, and pools located within sand and gravel mines support habitat for a variety of large birds. Some of these include various ducks, egrets, hawks, and Canada geese. In addition, there has been a recent increase in bird strikes at the SBN involving ferruginous hawks. This species is a regular but generally uncommon winter resident and migrate through the region. It is unknown why ferruginous hawk strikes increased in the fall/early winter at SBD. Below is an analysis of risk by various groups of birds for the WBI and SBN.

There are several species of birds known from the region that could pose a hazard to aviation. The relative risk for each species or category is based upon the SBN 12-month monitoring study and utilize a Relative Hazard to Aviation scores (Dolbeer et al. 2000) which have been assigned composite ranking from FAA AC No: 150/5200-33C (2020; Attachment 6). The lower the rank of a species or species group the greater the threat to aviation and human safety. Based upon review of the literature, databases, and field surveys identified above, Aspen compiled a list of potentially hazardous wildlife that are present or may be found in the Project vicinity. The habitat was also assessed for its potential to attract wildlife on the future site and in the surrounding areas.

Birds pose the greatest potential threat to aviation safety within the SBN and REI Influence Area. Mammals are less frequently observed near the SBN but may include predators, scavengers, and small prey. Five incidents with mammals were noted at the REI in 2021 and six in 2022. These species are identified in Table 1.

**Table 1. Potential Problem Species in the WBI Site and SBN and REI Vicinity.**

Species	Potential Risk
Soaring Birds (Eagles, Hawks, and Vultures)	Moderate-High
Canada Geese	Moderate-High
Waterfowl	Low
Doves and Pigeons	High
Starlings & Blackbirds	Moderate
Gulls	Moderate
Swallows	Moderate
Shorebirds and Waders	Low
Hérons & Egrets	Low
Corvids	Low
Songbirds	Moderate
Mammals (predators and scavengers)	Low to Moderate
Mammals (prey)	No Direct Risk

### 3.1 Raptors (Eagles, Hawks, Falcons, and Vultures)

Raptors have a moderate likelihood of being involved in a strike with aircraft, and many species can create a high degree of impact on flight due to their size. The FAA assigns a composite hazard ranking of 6 to eagles, 11 to hawks, and 21 to kestrels out of 25 ranked species. Twelve strikes with raptors have been recorded in the FAA database at SBN. Two strikes were reported from the REI, one with an unknown large bird in 2020 and one with a medium bird in 2016. Both occurred in November. Most aircraft conflicts at the REI involved coyotes. Therefore, the overall risk posed by raptors is critical to SBN and could affect the REI.

**Management Technique.** The WBI Project is not expected to be an attractant to most raptors that occur in the local area due to the planned control of food sources (e.g., small mammals, carrion), landscaping maintenance which will limit nesting and perching opportunities, and general human activity. Rodents provide a food source for raptors, and rodent management through improved fencing and limited denning opportunities may reduce the number of raptors present. California ground squirrels and gophers are common in the area and may provide a food source for raptors. Regular landscape maintenance will minimize small mammal occurrence on the site. The WBI Project is not expected to increase prey availability or cause any change to the existing numbers of soaring birds at SBN, REI, and in the vicinity.

### 3.2 Waterfowl

Waterfowl, including geese and ducks, are large aquatic birds that pose one of the most serious threats to aircraft because of their abundance, size, and flocking behavior. Waterfowl are attracted to open water ponds and basins to feed, nest, loaf, and escape predators. They will also frequent agricultural fields, parks, and golf courses to graze on the manicured grasses. Waterfowl can pose a hazard to aircraft based on their size and flocking behavior.

The FAA ranks geese as third in its composite ranking of 25 hazardous wildlife species and ducks as seventh. All have the potential to cause a high degree of impact on flight. Canada geese now relatively common in the area and has been detected as a year-round resident at a school immediately adjacent to the WBI. However, based on the low number of waterfowl observed on the SBN site during a 12-month monitoring study, the overall risk posed by waterfowl at SBN is low. There were no known waterfowl strikes identified at the REI during a search of the FAA database. The potential effect of the WBI facility as a waterfowl attractant is also low due to the design and management components identified in this Plan.

**Management Technique.** The Pacific Flyway supports huge waterfowl migrations annually. The WBI and SBN are positioned between a major and principal artery of the flyway. Because the surrounding area has been altered by development, migrating and resident waterfowl are attracted to available water features such as residential and golf course ponds and any water channels, like Weaver Creek, that have the potential to hold standing water. Habitat modification may be necessary if waterfowl become habituated to the area. Waterfowl will not be allowed to loaf or nest at the WBI. Geese that successfully raise young in a particular location will often return to the same nesting ground each year (Bellrose 1980), and therefore any nesting Canada geese will be subject to control under this Plan. The basins are designed to drain within 48 hours and the planned recharge basins, emergency culvert, and surrounding landscaping have been designed to not be attractants for waterfowl. The WBI Project is not expected to cause any change to the existing numbers of waterfowl at SBN, REI, and in the vicinity.

### 3.3 Doves and Pigeons

Non-native rock pigeons and Eurasian collared doves can be found in areas that are closely associated with human activity, such as parks and agricultural operations, and they nest in manmade structures such as parking ramps, buildings, and bridges. Doves and pigeons feed on grass and weed seeds in fields, refuse, and handouts from humans.

These species can pose hazards to aircraft operations because of their abundance and flocking behavior. Doves and pigeons pose a hazard due to their flocking behavior. The FAA assigns a composite hazard ranking of 13 to rock pigeons and 18 to mourning doves out of 25 ranked species. One strike with a mourning dove, and two strikes with a rock pigeon were recorded in the FAA Wildlife Strike Database. Based on the high number of doves observed on the SBN by a 12-month monitoring study, the proximity



of mourning doves to aircraft movement areas, observed flight patterns across the runway, the overall risk posed by this category is high. There were no known dove or pigeon strikes identified at the REI during a search of the FAA database.

**Management Technique.** Site design, operation, and maintenance will minimize the number of pigeons at the WBI facility. Structures will be designed to avoid creating nesting habitat (e.g., ledges under overhangs) for rock pigeons. Landscape design will not provide attractants for large numbers of pigeons and doves (e.g., fallow fields or waste grain). Wildlife feeding will not be permitted. Maintenance will include facility and landscape management to minimize nesting and foraging areas. The WBI Project is not expected to cause any change to the existing numbers of doves and pigeons at SBN, REI, and in the vicinity.

### 3.4 Starlings and Blackbirds

European starlings and blackbirds are medium-sized songbirds that can form large flocks in the non-breeding season. European starlings were the only species of the starlings and blackbird category observed during SBN 12-month monitoring study. Starlings are found in a variety of habitats from urban to rural environments. Starlings are attracted to open, grassy areas in which to forage, a water source, and trees or buildings that contain cavities for nesting. In the winter, these species form roosts in areas where cover and warmth are provided. Large flocks of starlings and blackbirds typically form in fall and winter in landscapes with abundant food resources such as fallow grain fields or livestock feed lots.

Starlings and blackbirds can pose a hazard to aircraft because of their dense flocking behavior. According to SBN, when strikes occur, they usually involve multiple birds that can be ingested by aircraft engines, and the severity of strikes associated with these species is moderate. The FAA assigns a composite hazard ranking of 20 to blackbirds and starlings. No strikes with these species have been documented at SBN. The overall risk posed by species within this category at SBN is moderate. There were no known starling or blackbird strikes identified at the REI during a search of the FAA database.

**Management Technique.** Starlings and blackbirds have the potential to forage at the WBI facility, but only in small numbers and it is unlikely that large flocks would use the site. No turf is proposed at WBI, and vegetation will be maintained to minimize food sources for starlings and blackbirds (e.g., grass heights will be low and there will be no significant source of insects or seeds). The basins would be maintained free of seed forming vegetation which would reduce attractants for these species. Structures will be designed to provide minimal cavity nesting opportunities for starlings. Persistent management actions are necessary to prevent large groups of birds from using open habitat areas. The WBI Project is not expected to cause any change to the existing numbers of starlings and blackbirds at SBN, REI, and in the vicinity.

### 3.5 Gulls

Gulls are large birds with long wings. Gulls can pose a severe hazard to aircraft based on their abundance, size, and flocking behavior. Gulls forage along lakes, lawns, pastures, garbage dumps, parking lots, and open water. A gull's diet consists of fish, insects, earthworms, small mammals, grain, garbage, fruit, and invertebrates.

Gulls have a moderate likelihood of being involved in a wildlife strike and can cause a moderate to high degree of impact on aircraft flight. The FAA assigns gulls a composite ranking of 12 in its list of 25 ranked species associated with wildlife strikes. No strikes with gulls have been recorded at SBN. There were no known gull strikes identified at the REI during a search of the FAA database. Although gulls were observed infrequently during SBN 12-month monitoring study, they did note them flying across the runway and their

presence could increase based on weather conditions. Based on these factors, the overall risk posed by this category is moderate according to SBN.

**Management Technique.** The landscape design including the recharge basins will not be attractive to gulls. The WBI Project will not provide a food source (no fish or aquatic invertebrates). Any trash generated on-site will be contained within appropriate receptacles. If gulls are observed loafing or feeding in the area, staff will identify any attractant and remove it. The WBI Project is not expected to cause any change to the existing numbers of gulls at SBN, REI, and in the vicinity.

### 3.6 Swallows

Swallows are frequently observed flying low over water features to capture insects. Swallows require water to build nests of mud. They are typically absent during the period of the year when flying insects are absent or at low densities.

The members of this category have a moderate likelihood of being involved in a strike with aircraft, and they can cause a moderate impact on flight due to their flocking behavior. The FAA assigns a composite hazard ranking of 23 to swallows out of 25 ranked species. However, swallows have not been associated with documented wildlife strikes at SBN. There were no known swallow strikes identified at the REI during a search of the FAA database. Therefore, the overall wildlife hazard risk posed by swallows is low according to SBN.

**Management Technique.** Swallows are present in the general area but not in large numbers and they are not expected to be attracted to the WBI Project. Design of the WBI facility and associated infrastructure will minimize potential cliff swallow nesting sites (e.g., beneath overhangs). The most effective method of dispersing swallows involves the removal of their food source. The water recharge basins will not provide a food source (e.g., emergent aquatic insects) due to vegetation and water management to prevent habitat for prey species. However, food sources may be present within the adjacent Weaver Creek channel. Neither nesting swallows nor large flocks of migrating swallows are common in the area. The WBI Project is not expected to cause any change to the existing numbers of swallows at SBN, REI, and in the vicinity.

### 3.7 Shorebirds and Waders

Shorebirds range from relatively large to small species and many species are often found in flocks. They seek small aquatic prey by probing on open shorelines, mud flats, or similar feeding habitats and some species forage in upland habitats such as fallow fields. Killdeer, a species that often forages and loafs in open upland habitats, was the most frequently observed shorebird during the SBN 12-month monitoring study. Killdeer frequent open grassy areas and occasionally are found in flocks, but usually occur alone or in pairs.

Shorebirds, especially killdeer, have a high probability of being involved in a strike with aircraft. Shorebirds would create a low impact on an aircraft flight due to their size. The FAA assigns a composite hazard ranking of 19 to shorebirds out of 25 ranked species. Since the number of killdeer observed during the 12-month monitoring study at SBN was relatively low, the overall wildlife hazard risk posed by shorebirds is low according to SBN. There were no known killdeer strikes identified at the REI during a search of the FAA database.

**Management Technique.** Shorebirds, particularly killdeer, are expected to occasionally use the WBI site in small numbers. There will be no shallow water or mudflat foraging habitat on site, so most shorebirds



will not be attracted to the site for feeding. Regular landscape maintenance and mowing will limit insect diversity and abundance, and therefore should not attract large potentially hazardous flocks of killdeer. However, the adjacent Weaver Creek channel may support foraging or nesting habitat for small numbers of killdeer and other shorebirds. With proper site maintenance, the WBI Project is not expected to cause any change to their existing numbers at SBN and in the vicinity.

### 3.8 Herons and Egrets

Herons and egrets are slender wading birds with long legs and long bills. They primarily hunt fish, amphibians, reptiles and mammals in shallow water or open grassy areas. They are generally solitary (except in breeding sites which may be communal for some species). The most observed wader by SBN was the great egret.

Herons and egrets are relatively large and often low-flying birds. The FAA assigns a composite hazard ranking of 10 to herons out of 25 ranked species. Since the number of herons observed during the 12-month monitoring study at SBN was relatively low, the overall wildlife hazard risk posed by herons and egrets is low according to SBN. There were no known heron or egret strikes identified at the REI during a search of the FAA database.

**Management Technique.** The WBI Project will not provide breeding or feeding sites for herons or egrets. There will be no shallow water habitat for wading, and no source of prey in the recharge basins (due to water quantity maintenance and vegetation management). Landscape maintenance including mowing and trash control will ensure that landscaped areas do not provide small mammal prey for herons or egrets. The WBI Project is not expected to cause any change to their existing numbers at SBN and in the vicinity.

### 3.9 Corvids

Only one species of corvid, the common raven, was observed during SBN 12-month monitoring period, although American crows and California scrub-jays are also common in the vicinity. The common raven is a large-sized bird that is highly intelligent, very social, and travels in small to large flocks. The raven is all black and easily confused with the American crow. The raven is an omnivore that feeds on a range of food items such as crops, fruit, carrion, insects, nuts, seeds, and human refuse. They also eat small animals such as lizards and young birds.

Ravens and other corvids have a low likelihood of being involved with an air strike at SBN due to their cautious behavior but strikes with ravens can result in a moderate impact on a flight due to their size and sometimes flocking behavior. The FAA assigns a composite hazard ranking of 16 to crows and ravens out of 25 ranked species. Based on the abundance of ravens observed during SBN 12-month monitoring study and their proximity to aircraft movement areas, the overall wildlife hazard risk assigned by SBN for this category is critical. There were no known corvid strikes identified at the REI during a search of the FAA database; however, one of the midsize birds was not identified.

**Management Technique.** The number of corvids at WBI Project can be minimized through good housekeeping procedures. All refuse collection containers will be equipped with secure lids and emptied regularly. The WBI Project is not expected to cause any change to the existing numbers of corvids at SBN and in the vicinity.

### 3.10 Small Songbirds

Songbirds, also called passerines, includes nearly half the world's birds. Songbirds vary greatly in size, and their diets vary among species. Smaller songbirds do not usually pose a threat to aircraft, but some smaller songbirds that travel in large flocks, such as the horned lark, can pose a greater threat. Ten songbird species were observed during the SBN 12-month monitoring study. The most common species are sparrows and finches which are found singly or in small loose flocks as they feed in open, weedy areas and grass fields. There were no known small songbird strikes identified at the REI during a search of the FAA database.

Songbirds have a moderate likelihood of being involved in a strike with aircraft, and they create a low degree of impact on flight due to their size. The FAA assigns a composite ranking of 15 to horned larks and 22 to meadowlarks, and 24 to sparrows, out of 25 ranked species. One strike with a meadowlark has been recorded in the FAA database for SBN. Based on their proximity to aircraft movement areas, SBN identified the overall risk posed by songbird species as moderate.

**Management Technique.** Site maintenance including mowing and trash control will ensure that nothing in the design or operations of the WBI Project would attract large songbird flocks. The WBI Project is not expected to cause any change to the existing numbers of songbirds at SBN and in the vicinity.

### 3.11 Mammals (predators and scavengers)

Predators and scavengers include mammals such as coyotes, bobcats, raccoons, skunks, opossums, feral dogs, and feral cats. They vary in size and their diets. Predator and scavenger mammals pose a threat to aircraft because of their large size if allowed on the runway. One strike with a striped skunk was recorded in the FAA Wildlife Strike Database.

Predatory and scavenger mammals on the WBI pose relatively small risk to SBN aviation due to the distance from the airport and existing deterrence or exclusion at the airport. One strike with a striped skunk was recorded in the FAA Wildlife Strike Database, and they do not have a ranking status within the FAA 25 ranked species. Five incidents with mammals were noted at the REI in 2021 and six in 2022. These incidents included coyotes which suggest the REI has a higher potential for incidents with mid-size mammals.

**Management Technique.** Management of predatory and scavenger mammals at the WBI Project will focus on deterring food sources such as prey mammals and access to trash. With proper landscaping maintenance, trash control, lack of aquatic food sources, predatory and scavenger mammal occurrences should be minimal. When large mammals, such as coyotes or dogs are detected on site (likely via remote monitoring cameras), animal control authorities will be notified for translocation. The WBI Project is not expected to cause any change to the existing numbers of mammalian predators or scavengers at SBN and in the vicinity.

### 3.12 Mammals (prey)

Smaller mammals, typically considered prey items for larger predators, consist of cottontail rabbits, ground squirrels, gophers, kangaroo rats, native and feral rats, and mice. They vary in size and their diets vary among species. Prey mammals pose a threat to aircraft by attracting predatory birds and mammals near SBN.

Prey mammals on the WBI Project site pose no direct risk to SBN aviation but can pose an indirect risk if they attract large numbers of predatory raptors.

**Management.** Small numbers of prey mammals such as rabbits, ground squirrels, and gophers are likely to occur at the WBI Project site. Site management will focus on landscape maintenance and trash control to minimize nesting sites and access to food. Wildlife deterrent fencing will be installed around the WBI Project area to limit the number of small mammals present within the Project site. The WBI Project is not expected to cause any change to the existing numbers of prey animals at SBN and in the vicinity.

## 4.0 Wildlife Hazard Reduction Plan

Wildlife hazard management generally involves on-site habitat and population management measures and may involve off-site habitat management measures of features that attract wildlife to critical airspace. The design, operation, and maintenance measures presented in this section are intended to reduce the risk of wildlife strikes at SBN by minimizing wildlife attractants at the WBI Project site. No off-site management measures are proposed.

**General Wildlife Management.** Should a wildlife hazard develop, it will be analyzed by qualified wildlife management personnel to determine a practical solution. The initial response for most species will be to haze them, followed by making the location unappealing in the future by removing attractants or modifying the habitat conditions (Section 4.3, Wildlife Habitat Management). The primary keys to successful wildlife management are persistence and innovation. Techniques will be applied based on safety, effectiveness, practicality, and environmental considerations.

The following table lists a series of habitat and non-habitat-based action items and priorities, including target dates for completion, where applicable. This table represents a generalized list of actions, more specific tasks are included in the hazard specific mitigation measures. While all items have an initial target date, many elements will be included in the on-going program.

**Table 2. Overview of WBI Project Wildlife Management Tasks and Schedule**

WBI Project Wildlife Management Tasks	Target Date	Date Completed
Evaluate and maintain a Wildlife Hazard Assessment and Wildlife Hazard Reduction Plan	Review annually	
Stock and maintain wildlife control supplies	May 2023	
Train employees in the safe and effective application of wildlife dispersal measures	May 2023	
Train contract landscaper crews in the safe and effective application of wildlife dispersal measures	June 2023	
Complete construction and implementation of the WBI Project consistent with this Plan	July 2023	
Construct wildlife deterrent fencing near the WBI Project recharge basins	May 2023	
Recharge water basins features shall be constructed to deter waterfowl and wading birds and will not hold standing water for longer than 48 hours and water holding will regularly cycle between the different basins	December 2022	
Install landscaping at the WBI Project site in a manner that does not create a wildlife attractant	May 2023	
Maintain landscaping in a manner that does not create food sources, nesting, or perching opportunities	June 2023	
Ensure that the recharge basins do not provide a food source (aquatic vegetation, fish or invertebrates)	June 2023	
On site trash receptacles shall have secure lids and are emptied regularly	June 2023	

**Table 2. Overview of WBI Project Wildlife Management Tasks and Schedule**

WBI Project Wildlife Management Tasks	Target Date	Date Completed
Establish a contract for Wildlife Baseline Monitoring	January 2023	
Develop reports for submittal to the SBN as outlined in this Plan	January 2023	
Annual participation in the SBN Airport Working Group	On-going annual participation	December 2022

## 4.1 Plan Implementation Authority

The EVWD will have the responsibility for the implementation of this plan for the emergency basin, and Valley District will have the responsibility for implementation of this plan for the five recharge basins at the WBI Project. Responsibilities for individual sections of the Plan may be delegated to various Departments within EVWD and Valley District. Clear communication among staff on-site at the WBI facility is essential to the success of the Plan. On-site staff shall inform Valley District’s/EVWD’s General Manager/CEO of progress, recommendations, and resources needed for the implementation of this program.

### General Manager/CEO (EVWD and Valley District)

- Review program goals, actions, and plans on an annual basis.

### Director of Strategic Services (EVWD) / Chief Engineer (Valley District)

- The SNRC Director of Strategic Services (EVWD) and the Chief Engineer (Valley District), or their designee within the Management/Supervisory classification shall be responsible for overseeing the implementation and maintenance of the Plan.
- Oversee any significant site modifications to ensure wildlife attractants are prevented.
- Develop and distribute outreach material to support the measures outlined in this document.
- Update the Plan as necessary.
- Attend the regular meetings of the SBN Wildlife Hazard Working Group and provide project findings and updates as relevant.
- Facilitate annual training regarding the Plan for all on-site staff.
- Conduct frequent physical inspections of areas critical to the success of the Plan.
- Harass wildlife from critical areas when appropriate.
- Record wildlife activity as outlined in this Plan.
- If applicable, obtain depredation permits to manage migratory birds and if necessary, mammals, from Federal or State wildlife agencies.

### On-site Staff

- Conduct frequent physical inspections of areas critical to the success of the Plan.
- Instruct visitors as needed regarding applicable Plan components, such as prohibition from feeding wildlife.
- Harass wildlife from critical areas when appropriate.
- Report potential wildlife hazards to the Director of Strategic Services.

**Wildlife Hazard Working Group.** The SNRC Director of Strategic Services (EVWD), and Chief Engineer (Valley District), or their designee within the Management/Supervisory classification will meet quarterly for the first year of operations with SBN and REI to provide updates, discuss results of the monthly monitoring, and make operational changes as necessary to reduce bird activity. Additionally, the SNRC Director of Strategic Services, and Chief Engineer (Valley District), or their designee within the Management/Supervisory classification will attend the SBN Wildlife Hazard Working Group meetings and provide project findings and updates as relevant. Operational changes at the WBI will be determined by a collaborative effort between the EVWD and Valley District, the SBN and the REI based on the results of the previous 12 months of monitoring. The SBN and REI will not be responsible for implementing operational changes at the SNRC as part of the management of this plan. If the SNRC directly results in wildlife hazards at the SBN or REI, necessitating revision to the SBN or REI FAA-approved Wildlife Hazard Management Plan and/or any additional measures that need to be taken at the SBN or REI, then the EVWD will be responsible for the added costs to the SBN and REI. However, any potential cost sharing will not apply to general measures taken to address changes in the wildlife environment beyond the SNRC.

## 4.2 Site Design

A few features at the WBI Project site could attract or support potentially hazardous wildlife. These features will be designed to minimize wildlife attraction. The primary focus of this Plan is on the recharge basins, emergency basin, and landscape features within the Project site.

### 4.2.1 WBI Project Facilities

The WBI facility will be controlled and monitored with at least one pumping plant and additional appurtenant facilities (pump station(s), surge tank, forebay tank, etc.). These facilities are not expected to attract wildlife or present a hazard to aviation. No additional design specifications related to wildlife management are included in this Plan.

### 4.2.2 Recharge Water Basins

The WBI Site will have six basins, five recharge basins that will be regularly used and one emergency basin that will hold emergency water from the Sterling Natural Resource Center. The basins will be designed to prevent the establishment of suitable habitat for aquatic invertebrates, plants, or birds. The FAA recommended guidelines for covering flood control basins (e.g., with inflatable balls or manufactured covers) would be incompatible with the purpose of the recharge basins for this Project. Nonetheless, additional design and water management efforts will minimize the potential attractants to wildlife hazards. The following measures will be incorporated into the recharge water basin design and operations:

- Recharge basins will not hold standing water for longer than 48 hours and water will be regularly cycled between the basins.
- Water depth and quality will be monitored to prevent the accumulation of any vegetation, prey, or large flocks of wading birds.
- Recharge basins will be designed to prevent nesting, foraging, or loafing by maintaining steep sides (ratio of greater than 3:1), narrow and/or linear banks to reduce available shoreline and preventing shallow flats or slopes that would support loafing or nesting (Mead and Hunt 2018).

- The recharge basins will be surrounded by a low wire mesh fence to separate the water surface from the adjacent soil and vegetation on the south side of the facility; waterfowl and other wildlife will not be able to walk between the basin and surrounding landscaping.

### 4.2.3 Landscape

The WBI Project site will have open space that will include frontage landscaping to integrate the new land use into the community consistent with existing visual character of the surrounding area along Greenspot Road. To reduce the potential for wildlife hazards the following measures will be incorporated into the landscape design:

- Ground surfaces (including gravel, walkways, turf, mulch, hardscape, decomposed granite, or other materials) will be designed to minimize cover and nest sites for small mammals (e.g., rabbits and ground squirrels).
- Plant materials will be selected to minimize food or nesting sites for birds or mammals. The Project frontage plant palette will include trees and shrubs with relatively open branch structure and little production of berries, nuts, or similar food sources. Trees including red bud (*Cercis occidentalis*), various pines (*Pinus spp.*), Chinese elm (*Ulmus parvifolia*), and others are acceptable trees for planting near airports. Low-growing shrubs will be arranged to minimize possible nest or den sites for small mammals. The landscaping will be consistent with landscape recommendations near airports (e.g., Attachment 4). If loafing birds are detected additional vegetation could be placed to prevent this behavior. Any existing vegetation that are attractive to wildlife, such as the jojoba (*Simmondsia chinensis*) plants, were removed.
- Landscaping will be regularly maintained and mowed to prevent the formation of tall grasses or dense shrubs that may attract any foraging, denning, or nesting hazardous wildlife within the Project vicinity.

## 4.3 Wildlife Habitat Management

Habitat management provides the most effective long-term measures for reducing wildlife hazards within an airport's influence area. Habitat management includes the physical removal, exclusion, or manipulation of areas that are attractive to wildlife. At the WBI Project, the goal will be to make the environment unattractive to species that are considered the greatest hazards to aircraft while maintaining a facility that is able to store and recharge the groundwater supply within the EVWD service area. Habitat modifications will be monitored carefully to ensure that they reduce wildlife hazards and to not create attractants for new wildlife.

### 4.3.1 WBI Project Facilities

The exterior of the facility will be maintained on a regular basis to prevent accumulations of leaves or soil, ponding water, weeds, overgrown landscaping, trash, or other potential wildlife attractants. Trash receptacles with self-closing covers will be placed in appropriate areas and emptied frequently. Any animal remains seen on the site will be removed immediately and road-killed or injured animals on adjacent roadways will be reported to animal control authorities for removal.

### 4.3.2 Recharge Water Basins

The water depth and location within each of the recharge water basins will be regularly monitored to prevent the establishment of any consistent source of standing water, reduce the potential for algae growth or other aquatic vegetation, and limit the amount of water present at any given time that may

attract wading birds. There will be no landscaping around the water basins and any vegetation will be maintained to minimize the suitability of nesting sites for waterfowl, wading birds, shorebirds, or small mammals.

### 4.3.2 Landscape

Ground surfaces (including gravel, walkways, turf, mulch, hardscape, decomposed granite, or other materials) will be maintained by routine mowing, sweeping, raking and similar practices to minimize cover and nest sites for small mammals (e.g., rabbits and ground squirrels). There will be no plant material installed within the fence line of the WBI.

### 4.3.3 Food and Prey Management

The facility will be maintained on a regular basis to prevent accumulations of leaves or soil, ponding water, weeds, overgrown landscaping, trash (especially food waste or food wrappers), or other potential wildlife attractants. Trash receptacles with self-closing covers will be placed in appropriate areas and emptied frequently. Any animal remains seen on the site will be removed immediately and road-killed or injured animals on adjacent roadways will be reported to animal control authorities for removal.

### 4.3.4 Staff Training

The EVWD and Valley District will annually train operations and maintenance staff working on-site at the WBI facility in implementing applicable measures, reporting persisting occurrence or flocking of problematic species, and prohibition of creating wildlife attractants. The Director of Strategic Services (EVWD) and Chief Engineer (Valley District) will ensure that all on-site personnel understand their roles and responsibilities in the successful execution of this Plan.

### 4.3.5 Land Use Changes

There are no applicable land use changes that would apply to the execution of this plan.

## 4.4 Wildlife Control Procedures

The EVWD and Valley District staff will conduct physical inspections of areas critical to wildlife hazard management as part of their daily protocol. Staff will document observed wildlife and record the data into a wildlife activity form (Attachment 7). The staff would be trained to identify birds and bird behavior and informed of the protections birds receive when they commence nesting. They will also document actions taken to mitigate any wildlife observed or reported. In cases where no animals are seen, no record will be generated. The wildlife activity reports will be maintained in the SNRC and Valley District offices and reviewed periodically by the Director of Strategic Services (EVWD) and Chief Engineer (Valley District).

Wildlife that is identified as hazardous during and after the completion of the recommended habitat modifications will be addressed immediately. The program to manage wildlife hazards at the WBI Project will require a flexible, innovative, and adaptive approach to managing the hazards. This will include collaboration with the SBN and REI where appropriate. On-site staff will be trained in the importance of this Plan, identifying hazardous wildlife, appropriate dispersal methods, and reporting procedures.

### 4.4.1 Wildlife Population Management

**Depredation Permit.** Should lethal wildlife management become necessary, the EVWD and/or Valley District may apply to the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife to obtain needed authorizations for wildlife hazing or lethal wildlife control that could become necessary



during implementation of this plan. Alternately, EVWD and/or Valley District may contract with a public agency or private firm holding valid depredation permits to implement any needed lethal control. In either case, and consistent with FAA (2020) recommendations, the EVWD will work closely with a Qualified Airport Wildlife Biologist during the consultation and permitting process. EVWD will coordinate with SBN as described below to review any potential lethal wildlife control and to ensure safe airport operations. Note that no agency authorization is needed for hazing (except for listed threatened or endangered species) or for the control of resident breeding Canada geese.

**SBN Coordination.** If persisting occurrences or large congregations of certain species categories are observed, the WBI Project will promptly update the SBN on the potential hazard, provide the anticipated course of action, and enable a rapid response to any potential hazard. These species include, but are not limited to:

- Soaring birds, gulls, and corvids
- Waterfowl
- Flocking birds (doves, pigeons, starlings, blackbirds, swallows, shorebirds)

If potential wildlife hazards necessitate active management activities, the WBI Project may undertake wildlife repelling or exclusion actions (i.e., hazing or harassment), described below. If persisting wildlife occurrence appears to be a threat to aircraft and human safety such that lethal management or control may be needed, the SNRC and/or Valley District will undertake needed actions either under its own authorizations or through a contractor (see Depredation Permit, above).

**Birds.** Most bird species, including their nests, nestlings, and eggs, are protected by the MBTA and California Fish and Game Code (Section 2.3). Except for certain non-native birds and resident Canada geese, any removal of nests or nesting birds (e.g., removal of nests from landscaping trees or removal of mud swallow nests from structures) must be coordinated through the USFWS and CDFW.

Non-lethal chemical repellents may be used if needed to discourage geese from using open areas on the site. In general, repellency based on conditioned aversion is longer lasting than repellency based on taste.

The EVWD may also implement other deterrents if needed. These may include eyes, streamers, wire, lighting, predator models.

**Small Mammals.** Rodenticides will not be used in or around structures to control non-native pest animals (rats and mice). No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), will be used within the Project site due to the presence of the San Bernardino Kangaroo rat (*Dipodomys merriami parvus*) in adjacent areas. San Bernardino Kangaroo rat is a State and federally listed species.

## 4.5 Plan Evaluation

The Plan will be re-assessed annually or as needed, in coordination with the SBN and REI to determine if more or less effort is required by the WBI Project.

## 5.0 Wildlife Baseline Data and Monitoring

The EVWD and Valley District will develop a baseline data set for potentially hazardous wildlife at the WBI Project site. The data would be collected after the WBI is operational and would be based on one year of monthly monitoring visits, following FAA (2018) guidelines. After assembling the baseline data, EVWD and Valley District will monitor the site on a quarterly basis throughout the life of the WBI site. All data collection and reporting will be conducted by a field monitor with training and oversight by a Qualified Airport



Wildlife Biologist. Baseline data collection and long-term continuing monitoring are summarized in Table 3 and the paragraphs that follow.

**Table 3. Monitoring Schedule**

Task	Responsible Personnel	Frequency	Time
Physical site inspections	EVWD/Valley District staff	Daily	Varied
Baseline data set	Qualified Airport Wildlife Biologist	Monthly for 12 consecutive months	During three daily periods, morning, mid-day and late afternoon, plus two additional nighttime periods
Continuing monitoring	Qualified Airport Wildlife Biologist	Quarterly	Varied
Reporting	EVWD/Valley District personnel	Monthly	Varied
Annual report	EVWD/Valley District personnel	Annual	Varied

**Baseline Data Set.** Monthly site visits conducted over a period of 12 consecutive months during three daily periods, morning, mid-day and late afternoon, plus two additional nighttime periods. Each site visit will consist of the following inspections:

- **Point Counts.** Visits to three (3) point count locations to be established on the WBI Project site. One point count location will be at the planned water features. The two other locations will be in other parts of the facility that could prove attractive to wildlife (e.g., landscaped area or trash receptacles). The field monitor will use a data form to record all birds and all mammals or sign observed over a 10-minute survey period at each point location. Each point count location will be recorded using a hand-held Global Positioning System (GPS) unit.
- **Inspections.** The field monitor will inspect signage, fencing, and trash receptacles to confirm adequate maintenance and function of the self-closing covers. Any needed replacements or maintenance will be noted in the data sheet.
- **Bird Nests.** During site inspections conducted in February through July the field monitor will inspect landscaping areas to identify nests of any potentially hazardous wildlife.

**Continuing Monitoring.** Throughout the life of the WBI facility the field monitor will work under the direction of the Qualified Airport Wildlife Biologist to continue the above monitoring program on a quarterly basis.

**Reporting.** The EVWD and Valley District will submit monthly data summaries in Excel format and an annual report to the SBN and REI reporting all data collected over the course of the year and identifying any observations of potentially hazardous conditions (i.e., large numbers of hazardous wildlife), as well as corrective measures taken.

## 6.0 References

Aspen (Aspen Environmental Group). 2020. Wildlife Hazard Management Plan. Sterling Natural Resource Center. June.

Bellrose, F. C. 1980. Ducks, Geese, and Swans of North America. Stackpole Books, Harrisburg, Pennsylvania.

City of Redlands. 2008. Final Master Plan for the Redlands Municipal Airport, Redlands, CA.

- City of Redlands. 2003. Redlands Municipal Airport Land Use Compatibility Plan.
- Dolbeer, R. A., S. E. Wright, and E. C. Cleary. 2000. Ranking the Hazard Level of Wildlife Species to Aviation. *Wildlife Society Bulletin* Vol. 28, No. 2.
- Federal Aviation Administration. 2021. Wildlife Strike Database, United States Department of Transportation, Washington, D.C. [Online]: <http://wildlife.faa.gov>. Accessed: January 11, 2022.
- Federal Aviation Administration. 2020. Advisory Circular 150/5200-33C, Hazardous Wildlife Attractants on and Near Airports. Washington, D.C. (see Attachment 6).
- Federal Aviation Administration. 2018. Advisory Circular 150/5200-38, Protocol for the Conduct and Review of Wildlife Hazard Site Visits, Wildlife Hazard Assessments, and Wildlife Hazard Management Plans. Washington, D.C.
- Federal Aviation Administration. 2012. Advisory Circular 150/5200-36A. Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards on Airports. Washington, D.C. (see Attachment 2).
- L & L Environmental, Inc. 2015 Updated General Biological and Spring Botanical Surveys for the Greenspot Partners Site West, City of Highland, County of San Bernardino, CA. December. Appendix A to the Addendum No. 2 to the Sterling Natural Resource Center Addendum No. 2 to the Final Environmental Impact Report.
- Mead and Hunt. 2015. Wildlife Hazard Assessment Report: San Bernardino International Airport. Prepared for SBN. September.
- Mead and Hunt. 2018. Airports, Wildlife, and Stormwater Management: Guidance for Proposed Projects in an Airport Influence Area. Riverside County Airport Land Use Commission. [Online]: <https://www.rcaluc.org/Portals/13/PDFGeneral/Resources/BROCHUREFINALEDAStormwaterletter.pdf?ver=2018-12-28-084354-193>. Accessed: January 11, 2022.
- USFWS (U.S. Fish and Wildlife Service). 2019. Migratory Bird Permits; Regulations for Managing Resident Canada Goose Populations. 84 FR 28769.
- Washburn, B. E., and T. W. Seamans. 2012. Foraging preferences of Canada geese among turfgrasses: implications for reducing human-geese conflicts. *Journal of Wildlife Management* 76:600-607.



## United States Department of the Interior

### U.S. FISH AND WILDLIFE SERVICE

Ecological Services  
Carlsbad Fish and Wildlife Office  
2177 Salk Avenue, Suite 250  
Carlsbad, California 92008



In Reply Refer to:  
23-0117201-S7-F-001

December 1, 2023  
*Sent Electronically*

Lily Lee  
Manager, Infrastructure Section  
U.S. Environmental Protection Agency, Region IX  
75 Hawthorne Street  
San Francisco, California 94105

Attention: Jillian Bletz and Cedric Irving

Subject: Amendment to the Biological Opinion for the Proposed Sterling Natural Resource Center, San Bernardino, California

Dear Lily Lee:

The U.S. Fish and Wildlife Service (Service) issued a biological opinion (FWS-SB-16B0182-17F0387) to the Environmental Protection Agency (EPA) for the Proposed Sterling Natural Resource Center (Project) on March 9, 2017, addressing impacts to the federally endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*; SBKR) and the federally threatened Santa Ana sucker (*Catostomus santaanae*; sucker) and their respective designated critical habitats. On August 1, 2023, we received an email from the EPA requesting reinitiation of consultation based on proposed changes to the Project Description related to Santa Ana sucker conservation measures. The East Valley Water District (EVWD) has proposed the changes to provide them flexibility in implementing sucker conservation measures and to achieve their stated objectives. This amendment addresses the proposed changes to the conservation measures for sucker. On November 14, 2023, we received an updated Supplemental Biological Assessment from EVWD which contained the final changes to the Project Description.

The conservation measures and their changes are provided below. There are no proposed changes to the Project's scope as it relates to our previous biological opinion on this project (FWS-SB-16B0182-17F0387-R002). This document was prepared in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*).

In our biological opinion (FWS-SB-16B0182-17F0387) we concluded that the permanent loss of designated sucker critical habitat would be offset by the creation and maintenance of habitat nodes and cooling of summer water temperatures in the Rialto Channel. Thus, the ecological function and values of designated critical habitat would be maintained in this critical habitat unit and within sucker designated critical habitat overall. We also concluded that the Project would

offset its displacement of sucker and support the range-wide conservation (recovery) of sucker through enhancement of Santa Ana River aquatic and riparian habitats, reintroduction to portions of its historic range, and long-term management of existing and new populations. In the following paragraphs we list the proposed changes to the project conservation measures and subsequently we discuss why they do not affect sucker in a way that was not considered in our biological opinion (FWS-SB-16B0182-17F0387). A complete list of the conservation measures is provided in Appendix D.

### **Revised Conservation Measures**

Changes are indicated in double underline and ~~strikethrough text~~.

#### ***Santa Ana Sucker***

- SAS 21. The following measures will avoid, minimize, and offset Project-related impacts to SAS associated with up to 1.21 acres of permanent degradation of occupied designated critical habitat in the mainstem of the Santa Ana River from the RIX outfall downstream to approximately Mission Boulevard.
- a. Valley District will prepare and implement the HMMP which will identify habitat improvement actions and methods for implementation, monitoring, and maintenance. The diversion of wastewater flow from the RIX Facility to the SNRC will not occur until Valley District's Santa Ana Sucker HMMP has been approved by the USFWS and the actions proposed in this measure have been completed or show evidence of significant progress toward successful implementation such as engineering design(s) and/or other regulatory compliance such as the California Environmental Quality Act, or consultation with the USFWS will be reinitiated.
  - b. The HMMP will include the measures listed below to offset direct and indirect impacts to SAS and its habitat resulting from the loss of up to 22.3 percent (6.43 MGD of 28.4 MGD calculated from the November 2014 to May 2016 discharge) discharge from the RIX outfall into the Santa Ana River. The HMMP will contain measures to increase the number of individual SAS in the Santa Ana River, increase the area of suitable and occupied habitat in this watershed, and establish two new populations in the watershed. It will be implemented by a contracted, qualified, and permitted entity in coordination with the USFWS. The HMMP will specify goals and performance criteria for each conservation measure and include the following elements:
    - i. Habitat Node Creation (microhabitat enhancements) to offset the potential reduction of suitable habitat available to sucker, including the above listed habitat features, resulting from decreased flow, decreased water velocity, and decreased sand transport.

Objective: Increase the total area of suitable habitat available to sucker, including riffles, small scour pools, and exposed patches of gravel/cobble substrate by strategically placing a series of structures within the stream flow to manipulate water movement and create these microhabitat areas.

This measure is expected to enhance perennial stream habitat within at least 1.5 acres of occupied habitat along about 2.5 miles of river, as measured in the fall by the area of pools created, gravel/cobble substrates exposed, and other functional SAS habitat features created/enhanced. The creation of a minimum of at least 6 habitat nodes will occur prior to any water diversions. An additional 0.5 acre of microhabitat enhancements (total of 2.0 acres) will be maintained temporally during dry rainfall years (<14.7 inches<sup>1</sup>) until Upper Watershed Population Establishment has occurred (see Conservation Measure 21.b.v).

If future data suggests that impacts to the species are either greater than expected or habitat nodes cannot be created to functionally offset Project impacts, the Project will obtain technical assistance from the USFWS to develop a new or revised CM that will achieve the biological objective(s) as analyzed in this opinion, or consultation with the USFWS will be reinitiated.

The Project will implement microhabitat enhancements (habitat nodes) within ecologically valuable segments of the Santa Ana River downstream of the RIX discharge location (subject to landowner access permissions) to improve the abundance and distribution of the above-mentioned SAS habitat features. Enhancements will include the use of natural materials to increase scour and pool formation. Substrate augmentation (e.g., river gravel and cobble) may also occur in the same area to enhance perennial stream habitat function. Examples may include placement of large boulders and/or large woody debris to increase velocity of flow and gravel bar patches as well as deep pool refugia areas. A minimum of six habitat nodes will be created.

One naturally occurring riffle/pool feature (natural node) in the Santa Ana River was observed to enhance the stream habitat for SAS for approximately 330 feet (100 meters, 0.25 acres). Between 2015 and 2016 the USGS Native Fishes Survey found that the relative abundance of exposed gravels increased in this area suggesting that the size of the affected area associated with the node is subject to fluctuate based upon environmental conditions and the abundance of fine sediment in

---

<sup>1</sup> Measured in San Bernardino, California

the inset channel (SAS occupied stream) (Brown and May 2016, 2017). Although all nodes will be unique in design, each will serve to replicate the scale and provide similar ecological functions as the natural node discussed above.

The nodes will be located in the Santa Ana River mainstem between the RIX outfall and River Road Bridge. To maximize habitat value and function locations should be associated with mainstem tributaries (~~Evan's Lake~~, Arroyo Tequesquite, Sunnyslope Drain, Anza Drain, Hole Creek, etc.). Locations will need to be further refined by field survey data.

Habitat nodes will be monitored annually, and the survey data will be used to assess the need for corrective measures. Annual monitoring will include, at minimum, water quality, visual estimates of substrate cover types, and fish surveys. When the cumulative cover of boulder, cobble, and gravel is found to be less than 35 percent for any habitat node (mean cover measured over a 0.25-acre reach associated with a node), maintenance and/or reinstallation of nodes will be conducted to maintain a minimum of 0.25 acres of habitat enhancement for every node or a cumulative enhancement of 1.5 acres for all ~~six~~ nodes. An additional 0.5 acre (total of 2.0 acres) will be enhanced during dry rainfall years (<14.7 inches) until Upper Watershed Population Establishment has occurred (see Conservation Measure 21.b.v). All work conducted in the Santa Ana River will be done in coordination with the USFWS and CDFW.

If vegetation removal is required for ingress, egress, or other work areas associated with Habitat Node creation and maintenance it will be revegetated. Quantitative and qualitative performance standards addressing vegetation cover and diversity will be included in the HMMP. Within 3 and at most 5 years after commencing revegetation efforts, cover and diversity should have progressed toward pre-Project levels of cover and diversity, or higher quality for the benefit of vireo and SAS. It is not anticipated that maintenance work, requiring vegetation removal, will be needed more frequently than every 5 years.

- ii. Aquatic Predator Control Program to offset the potential increase in non-native predator habitat (pools or other microhabitats that provide relatively deep and slow velocity water flow) resulting from reduced discharge volume.

Objective: Reduce the abundance of non-native predators in the reach of river affected by the Project so as to maximize native fish survival. The non-native predator removal program will be focused on reducing

the abundance of non-native aquatic predators immediately preceding the start of the sucker spawning season (approximately March 1). Species to be removed may include non-native fish, amphibians, and reptiles such as mosquitofish, largemouth bass, black bullhead catfish, green sunfish, red-eared slider, African clawed frog, and American bullfrog. This activity will occur at minimum of two ~~one~~ times per year outside of the SAS spawning season (August 1 to February 28) until Upper Watershed Population Establishment has occurred (see Conservation Measure 21.b.v), at which point the effort will be reduced to a minimum of one time per year. The most recent fish and/or other surveys conducted upstream of Prado Basin in the Santa Ana River will provide the locations of where to conduct electroshocking. Electroshocking will be carried out by a USFWS-approved SAS biologist authorized to use electroshock sampling methods. Pre-spawning predator removal will occur annually prior to February 15 between Rialto Channel downstream to Van Buren Boulevard (or elsewhere along the mainstem Santa Ana River if determined beneficial to the species), focusing on ~~in~~ areas of highest ecological value to SAS reproduction, currently from Rialto Channel downstream to approximately Mission Boulevard and in mainstem tributaries. If aquatic predators are found in abundance after pre-spawning predator removal, one or more ~~a second~~ predator removals will be conducted after August 1.

- iii. Exotic Weed Management Program to reduce competitive stress for native vegetation within the riparian community in order to offset the impacts associated with reduced water availability resulting from the Project.

Objective: Maintain a low abundance and cover of non-native vegetation along the Santa Ana River ~~and in City Creek~~ within the Project impact area (RIX outlet to Mission Boulevard, or as otherwise approved by the USFWS and Boulder Avenue to Alabama Street, respectively), focusing on the removal of giant reed, tamarisk, and castor bean.

The exotic weed management program will be carried out by a qualified and experienced entity and will focus on controlling the non-native vegetation within the riparian corridor between the Rialto Channel and the Mission Boulevard Bridge (approximately 4.2 miles) or, depending on landowner permissions, along a similar length of river downstream of the Riverside County-San Bernardino County line (for example, Market Street Bridge downstream to Anza Creek, approximately 4.2 miles). This measure will establish and maintain weed control in one-third of the area (approximately 1.4 miles) per year, so as to

complete the weeding of the entire area once every 3 years. Annual work plan meetings between the USFWS, Valley District staff, and contractor will identify areas of concern and focus work efforts on those areas. A successful program will maintain total cover of non-native riparian species to less than 25 percent and total cover of giant reed, tamarisk, and castor bean to less than 5 percent. Percent cover will be assessed relative the total area of the weeded riparian corridor for that year. Although they are native species, cattails (*Typha* spp.) and bulrush (*Schoenoplectus* spp.) may increase in abundance over time as their preferred habitat type (slow, shallow water or marsh) is expected to increase due to Project reductions of flow. These plant species may degrade sucker habitat by further reducing water velocity and trapping fine sediment. Problem areas will be identified as part of the Riverwalk survey (see below for more on Riverwalk survey) and if certain areas have become problematic, they will be managed in coordination with the USFWS and CDFW.

- SAS 4. High Flow Pulse Events<sup>2</sup>. The HMMP will identify means to create high flow pulse events as needed based on substrate conditions, up to 2 times per year. The high flow pulse events would be designed to flush out fine sediment from the upstream reach of the affected river segment and would be implemented through a cooperative agreement with the City of San Bernardino Municipal Water Department and/or the City of Rialto.
- iv. Rialto Channel and/or Santa Ana River Water Temperature Management: Commit funding to contribute towards implementation of a water temperature amelioration strategy/measure (project) within Rialto Channel and/or the Santa Ana River to offset the potential loss of suitable habitat downstream in the Project impact area during times of the year when habitat will be most affected from the cumulative impacts from reduced discharge and drought effects, particularly in summer and fall. Proposed measures/strategies to reduce water temperature will be developed following completion of a larger-scale water temperature monitoring study (to be completed by the Upper Santa Ana River HCP applicants). Financial commitment will be outlined in the HMMP and reviewed and approved by the USFWS.

---

<sup>2</sup> SAS 4 is stipulated in East Valley Water District's Environmental Impact Report for this Project, and the Service has kept the numbering of this conservation measure consistent with that document. This measure was formerly a Conservation Recommendation.



Objective: Reduce water temperatures in Rialto Channel and/or the Santa Ana River to tolerable levels (less than 86 degrees Fahrenheit) during summer months. Commit funding to contribute towards implementation of a proposed measure/strategy (project) to ameliorate Rialto Channel and/or Santa Ana River water temperatures.

In recent years the temperatures within the natural bottom reach of Rialto Channel (not concrete lined section) were found to be generally greater than 80 degrees Fahrenheit in summer and fall (USGS 2015) and often warm enough to be outside of the tolerable range for sucker (USFWS 2010b). Areas of elevated water temperature have also been recorded in the Santa Ana River. A potential strategy In order to decrease the water temperature in Rialto Channel and/or the Santa Ana River to tolerable levels for SAS is to add supplemental flow from relatively cool groundwater (67–70 degrees Fahrenheit, temperature range derived from local nearby well operators), from up to 4 wells or other water sources will be added to the flows in Rialto channel.

In order to implement this measure most effectively, To inform potential solutions to elevated water temperatures in Rialto Channel and the Santa Ana River, a water temperature study has been initiated by the Upper Santa Ana River HCP applicants. Results of these studies will be used to facilitate development of methodologies/strategies to ameliorate elevated water temperatures. Funds set aside in accordance with this measure will be used to implement future recommended methodologies/strategies generated by the water temperature studies (as approved by the USFWS). two water quality monitoring stations will be established in Rialto Channel. An upstream, real-time gage will measure the water temperature at the well input location (plunge pool downstream of Agua Mansa Bridge). At 85 degrees Fahrenheit the groundwater wells will automatically turn on and release directly into the plunge pool. Another real-time gage will be installed downstream of the plunge pool Rialto Channel just before the confluence with the Santa Ana River and. Once the water temperature at this downstream gage is less than 82 degrees Fahrenheit the well input will be turned off. Initiation and cessation of well water input (discharge) will be phased over a period of time to reduce sudden changes in flow and temperature in Rialto Channel. The well input and controls will be constructed and tested prior to

~~diversion of flows from the RIX facility to the SNRC. This program will be deemed successful if there are 5 or fewer days between June 22 and September 21 that the daily maximum water temperature exceeds 82 degrees Fahrenheit and SAS are present in the channel during the same period. Water temperature will be measured in Rialto Channel upstream of the RIX outfall. If success criteria are not met within 2 years of signing the biological opinion, the Project will obtain technical assistance from the USFWS to develop a new or revised CM that will achieve the biological objective(s) as analyzed in this opinion.~~

- v. Upper Watershed SAS Population Establishment to offset potential losses of suitable habitat in the Project's impact area, and to offset unknown and/or cumulative impacts to the species and its habitat that may be associated with the reduction of flow to the Santa Ana River.

Objective: Increase the abundance, distribution, and resilience of the sucker population in the Santa Ana River Watershed by establishing redundant populations in upper watershed tributaries.

Subject to the availability of sufficient source fish, the Project will establish two new locations of sucker within City Creek and Hemlock Creek, or another suitable unoccupied locations within the former range of the species within the Santa Ana River watershed as approved by the USFWS. Both City and Hemlock creeks have been analyzed as part of the Santa Ana Sucker Translocation Plan (Dudek 2016a, 2017). Valley District has assessed the habitat availability and appropriateness for SAS in City and Hemlock creeks (Dudek 2016b). These documents show that elements (PCEs) to support SAS, as well as additional factors found to be important to SAS (Aspen 2016). The Translocation Plan is currently under review by the USFWS, the CDFW, and the U.S. Forest Service (USFS).

~~Prior to Project flow reduction to the Santa Ana River, at least one translocation of SAS will have occurred and Valley District will provide data indicating that the nascent population is healthy, reproducing, and appears to be successfully establishing. Successful establishment of SAS will have occurred when there are surviving and reproducing fish in at least two size classes, the population of SAS is~~

~~stable or increasing in population as averaged over 5 years, and the translocated population is distributed throughout the appropriate habitat in the translocation stream.~~

If progress towards achievement of success criteria is not demonstrated within ~~are not met in both translocation tributaries within 5 years of initial translocation, or has not been met within 10 years of translocation,~~ signing the biological opinion, the Project will obtain technical assistance from the USFWS to develop a new or revised CM that will achieve the biological objective(s) as analyzed in this opinion.

The HMMP will identify and further detail the goals and success criteria of SAS re-establishment. A financial security deposit, in an amount approved by USFWS and CDFW, will be established prior to Project flow reduction to the Santa Ana River, to provide assurances that the translocations will be implemented and monitored to demonstrate achievement of success criteria (progress towards achievement of success criteria demonstrated within 5 years of translocation, or met within 10 years of translocation). The HMMP will also describe ~~and include~~ the amount of financial assistance to be provided by East Valley Water District for the regionally beneficial population establishment program, including additional measures found below.

- A. East Valley Water District will contract with a USFWS-approved entity that can demonstrate the ability to re-introduce ~~captively bred~~ SAS to a suitable unoccupied location with the intent of establishing a new self-sustaining population within the former range of the species on the Santa Ana River. The Contract requirements will include the following:
- (1) translocation of appropriate numbers and age classes of SAS rearing and maintaining a sufficient number of breeding adults to support re-introduction of a ~~minimum of 500 juvenile SAS~~ into the target area ~~per year (subject to approval by or alternate numbers agreed to by the USFWS);~~ (2) annual relocations for the first 3 years to supplement the population, ~~then~~ as needed to maintain a stable population size and genetic diversity; and (3) monitoring, adaptive management, and annual reporting.

- B. East Valley Water District may only reintroduce captive-bred SAS if ~~(1) captive breeding, and all associated permitting and~~ documentation has been approved by the USFWS and CDFW ~~and (2) the captive breeding facility has adequate numbers of appropriate sized SAS. If these conditions are not met or if additional fish are needed for translocation purposes SAS may be translocated from the Santa Ana River to the west fork of City Creek and one other historic tributary in the Santa Ana River watershed.~~
- C. If, at any time, SAS are found located downstream Highland Avenue Bridge, East Valley Water District will be responsible for relocating all SAS back upstream within the boundaries of the San Bernardino National Forest or out of locations that where their presence might affect other entities who do not have incidental take exemptions for this species. This measure will be implemented for the life of the Project or until another entity, such as the HCP, takes over this responsibility.

## Discussion

Conservation measure SAS 21.b.i. will be modified to give EVWD flexibility in enhancement area to account for landowner access permissions and increase the area of habitat enhanced/maintained for sucker. This measure now includes a minimum of 6 habitat nodes and an additional 0.5 acre of habitat will be enhanced during low rainfall years, resulting in more benefits to sucker than the original conservation measure. We have already analyzed the effects of habitat node creation on sucker and its designated critical habitat, and the proposed changes to this conservation measure would continue to offset effects to sucker designated critical habitat through the creation of habitat nodes. Since it is a low impact activity, we do not expect additional adverse effects to sucker or its designated critical habitat from additional habitat node creation.

Revised conservation measure SAS 21.b.ii., aquatic predator removal, will double the number of predator removal events until conservation measure SAS 21.b.v. is implemented. This conservation measure would continue to benefit the long-term conservation management of sucker in its current range, and the doubled efforts leading up to upper watershed population is expected to result in a reduction of predation on sucker, providing an additional conservation benefit in the short-term. Moreover, the effects of recovery actions including aquatic predator removal have been addressed in our programmatic biological opinion (FWS-CFWO-14B0113-14F0171).

The changes to conservation measure SAS 21.b.iii, will allow EVWD to shift the weed management area to suit land access permissions. The length of river miles to be enhanced remains unchanged, and the revision would not reduce the conservation value of the exotic

weed management program for the Project. Since it is a low impact activity, we do not expect additional adverse effects to sucker or its designated critical habitat from the changes in the exotic weed management program.

The changes to conservation measure SAS 21.b.v., upper watershed sucker population establishment, will give EVWD flexibility in implementation timing to address downstream landowner concerns. A financial security will be established to provide assurances that translocations and achievement of success criteria will occur. Therefore, range expansion will be delayed and may represent a temporal loss of conservation value and a delay in this recovery action. However, the delay would be offset by the temporal benefits of the doubled predator control efforts and increased habitat node creation. The EVWD will establish a financial security deposit prior to diverting water and the HMMP is being finalized for approval by the Service. We do not expect additional adverse effects to sucker, or its designated critical habitat, from the delay in implementing this recovery action. Moreover, the effects of recovery actions including translocation of sucker within its historic range have been addressed in our programmatic biological opinion (FWS-CFWO-14B0113-14F0171).

The EVWD has decided to incorporate a conservation recommendation in our biological opinion (FWS-SB-16B0182-17F0387), conservation measure SAS 4, high flow pulse events. This is an additional conservation value for sucker and its designated critical habitat. This conservation measure will benefit sucker and its critical habitat by increasing the surface area of foraging and spawning habitat by exposing gravels and cobbles. EVWD has cooperated with the Service and both Rialto and the RIX treatment facilities (sometimes together, or independently) in the past to facilitate shutdowns at specific dates and times for nonnative aquatic species control efforts. The additional benefit following the predator control effort is flushing flows. The effects of this conservation measure would coincide with the planned shutdown/maintenance events of the RIX water treatment facility; therefore, the effects of this conservation measure are addressed by the RIX HCP and our biological opinion for that project.

A number of constraints have made it necessary for EVWD to revise conservation measure SAS 21.b.iv., Rialto Channel and Santa Ana River Water Temperature Study and Amelioration Management Plan. Those constraints include the lack of willing landowners to sell or lease property; the presence of Delhi Sands flower-loving fly habitat adjacent to Rialto Channel; and the close proximity to the City of San Bernardino's wastewater treatment plant and the potential for a well to interfere with their operations. New data received from the City of Rialto comparing influent and effluent water temperature from the City of Rialto's treatment plant identified that wastewater is entering the Rialto treatment plant at high temperatures. This discovery raised the question of whether it might be better to identify locations within Rialto's wastewater pipeline system where mitigation measures could be implemented to reduce temperatures prior to reaching the treatment plant.

Action to reduce water temperatures would be delayed for 3 years to investigate and recommend potential measures to ameliorate water temperatures. This change represents a temporal loss of conservation value and a delay in a recovery action. However, based on new information we no longer see the elevated water temperatures present at Rialto Channel as an obvious source of

adverse effects to sucker. Cooler water could likely benefit sucker over the long term; however, sucker have been observed this year in higher numbers in the warmer mainstem of the river and lower numbers of the cooler RIX outflow, even though the RIX outflow is accessible to sucker. Notably, since October 2022, flow from Rialto Channel has been disconnected from the mainstem of the river ever since a major storm event caused it to jump its bank. Consequently, Rialto Channel water is now separate from the RIX outflow except during high flow events such as storms or during unusually high water-years, such as the water-year 2023, when the Santa Ana River is perennially flowing from the Seven Oaks Dam. For the period that the separation persists, during high flow years, Rialto may mingle with the RIX outflow but the effect of warm water from Rialto Channel becomes difficult to measure since the water coming from upriver is highly turbid and therefore prone to high temperature spikes during hot days. Conversely, during normal or low water-years the effect of warm water from Rialto Channel would be nullified by the fact that the two tributaries are disconnected, since Rialto Channel water permeates into the riverbed before mingling with RIX surface water. Notwithstanding existing circumstances and new information, EVWD has committed \$1,000,000 of funding for the construction of a well adjacent to the Santa Ana River that would discharge cool water into the river as part of their 1600 Streambed Alteration Agreement with California Department of Fish and Wildlife as a strategy to decrease surface water temperature.

In summary, we have considered the changes that EVWD has decided to make. Considering the most recent available information, we have concluded that the revised conservation measures do not affect sucker in a way that was not considered in our biological opinion (FWS-SB-16B0182-17F0387), and the revised measures do not provide less conservation value to sucker and its designated critical habitat than the originally analyzed measures. We do not expect the revisions to result in adverse effects to sucker or its designated critical habitat that we did not already analyze in our biological opinion (FWS-SB-16B0182-17F0387).

### **REINITIATION NOTICE**

Reinitiation of consultation is required and will be requested by the Federal agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and:

1. If the amount or extent of taking specified in the incidental take statement is exceeded;
2. If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
3. If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this biological opinion; or
4. If a new species is listed or critical habitat designated that may be affected by the identified action.

Any questions or comments should be directed to [William Sherwin](#)<sup>3</sup> of my staff at 760-322-2070.

Sincerely,

for Scott A. Sobiech  
Field Supervisor

Revised Appendix D (sep cover)

---

<sup>3</sup> [William\\_sherwin@fws.gov](mailto:William_sherwin@fws.gov)

## APPENDIX D

### CONSERVATION MEASURES

The general and species-specific conservation measures (CM) listed below have been included in the Project to avoid and minimize impacts to federally listed species and their designated critical habitats or to offset impacts that may otherwise adversely affect a listed species or designated critical habitat. The proposed modifications to the physical location of discharge locations and groundwater recharge areas have made some conservation measures from the 2017 Biological Opinion unnecessary and other measures have been revised. Conservation measures listed in this document are exhaustive and supersede any conservation measures listed in our 2017 Biological Opinion for the Project. Eliminated Conservation Measures include those intended to minimize effects to SBKR and Santa Ana River Woolly-Star. In the measures below, changes from the 2017 Biological Opinion are in **bold text** and double underline for additions and ~~striketrough text~~ for deletions.

#### *General Measures*

- CM 1. Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) will be provided to work crews by a qualified biologist(s) prior to the commencement of construction activities. Each worker will receive the WEAP training prior to beginning work on the Project. Training materials and briefings will include but not be limited to, discussion of the federal and state Endangered Species Acts, the consequences of noncompliance with Project permitting requirements, identification of special-status plant and wildlife species and sensitive natural plant community habitats present in or adjacent to the work areas, a contact person in the event of the discovery of dead or injured wildlife, and review of construction-related avoidance and minimization requirements. Maps showing the location of special-status plants and wildlife, exclusion areas, or other construction limitations (i.e., limited operating periods) will be provided to the environmental monitors and work crews prior to ground disturbance.
- CM 2. Limits of Disturbance. Prior to construction in or adjacent to sensitive habitat areas and under the direction of a qualified biologist, Valley District will clearly delineate the construction right-of-way (stake, flag, fence, etc.) that restricts the limits of construction to the minimum necessary to implement the Project.
- CM 3. Biological Monitoring. Prior to the start of construction, Valley District will retain a ~~USFWS-authorized~~ **qualified** biological monitor on site (**Weaver Basins**) during the initial ground disturbance and ~~during construction activities~~ **on an as-needed basis to ensure that construction activity is being confined to the delineated area and to verify that the barrier fencing (CM 6) is intact** ~~monitor habitat conditions and impacts.~~ **The biological monitor will be a qualified biologist with species expertise appropriate for this project.** The biological monitor will ensure compliance with the Project description evaluated in the biological opinion, including all CMs and terms and conditions, and will have the authority to halt or suspend all activities until appropriate corrective measures



have been taken. The biological monitor will report any non-compliance immediately to the USFWS. ~~The biological monitor will be a qualified biologist with species expertise appropriate for this Project. The USFWS will approve a biological monitor before Project activities can begin.~~

- CM 4. Construction Best Management Practices. The Contractor will implement the following Best Management Practices during construction of pipelines and discharge structures to protect any adjacent sensitive natural communities that provide habitat for special-status species.
- a. The following water quality protection measures will be implemented during construction:
    - i. Stationary engines, such as compressors, generators, light plants, etc., will have drip pans beneath them to prevent any leakage from entering runoff or receiving waters.
    - ii. All construction equipment will be inspected for leaks and maintained regularly to avoid soil contamination. Leaks and smears of petroleum products will be wiped clean prior to use.
    - iii. Any grout waste or spills will be cleaned up immediately and disposed of off-site.
    - iv. Spill kits capable of containing hazardous spills will be stored on-site.
  - b. To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered with tarp, plywood or similar materials at the close of each working day and will be inspected visually to confirm animals would be excluded, to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow for animals to escape, if necessary. Before such holes or trenches are backfilled, they should be thoroughly inspected for trapped animals. If trapped wildlife is observed, escape ramps or structures will be installed immediately to allow escape.
- CM 5. On Site Overnight Storage. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods should be thoroughly inspected for birds and other wildlife before the pipe is subsequently buried, capped, or otherwise used or moved.

***San Bernardino Kangaroo Rat***

- CM 6. **For avoidance of SBKR at the Weaver Basin site, Exclusionary barrier** fencing will be erected **between** ~~in~~ construction areas ~~known to be occupied by~~

~~SBKR or containing kangaroo rat sign (e.g., burrows, scat, tail drags, or dust baths) as determined by a preconstruction survey by a qualified biologist (i.e., City Creek or Redlands Basins) and suitable SBKR habitat located south of the Project site.~~ The fencing configuration and materials **will do not need to** meet the specifications found in Appendix A. An alternative fence design or material may be used ~~upon approval of the USFWS.~~ Proposed fence installations **will may** be submitted to the USFWS for review and approval. ~~No ground disturbance may occur prior to approval of the design.~~

- ~~a. — A qualified biologist or approved biological monitor will be present on site when the fence is installed to minimize disturbance of SBKR burrows from fence installation.~~
- b. The integrity of the fencing will **be maintained in good working order throughout the duration of the Project** ~~checked by a qualified biologist at the end of each work day. Any gaps greater than 0.5 inch will be repaired immediately.~~
- c. Construction access openings, **if included within the barrier fence**, will be closed and secured at the end of each work day using the at-grade fencing method.
- d. The fence will remain in place for the duration of construction activities and removed at the completion of the relevant Project activity.

CM 7. ~~A qualified biologist will initiate preconstruction trapping within each fenced construction zone the evening of the day on which the fence is installed to remove as many SBKR as possible from within each fenced area.~~

CM 8. ~~Trapping will be conducted for 5 consecutive nights or until no SBKR are captured for 2 consecutive nights.~~

CM 9. ~~Any SBKR removed from within the construction zone will be relocated outside of the fenced area to an area which is safely away from the construction activities.~~

- ~~a. — Monthly reporting will occur during Project construction in SBKR habitat areas and include all sensitive species detected in the vicinity of the work areas, and all construction related actions that may have directly affected SBKR.~~

CM 10. ~~Handling and relocating SBKR will be conducted as follows:~~

CM 11. ~~Individual SBKR will be held for no longer than 1 hour before releasing them, and they will be relocated as quickly as possible.~~

- CM 12. ~~Animals will not be held in plastic bags; they will be transferred in a clean, structurally sound, breathable container with adequate ventilation.~~
- a. ~~Animals will be handled and temporarily held in a manner and conditions which will prevent them from becoming stressed due to temperature extremes (either hot or cold) at any time.~~
- CM 13. ~~Construction within fenced areas will begin no more than 5 days after fence placement (i.e., at the conclusion of maximum number of days in which trapping is conducted); or if this is not possible, the preconstruction trapping will be extended or repeated.~~
- CM 14. ~~The qualified biologist or approved biological monitor will visually inspect trenches and steep-walled holes, as in Measure 4b above, before the onset of daily construction for the presence of SBKR. If SBKR are discovered, the biologist will supervise the movement or relocation of the equipment until the animal has left the area on its own or capture the animal and release it outside the exclusionary fence in suitable habitat as close as possible to where it was discovered.~~
- CM 15. ~~To the extent feasible, soil stockpiles in SBKR habitat will be located within the construction area inside the exclusionary fence. If soil stockpiles must be located in SBKR habitat outside the main construction area, they will be located in areas where there is no kangaroo rat sign, as determined by a qualified biologist. Exclusionary fencing will be placed around soil stockpiles outside the main construction area to minimize the potential for SBKR to access them. They will be inspected prior to daily construction for evidence of kangaroo rat sign by a qualified biologist. If sign is detected trapping and relocation of SBKR will be conducted as described above.~~
- CM 16. Nighttime construction and night lighting will not be allowed.
- CM 17. Valley District will prepare and implement a revegetation plan to replace temporarily impacted habitat in proposed impact areas **located within designated SBKR critical habitat** (i.e., City Creek and Redlands Basins) or lands conserved as ~~compensatory mitigation~~. The revegetation plan will be submitted to the USFWS ~~a minimum of 60~~ **within 120** days ~~prior to~~ **of** commencing construction activities in **SBKR critical native** habitat. At minimum, the revegetation plan will include the following elements:
- a. Relevant conditions of Project permits and this biological opinion.
- b. Clear guidelines and quantifiable success criteria to measure progress toward fulfilling relevant conditions and to determine that implementation has been successfully completed.

- c. Performance standards to set appropriate quantitative and qualitative measurements of coverage and diversity of the scalebroom scrub vegetation and non-native vegetation to assure that the effort is progressing toward replacement of habitat to pre-Project levels of cover and diversity, or high quality as approved by the USFWS. Within 5 years after commencing revegetation efforts, cover and diversity should have progressed toward an intermediate phase of scalebroom scrub. Both early and intermediate stages of scalebroom scrub (native perennial plant cover 30 to 50 percent) and limited non-native plant species cover (less than 10 percent) provide suitable habitat for SBKR and woolly-star.
- d. Guidelines and specifications for salvage and redistribution of topsoil, vegetative debris, and organic material (“duff”), as well as other pertinent planting specifications.
- e. Guidelines for controlling and monitoring invasive, non-native plants.
- f. Specifications for seed application including guidance for materials and source material, rates of application, and appropriate application methods and timing specifications, and methods will be based on locally successful SBKR habitat restoration Projects within the watershed.
- g. Descriptions of maintenance and monitoring methods to promote successful implementation of the plan.

CM 18. ~~All Project-related impacts to scalebroom scrub habitat in City Creek and the Redlands Basins are within the designated critical habitat for SBKR (Table 1; see section on Direct Effects to SBKR). Permanent impacts to unoccupied designated critical habitat for SBKR in City Creek (outlet structure, 0.02 acres; habitat type conversion, 8.2 acres) and in Redlands at Weaver Basins (outlet structure, 0.02 approximately 16.93 acres), will be offset onsite through permanent conservation of approximately 17 acres of unoccupied designated SBKR critical habitat in the southeastern portion of the Weaver Basins site. require off-site compensation at a ratio of 3:1 acres (occupied, 4.12 acres) or a ratio of 2:1 acres (unoccupied, 4.12 acres). Temporary impacts to designated SBKR critical habitat in City Creek and Redlands at Weaver Basins will be restored in place. compensated at a ratio of 2:1 acres (occupied, 0.48 acre) or a ratio of 1:1 acres (unoccupied, 0.18 acres). All SBKR habitat temporarily impacted during construction will be restored in accordance with the approved revegetation plan. Compensatory mitigation of 21.74 acres may be provided through: (1) the conservation and management of scalebroom scrub habitat (at least 13.32 acres of which are occupied), (2) the purchase of equivalent credits from a Conservation Bank approved by the USFWS, or another equivalent compensatory mitigation option approved by the PSFWO in writing prior to initiation of Project construction.~~

***Santa Ana River Woolly-Star***

- CM 19. ~~Prior to ground disturbance, a qualified botanist will conduct preconstruction surveys for woolly star in areas of suitable habitat where disturbance will occur as a result of construction (excluding paved roads and road shoulders) using the California Department of Fish and Wildlife's [CDFW, formerly the California Department of Fish and Game (CDFG)] November 2009 guidance for Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations, as appropriate.~~
- CM 20. ~~If a woolly star plant is found occurring in a Project work area and it may be impacted by the Project, the USFWS will be notified within 3 working days of the finding. If occupied habitat cannot be avoided all work will stop in occupied areas. If it is determined that avoidance is not feasible consultation with the USFWS will be reinitiated.~~

***Santa Ana Sucker***

- SAS 21. The following measures will avoid, minimize, and offset Project-related impacts to SAS associated with up to 1.21 acres of permanent degradation of occupied designated critical habitat in the mainstem of the Santa Ana River from the RIX outfall downstream to approximately Mission Boulevard.
- a. Valley District will prepare and implement the HMMP which will identify habitat improvement actions and methods for implementation, monitoring, and maintenance. The diversion of wastewater flow from the RIX Facility to the SNRC will not occur until Valley District's Santa Ana Sucker HMMP has been approved by the USFWS and the actions proposed in this measure have been completed or show evidence of significant progress toward successful implementation such as engineering design(s) and/or other regulatory compliance such as the California Environmental Quality Act, or consultation with the USFWS will be reinitiated.
  - b. The HMMP will include the measures listed below to offset direct and indirect impacts to SAS and its habitat resulting from the loss of up to 22.3 percent (6.43 MGD of 28.4 MGD calculated from the November 2014 to May 2016 discharge) discharge from the RIX outfall into the Santa Ana River. The HMMP will contain measures to increase the number of individual SAS in the Santa Ana River, increase the area of suitable and occupied habitat in this watershed, and establish two new populations in the watershed. It will be implemented by a contracted, qualified, and permitted entity in coordination with the USFWS. The HMMP will specify goals and

performance criteria for each conservation measure and include the following elements:

- i. Habitat Node Creation (microhabitat enhancements) to offset the potential reduction of suitable habitat available to sucker, including the above listed habitat features, resulting from decreased flow, decreased water velocity, and decreased sand transport.

Objective: Increase the total area of suitable habitat available to sucker, including riffles, small scour pools, and exposed patches of gravel/cobble substrate by strategically placing a series of structures within the stream flow to manipulate water movement and create these microhabitat areas.

This measure is expected to enhance perennial stream habitat within at least 1.5 acres of occupied habitat along about 2.5 miles of river, as measured in the fall by the area of pools created, gravel/cobble substrates exposed, and other functional SAS habitat features created/enhanced. The creation of a minimum of at least 6 habitat nodes will occur prior to any water diversions. An additional 0.5 acre of microhabitat enhancements (total of 2.0 acres) will be maintained temporarily during dry rainfall years (<14.7 inches<sup>1</sup>) until Upper Watershed Population Establishment has occurred (see Conservation Measure 21.b.v).

If future data suggests that impacts to the species are either greater than expected or habitat nodes cannot be created to functionally offset Project impacts, the Project will obtain technical assistance from the USFWS to develop a new or revised CM that will achieve the biological objective(s) as analyzed in this opinion, or consultation with the USFWS will be reinitiated.

The Project will implement microhabitat enhancements (habitat nodes) within ecologically valuable segments of the Santa Ana River downstream of the RIX discharge location (subject to landowner access permissions) to improve the abundance and distribution of the above-mentioned SAS habitat features. Enhancements will include the use of natural materials to increase scour and pool formation. Substrate augmentation (e.g., river gravel and cobble) may also occur in the same area to enhance perennial stream habitat function. Examples may include placement of large boulders and/or large woody debris to increase velocity of flow and gravel bar patches as well as deep pool refugia areas. A minimum of six habitat nodes will be created.

---

<sup>1</sup> Measured in San Bernardino, California

One naturally occurring riffle/pool feature (natural node) in the Santa Ana River was observed to enhance the stream habitat for SAS for approximately 330 feet (100 meters, 0.25 acres). Between 2015 and 2016 the USGS Native Fishes Survey found that the relative abundance of exposed gravels increased in this area suggesting that the size of the affected area associated with the node is subject to fluctuate based upon environmental conditions and the abundance of fine sediment in the inset channel (SAS occupied stream) (Brown and May 2016, 2017). Although all nodes will be unique in design, each will serve to replicate the scale and provide similar ecological functions as the natural node discussed above.

The nodes will be located in the Santa Ana River mainstem between the RIX outfall and River Road Bridge. To maximize habitat value and function locations should be associated with mainstem tributaries (~~Evan's Lake~~, Arroyo Tequesquite, Sunnyslope Drain, Anza Drain, Hole Creek, etc.). Locations will need to be further refined by field survey data.

Habitat nodes will be monitored annually, and the survey data will be used to assess the need for corrective measures. Annual monitoring will include, at minimum, water quality, visual estimates of substrate cover types, and fish surveys. When the cumulative cover of boulder, cobble, and gravel is found to be less than 35 percent for any habitat node (mean cover measured over a 0.25-acre reach associated with a node), maintenance and/or reinstallation of nodes will be conducted to maintain a minimum of 0.25 acres of habitat enhancement for every node or a cumulative enhancement of 1.5 acres for all ~~six~~ nodes. An additional 0.5 acre (total of 2.0 acres) will be enhanced during dry rainfall years (<14.7 inches) until Upper Watershed Population Establishment has occurred (see Conservation Measure 21.b.v). All work conducted in the Santa Ana River will be done in coordination with the USFWS and CDFW.

If vegetation removal is required for ingress, egress, or other work areas associated with Habitat Node creation and maintenance it will be revegetated. Quantitative and qualitative performance standards addressing vegetation cover and diversity will be included in the HMMP. Within 3 and at most 5 years after commencing revegetation efforts, cover and diversity should have progressed toward pre-Project levels of cover and diversity, or higher quality for the benefit of vireo and SAS. It is not anticipated that maintenance work, requiring vegetation removal, will be needed more frequently than every 5 years.

- ii. Aquatic Predator Control Program to offset the potential increase in non-native predator habitat (pools or other microhabitats that provide relatively deep and slow velocity water flow) resulting from reduced discharge volume.

Objective: Reduce the abundance of non-native predators in the reach of river affected by the Project so as to maximize native fish survival. The non-native predator removal program will be focused on reducing the abundance of non-native aquatic predators immediately preceding the start of the sucker spawning season (approximately March 1). Species to be removed may include non-native fish, amphibians, and reptiles such as mosquitofish, largemouth bass, black bullhead catfish, green sunfish, red-eared slider, African clawed frog, and American bullfrog. This activity will occur at minimum of two ~~one~~ times per year outside of the SAS spawning season (August 1 to February 28) until Upper Watershed Population Establishment has occurred (see Conservation Measure 21.b.v), at which point the effort will be reduced to a minimum of one time per year. The most recent fish and/or other surveys conducted upstream of Prado Basin in the Santa Ana River will provide the locations of where to conduct electroshocking. Electroshocking will be carried out by a USFWS-approved SAS biologist authorized to use electroshock sampling methods. Pre-spawning predator removal will occur annually prior to February 15 between Rialto Channel downstream to Van Buren Boulevard (or elsewhere along the mainstem Santa Ana River if determined beneficial to the species), focusing on in areas of highest ecological value to SAS reproduction, currently from Rialto Channel downstream to approximately Mission Boulevard and in mainstem tributaries. If aquatic predators are found in abundance after pre-spawning predator removal, one or more ~~a second~~ predator removals will be conducted after August 1.

- iii. Exotic Weed Management Program to reduce competitive stress for native vegetation within the riparian community in order to offset the impacts associated with reduced water availability resulting from the Project.

Objective: Maintain a low abundance and cover of non-native vegetation along the Santa Ana River ~~and in City Creek~~ within the Project impact area (RIX outlet to Mission Boulevard, or as otherwise approved by the USFWS and Boulder Avenue to Alabama Street, respectively), focusing on the removal of giant reed, tamarisk, and castor bean.



The exotic weed management program will be carried out by a qualified and experienced entity and will focus on controlling the non-native vegetation within the riparian corridor between the Rialto Channel and the Mission Boulevard Bridge (approximately 4.2 miles) or, depending on landowner permissions, along a similar length of river downstream of the Riverside County-San Bernardino County line (for example, Market Street Bridge downstream to Anza Creek, approximately 4.2 miles). This measure will establish and maintain weed control in one-third of the area (approximately 1.4 miles) per year, so as to complete the weeding of the entire area once every 3 years. Annual work plan meetings between the USFWS, Valley District staff, and contractor will identify areas of concern and focus work efforts on those areas. A successful program will maintain total cover of non-native riparian species to less than 25 percent and total cover of giant reed, tamarisk, and castor bean to less than 5 percent. Percent cover will be assessed relative the total area of the weeded riparian corridor for that year. Although they are native species, cattails (*Typha* spp.) and bulrush (*Schoenoplectus* spp.) may increase in abundance over time as their preferred habitat type (slow, shallow water or marsh) is expected to increase due to Project reductions of flow. These plant species may degrade sucker habitat by further reducing water velocity and trapping fine sediment. Problem areas will be identified as part of the Riverwalk survey (see below for more on Riverwalk survey) and if certain areas have become problematic, they will be managed in coordination with the USFWS and CDFW.

- SAS 4. High Flow Pulse Events<sup>2</sup>. The HMMP will identify means to create high flow pulse events as needed based on substrate conditions, up to 2 times per year. The high flow pulse events would be designed to flush out fine sediment from the upstream reach of the affected river segment and would be implemented through a cooperative agreement with the City of San Bernardino Municipal Water Department and/or the City of Rialto.
- iv. Rialto Channel and/or Santa Ana River Water Temperature Management: Commit funding to contribute towards implementation of a water temperature amelioration strategy/measure (project) within Rialto Channel and/or the Santa Ana River to offset the potential loss of suitable habitat downstream in the Project impact area during times of the year when habitat will be most affected from the cumulative

---

<sup>2</sup> SAS 4 is stipulated in East Valley Water District's Environmental Impact Report for this Project, and the Service has kept the numbering of this conservation measure consistent with that document. This measure was formerly a Conservation Recommendation.

impacts from reduced discharge and drought effects, particularly in summer and fall. Proposed measures/strategies to reduce water temperature will be developed following completion of a larger-scale water temperature monitoring study (to be completed by the Upper Santa Ana River HCP applicants). Financial commitment will be outlined in the HMMP and reviewed and approved by the USFWS.

Objective: Reduce water temperatures in Rialto Channel and/or the Santa Ana River to tolerable levels (less than 86 degrees Fahrenheit) during summer months. Commit funding to contribute towards implementation of a proposed measure/strategy (project) to ameliorate Rialto Channel and/or Santa Ana River water temperatures.

In recent years the temperatures within the natural bottom reach of Rialto Channel (not concrete lined section) were found to be generally greater than 80 degrees Fahrenheit in summer and fall (USGS 2015) and often warm enough to be outside of the tolerable range for sucker (USFWS 2010b). Areas of elevated water temperature have also been recorded in the Santa Ana River. A potential strategy ~~In order to decrease the water temperature in Rialto Channel and/or the Santa Ana River to tolerable levels for SAS is to add supplemental flow from relatively cool groundwater (67–70 degrees Fahrenheit, temperature range derived from local nearby well operators), from up to 4 wells or other water sources will be added to the flows in Rialto channel.~~

~~In order to implement this measure most effectively, To inform potential solutions to elevated water temperatures in Rialto Channel and the Santa Ana River, a water temperature study has been initiated by the Upper Santa Ana River HCP applicants. Results of these studies will be used to facilitate development of methodologies/strategies to ameliorate elevated water temperatures. Funds set aside in accordance with this measure will be used to implement future recommended methodologies/strategies generated by the water temperature studies (as approved by the USFWS). two water quality monitoring stations will be established in Rialto Channel. An upstream, real-time gage will measure the water temperature at the well input location (plunge pool downstream of Agua Mansa Bridge). At 85 degrees Fahrenheit the groundwater wells will automatically turn on and release directly into the plunge pool. Another real-time~~

~~gage will be installed downstream of the plunge pool Rialto Channel just before the confluence with the Santa Ana River and. Once the water temperature at this downstream gage is less than 82 degrees Fahrenheit the well input will be turned off. Initiation and cessation of well water input (discharge) will be phased over a period of time to reduce sudden changes in flow and temperature in Rialto Channel. The well input and controls will be constructed and tested prior to diversion of flows from the RIX facility to the SNRC. This program will be deemed successful if there are 5 or fewer days between June 22 and September 21 that the daily maximum water temperature exceeds 82 degrees Fahrenheit and SAS are present in the channel during the same period. Water temperature will be measured in Rialto Channel upstream of the RIX outfall. If success criteria are not met within 2 years of signing the biological opinion, the Project will obtain technical assistance from the USFWS to develop a new or revised CM that will achieve the biological objective(s) as analyzed in this opinion.~~

- v. Upper Watershed SAS Population Establishment to offset potential losses of suitable habitat in the Project's impact area, and to offset unknown and/or cumulative impacts to the species and its habitat that may be associated with the reduction of flow to the Santa Ana River.

Objective: Increase the abundance, distribution, and resilience of the sucker population in the Santa Ana River Watershed by establishing redundant populations in upper watershed tributaries.

Subject to the availability of sufficient source fish, the Project will establish two new locations of sucker within City Creek and Hemlock Creek, or another suitable unoccupied locations within the former range of the species within the Santa Ana River watershed as approved by the USFWS. Both City and Hemlock creeks have been analyzed as part of the Santa Ana Sucker Translocation Plan (Dudek 2016a, 2017). Valley District has assessed the habitat availability and appropriateness for SAS in City and Hemlock creeks (Dudek 2016b). These documents show that elements (PCEs) to support SAS, as well as additional factors found to be important to SAS (Aspen 2016). The Translocation Plan is currently under review by the USFWS, CDFW, and U.S. Forest Service (USFS).

~~Prior to Project flow reduction to the Santa Ana River, at least one translocation of SAS will have occurred and Valley District will provide data indicating that the nascent population is healthy, reproducing, and appears to be successfully establishing. Successful establishment of SAS will have occurred when there are surviving and reproducing fish in at least two size classes, the population of SAS is stable or increasing in population as averaged over 5 years, and the translocated population is distributed throughout the appropriate habitat in the translocation stream.~~

~~If progress towards achievement of success criteria is not demonstrated within are not met in both translocation tributaries within 5 years of initial translocation, or has not been met within 10 years of translocation, signing the biological opinion, the Project will obtain technical assistance from the USFWS to develop a new or revised CM that will achieve the biological objective(s) as analyzed in this opinion.~~

The HMMP will identify and further detail the goals and success criteria of SAS re-establishment. A financial security deposit, in an amount approved by USFWS and CDFW, will be established prior to Project flow reduction to the Santa Ana River, to provide assurances that the translocations will be implemented and monitored to demonstrate achievement of success criteria (progress towards achievement of success criteria demonstrated within 5 years of translocation, or met within 10 years of translocation). The HMMP will also describe and include the amount of financial assistance to be provided by East Valley Water District for the regionally beneficial population establishment program, including additional measures found below.

- A. East Valley Water District will contract with a USFWS-approved entity that can demonstrate the ability to re-introduce ~~captively-bred~~ SAS to a suitable unoccupied location with the intent of establishing a new self-sustaining population within the former range of the species on the Santa Ana River. The Contract requirements will include the following: (1) translocation of appropriate numbers and age classes of SAS rearing and maintaining a sufficient number of breeding adults to support re-introduction of a minimum of 500 juvenile SAS into the target area per

~~year~~ (subject to approval ~~by or alternate numbers agreed to~~ by the USFWS); (2) annual relocations for the first 3 years to supplement the population, ~~then as~~ needed to maintain a stable population size and genetic diversity; and (3) monitoring, adaptive management, and annual reporting.

- B. East Valley Water District may only reintroduce captive-bred SAS if ~~(1) captive breeding, and all associated permitting and~~ documentation has been approved by the USFWS and CDFW ~~and (2) the captive breeding facility has adequate numbers of appropriate sized SAS. If these conditions are not met or if additional fish are needed for translocation purposes SAS may be translocated from the Santa Ana River to the west fork of City Creek and one other historic tributary in the Santa Ana River watershed.~~
  - C. If, at any time, SAS are found located downstream Highland Avenue Bridge, East Valley Water District will be responsible for relocating all SAS back upstream within the boundaries of the San Bernardino National Forest or out of locations that where their presence might affect other entities who do not have incidental take exemptions for this species. This measure will be implemented for the life of the Project or until another entity, such as the HCP, takes over this responsibility.
- vi. Annual Monitoring of the Santa Ana River to track the suitability and habitat for SAS following implementation of the Project and its conservation measures.

Objective: Identify any key effects to the hydrology or biology of the River that may result from reduced flow due to this Project.

The HMMP will outline a monitoring program to collect hydrology data in the segment of river between the RIX outlet and Mission Boulevard and within the habitat node creation reaches. Hydrology data will include water quality (flow velocity, temperature, and depth), visual observations of substrate, and other surface topography, and fish surveys. Annual reporting will include summaries of the non-native plant and aquatic predator removals and any adaptive

management actions taken in the past year, and will be submitted to the USEPA, State Water Board, and USFWS by April 30 for review and comment. All long-term monitoring and management activities will be completed by the Project proponent per the commitments included in the HMMP and required by this biological opinion until the HCP is finalized and permitted or until incidental take associated with the Project becomes covered by another mechanism.

In order to make best use of the existing Riverwalk habitat survey dataset, (Riverwalk which has been conducted annually in the fall for the past 11 years), the Project will provide support to Riverwalk organizers, whether financial or in-kind services and develop the long-term monitoring methodology to be complementary to the Riverwalk survey data collection to provide a greater understanding of habitat availability throughout the entire system. The locations of the habitat nodes, as described above, will be added to the Riverwalk survey area as non-random transects. At least one year's worth of baseline data that captures the entire river corridor (Riverwalk points 9 to 118) will be recorded prior to a reduction in discharge flow from RIX.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SANTA ANA REGION**

3737 MAIN STREET, SUITE 500, RIVERSIDE, CALIFORNIA 92501-3348  
Phone (951) 782-4130 – FAX (951) 781-6288 – TDD (951) 782-3221  
<http://www.waterboards.ca.gov/santaana>

**ORDER NO. R8-2023-0009**

**WASTE DISCHARGE REQUIREMENTS AND MASTER RECYCLING PERMIT  
FOR THE  
EAST VALLEY WATER DISTRICT  
STERLING NATURAL RESOURCE CENTER**

The following Discharger, as described below, is subject to Waste Discharge Requirements (WDRs) and Master Recycling Permit set forth in this Order:

**Table 1 Discharger/Facility Information**

Discharger	East Valley Water District
Name of Facility	Sterling Natural Resource Center (SNRC)
Facility Address	25376 5 <sup>th</sup> St., San Bernardino, CA 92410
	San Bernardino County

**Table 2 Discharge Locations**

Discharge Point	Effluent Description	Latitude	Longitude	Receiving Waters
DP-001	Up to 8 MGD of Disinfected Tertiary Treated recycled water	34°6'34" N	117°9'57" W	Bunker Hill-B Groundwater Management Zone (GMZ)

**Effective Date**

The Order was adopted by the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) and is effective on December 1, 2023.

I, Jayne Joy, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the Santa Ana Water Board on December 1, 2023.

---

**Jayne Joy, P.E., Executive Officer**



## TABLE OF CONTENTS

I. Facility Information.....	5
II. Findings.....	5
III. Discharge Prohibitions.....	8
IV. Discharge Specifications and Effluent Limitations .....	8
V. Notification and Response Levels .....	16
VI. Water Recycling Requirements .....	17
VII. Standard Provisions.....	18
VIII. Special Provisions .....	23
IX. Notices.....	27
ATTACHMENT A – DEFINITIONS.....	1
ATTACHMENT B – MAPS AND FIGURES.....	1
ATTACHMENT C – FLOW SCHEMATIC.....	1
ATTACHMENT D – WATER RECYCLING REQUIREMENTS.....	2
I. General Requirements.....	2
II. Wastewater Source Control.....	4
III. Diluent Water And Recycled Municipal Wastewater Contribution Requirements .....	4
IV. Pathogenic Microorganism Control.....	5
V. Cross-Connection Control Program.....	7
VI. Non-Potable Recycled Water Specifications .....	9
VII. Compliance Monitoring and Reporting.....	12
VIII. Operation Optimization Plan.....	14
IX. Total Organic Carbon and Soil-Aquifer Treatment Process Requirements.....	15
ATTACHMENT E – MONITORING AND REPORTING PROGRAM.....	1
I. Findings.....	1
II. General Monitoring Provisions.....	1
III. Monitoring Locations.....	3
IV. Monitoring Requirements.....	4
V. Constituents of Emerging Concern Monitoring Requirements .....	19
VI. Diluent Water Monitoring .....	26
VII. Self-Monitoring Reports.....	27
VIII. One Time Reporting Due Dates .....	29

IX. Volumetric Reporting Requirements.....	30
X. Pretreatment Program Monitoring and Reporting Requirements.....	31
ATTACHMENT F – FACT SHEET .....	1
I. Order Information .....	1
II. Facility Description.....	2
III. Applicable Plans, Policies, and Regulations .....	4
IV. Rationale For Discharge Prohibitions, Discharge Specifications, and Effluent Limitations .....	9
V. Rationale For Provisions.....	12
VI. Rationale For Monitoring and Reporting Provisions .....	13
VII. Public Participation .....	14

### ATTACHMENTS

Attachment A – DEFINITIONS

Attachment B – MAPS AND FIGURES

Attachment C – FLOW SCHEMATIC

Attachment D – WATER RECLAMATION REQUIREMENTS

Attachment E – MONITORING AND REPORTING REQUIREMENTS

Attachment F – FACT SHEET

### TABLES

Table 1 Discharger/Facility Information.....	1
Table 2 Discharge Locations.....	1
Table 3 Effluent Limitations at DP-001 .....	8
Table 4 Effluent Limitations Based on Constituents with Secondary MCLs and other Required Constituents.....	9
Table 5 Effluent Limitations Based on Primary MCLs .....	11
Table 6 Effluent Limitations Based on Volatile Organic Chemicals (VOCs) with Primary MCLs.....	12
Table 7 Effluent Limitations Based on Synthetic Organic Chemicals (SOCs) with Primary MCLs .....	13
Table 8 Effluent Limitations Based on Disinfection Byproducts with Primary MCLs.....	15
Table 9 Effluent Limitations Based on Radionuclides with Primary MCLs.....	15
Table 10 Notification Levels (NL) and Response Levels (RL) .....	16

## I. FACILITY INFORMATION

- A. The East Valley Water District (Discharger) owns and operates the Sterling Natural Resource Center (SNRC or Facility). The SNRC is a recycled water project by EVWD, in collaboration with the San Bernardino Valley Municipal Water District (San Bernardino Valley). The SNRC consists of two major components: wastewater recycling facility (WWRF) and the Weaver Basins. Non-potable use of treated water from the WWRF is an additional minor component. The WWRF is located at 25376 5<sup>th</sup> St., San Bernardino, CA 92410.
- B. The Discharger is responsible for providing potable water treatment and delivery services and wastewater collection and treatment. The Discharger constructed the Facility to produce and discharge disinfected tertiary treated recycled water through spreading basins for groundwater recharge (indirect potable reuse) of the Bunker Hill-B GMZ and for limited non-potable uses. Recycled water from the Facility will supplement the natural recharge into the groundwater basin.
- C. General information about the Facility is summarized in sections I and II of the Fact Sheet (Attachment F) of this Order to provide a detailed description of the Facility. Section I of the Fact Sheet also includes information regarding the permit application for the Facility.

## II. FINDINGS

- A. **Legal Authorities.** This Order serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code, commencing with section 13260. Also, this Order serves as a master recycling permit pursuant to section 13523.1 of article 4, chapter 7, division 7 of the Water Code. This Order further incorporates applicable portions of State Water Resources Control Board (State Water Board) *Water Quality Control Policy for Recycled Water* (Recycled Water Policy)<sup>1</sup> and California Code of Regulations, title 22, division 4, chapter 3, article 5.1 - Indirect Potable Reuse: Groundwater Replenishment – Surface Application.
- B. **Background and Rationale for Requirements.** The Santa Ana Water Board developed the requirements in this Order based on information submitted in the *Title 22 Engineering Report: Sterling Natural Resource Center*<sup>2</sup> (Engineering Report) and the *Report of Waste Discharge Application for the East Valley Water District's Sterling Natural Resource Center* (ROWD)<sup>3</sup>, water quality control plans, policies, and other available information. The Fact Sheet (Attachment F) contains background information and rationale for the requirements in this Order and is

---

<sup>1</sup> The Recycled Water Policy can be found at the following webpage:  
[https://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2018/121118\\_7\\_final\\_ame ndment\\_oal.pdf](https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2018/121118_7_final_ame ndment_oal.pdf)

<sup>2</sup> Submitted pursuant to Cal. Code Regs., tit. 22, § 60323

<sup>3</sup> Submitted pursuant to Wat. Code, § 13260

incorporated into and constitutes findings for this Order. Attachments B through E are also incorporated in this Order.

- C. **Pretreatment Program Approval.** The Santa Ana Water Board has received a request from the Discharger for approval of its pretreatment program. The Discharger's pretreatment program submittal was made in accordance with California Code of Regulations, title 23, section 2233 and 40 Code of Federal Regulations (40 CFR) section 403.9. The Santa Ana Water Board has reviewed the Discharger's pretreatment program submission and finds that it complies with the requirements of 40 CFR section 403.8. The Discharger's request did not include a request for a modification of the categorical treatment standards under 40 CFR sections 403.7(b) and (c). The Santa Ana Water Board hereby approves the pretreatment program of the Discharger (also referred to as the "Control Authority"). This approval is made in accordance with the requirements of the California Code of Regulations, title 23, section 2233 and 40 CFR section 403.11. The approved pretreatment program and its components, such as the Sewer Use Ordinance (Sewer Rules and Regulations), Enforcement Response Plan, local limits, and control mechanisms, amongst others, are hereby made an enforceable condition of this Order.
- D. **California Environmental Quality Act (CEQA).** This Order includes requirements for the production and distribution of recycled water for non-potable reuse at a new facility. On March 15, 2016, the San Bernardino Valley, as the lead agency under CEQA (Pub. Res. Code, § 21000 et seq.), certified an Environmental Impact Report (EIR) for the SNRC (State Clearinghouse [SCH] No. 2015101058). The EIR identified no significant adverse impact to water quality as a result of the use of recycled water provided that mitigation measures proposed in the EIR are implemented. In 2018, the Discharger became the lead agency for SNRC and subsequently issued Addendum No. 1 and Addendum No. 2 to the 2016 EIR (see section III.B. of Attachment F for more details).

The Santa Ana Water Board is a responsible agency under CEQA for the purposes of issuing this Order. In issuing this Order, the Santa Ana Water Board has considered the EIR certified by San Bernardino Valley, Addendum Nos. 1 and 2 prepared by the Discharger, and subsequent information provided by the Discharger. More specifically, the Santa Ana Water Board considered those sections of the EIR and Addendums pertaining to impacts to water quality. The Santa Ana Water Board finds that compliance with the mitigation measures of the EIR and conditions in this Order will reduce potentially adverse impacts to water quality to a less than significant level and protect beneficial uses of receiving waters.

- E. **Antidegradation Policy.** The State Water Board established California's Antidegradation Policy in Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Resolution No. 68-16). Resolution No. 68-16 requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. The Santa Ana Water

Board's *Water Quality Control Plan for the Santa Ana River Basin* (Basin Plan) implements and incorporates by reference the State's Antidegradation Policy. As discussed in section III.F of the Fact Sheet, the discharge regulated by this Order is consistent with the Basin Plan and Resolution No 68-16.

- F. **Executive Officer Delegation of Authority.** The Santa Ana Water Board, by prior resolution, has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to Water Code section 13223. Therefore, the Executive Officer is authorized to act on the Santa Ana Water Board's behalf on any matter within this Order, unless such delegation is unlawful under the Water Code section 13223 or as otherwise explicitly stated in this Order. The Santa Ana Water Board's delegated authorities to the Executive Officer include approving modifications to Water Recycling Requirements in Attachment D of this Order, as appropriate, after consulting with and receiving the recommendations from the State Water Board, Division of Drinking Water (DDW). The Executive Officer may also approve modifications to the Monitoring and Reporting Program (MRP), Attachment E.
- G. **Notification of Interested Persons.** The Santa Ana Water Board notified the Discharger, local agencies, and interested persons of its intent to prescribe WDRs and Master Recycling Permit for the discharge and provided them with an opportunity to submit written comments and recommendations. The Santa Ana Water Board also provided an opportunity for the Discharger and interested agencies and persons to submit oral comments and recommendations at a public hearing. Notification details are included in section VII.B of the Fact Sheet.
- H. **Consideration of Public Comment.** The Santa Ana Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Public Hearing details are included in section VII.D of the Fact Sheet.

**THEREFORE, IT IS HEREBY ORDERED** that, to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and applicable regulations adopted thereunder, the Discharger must comply with the requirements in this Order. The Discharger is hereby authorized to discharge disinfected tertiary treated recycled water at the discharge locations described in Table 2 within the Bunker Hill-B GMZ subject to the requirements below:

**III. DISCHARGE PROHIBITIONS**

- A. The use of recycled water shall be limited to treated effluent that meets the conditions and requirements specified in section IV and Attachments D and E of this Order.
- B. The discharge of wastewater and/or of recycled water at a location or in a manner different from described in the Order is prohibited.
- C. The bypass or overflow of untreated wastewater or wastes to surface waters or surface water drainage courses is prohibited.
- D. The discharge of any substances in concentrations toxic to animal or plant life in the affected receiving water is prohibited.
- E. The discharge of any radiological, chemical, or biological warfare agent or high-level radiological waste is prohibited.
- F. The distribution and use of recycled water prior to authorization by the California State Water Resources Control Board's (State Water Board) Division of Drinking Water (DDW), is prohibited.
- G. The treatment or disposal of waste from the Facility that causes a condition of contamination, pollution or nuisance, as defined in Water Code section 13050, is prohibited.

**IV. DISCHARGE SPECIFICATIONS AND EFFLUENT LIMITATIONS**

- A. The flowrate from the Facility must not exceed 8 million gallons per day (MGD) based on a monthly average flow.
- B. The Discharger must maintain compliance with the effluent limitations in Table 3, with compliance for DP-001 measured at Monitoring Location REC-001 as described in table E-1 of the Monitoring and Reporting Program (MRP) in Attachment E of the Order.

**Table 3 Effluent Limitations at DP-001**

Parameter	Units	Monthly Average <sup>1</sup>	Weekly Average <sup>2</sup>
Biological Oxygen Demand (BOD <sub>5</sub> @ 20°C) <sup>3</sup>	Milligrams per liter (mg/L)	20	30
Total Suspended Solids (TSS) <sup>3</sup>	mg/L	20	30

<sup>1</sup> The monthly average effluent limitation must apply to the arithmetic mean of the results of all samples collected during each calendar month.

- <sup>2</sup> The weekly average effluent limitation must apply to the arithmetic mean of the results of all samples collected during each calendar week, beginning on Sunday and ending on Saturday.
- <sup>3</sup> Compliance is determined based on the monitoring data generated by the Discharger, at a minimum as required in Attachment E of this Order, which will characterize the discharge during the monitoring period.
- C. The Discharger must maintain compliance with the effluent limitations in Tables 4 through 9 of this Order, with compliance measured at Monitoring Location REC-001, as described in Table E-1 of Attachment E of this Order.

**Table 4 Effluent Limitations Based on Constituents with Secondary MCLs and other Required Constituents**

Parameter	Units	Average Annual <sup>1</sup>	Daily Maximum	Instantaneous Minimum	Instantaneous Maximum
Aluminum <sup>2</sup>	milligrams per liter (mg/L)	0.2	-	-	-
Boron <sup>3</sup>	mg/L	0.75	-	-	-
Chloride <sup>2,3</sup>	mg/L	55	500	-	-
Color Units <sup>2,3</sup>	Apparent Color Unit (ACU)	15	-	-	-
Copper <sup>2,3,4</sup>	mg/L	1.0	-	-	-
Fluoride <sup>3,4</sup>	"	1.0			
Iron <sup>2,3</sup>	"	0.3	-	-	-
Manganese <sup>2,3</sup>	"	0.05	-	-	-
Methylene Blue-Activated Substances (MBAS) <sup>2,3</sup>	"	0.05	0.5	-	-
Methyl-tert-butyl ether (MTBE) <sup>2</sup>	"	0.005	-	-	-
Nitrate (as Nitrogen) <sup>4,11</sup>	"		10	-	-
Nitrate + Nitrite (as Nitrogen) <sup>4,11</sup>	"	-	10	-	-

Parameter	Units	Average Annual <sup>1</sup>	Daily Maximum	Instantaneous Minimum	Instantaneous Maximum
Nitrite (as Nitrogen) <sup>4,11</sup>	"	-	1	-	-
Total Nitrogen <sup>6,13</sup>	"	-	10	-	-
Total Inorganic Nitrogen <sup>3</sup>	"	7.3	-	-	-
Odor <sup>2</sup>	Threshold Odor Number (TON)	3	-	-	-
pH <sup>3,12</sup>	pH Units	-	-	6	9
Silver <sup>2,3</sup>	mg/L	0.05	0.1	-	-
Sulfate <sup>2,3</sup>	"	250	500	-	-
Thiobencarb <sup>2</sup>	"	0.001	-	-	-
Total Dissolved Solids (TDS) <sup>3</sup>	"	545	-	-	-
Total Organic Carbon (TOC) <sup>5,7,13</sup>	"	0.5	-	-	0.5
Turbidity <sup>2,8,9,10</sup>	Nephelometric Turbidity Units (NTU)	-	0.2	-	0.5
Zinc <sup>2</sup>	mg/L	5.0	-	-	-

- <sup>1</sup> The average annual effluent limitation must apply to the arithmetic mean of the results of all samples collected during each calendar year.
- <sup>2</sup> Parameters with secondary maximum contaminant levels (MCLs) established in title 22, section 64449, Tables 64449-A and 64449-B.
- <sup>3</sup> Parameters with water quality objectives (WQOs) in the Basin Plan and for TDS is based on TDS assimilative capacity for the Bunker Hill-B GMZ. However, if the Discharger does not demonstrate compliance with the TDS mitigation commitments listed in section VIII.G. of this Order, the annual average TDS concentration shall not exceed a TDS effluent limitation of 330 mg/L, which is the TDS WQO for the Bunker Hill-B GMZ in the Basin Plan.



- 4 Parameters with primary MCLs established in title 22, section 64431, Table 64431-A.
- 5 Parameters with effluent limitations recommended by DDW's *Division of Drinking Water's Conditional Acceptance of the Title 22 Engineering Report for the East Valley Water District – Sterling Natural Resource Center Groundwater Replenishment Project (3690026-701), dated August 1, 2023, as revised by DDW's letter issued on October 13, 2023, to correct conditions and responsibilities regarding well-control zones.*
- 6 Parameters with limits established in title 22, section 60320.110.
- 7 As required under title 22, section 60320.118(c), TOC must not exceed 0.5 mg/L divided by the RMA RWC based on a 20-week running average of all TOC results and the average of the last four monitoring results for TOC.
- 8 Parameters with limits established in title 22, section 60301.320(b).
- 9 The effluent turbidity must not exceed an average of 0.2 NTU more than 5% of the time within a 24-hour period or 0.5 NTU at any time.
- 10 The Discharger must monitor turbidity at the MBR's microfiltration filter effluent rather than REC-001.
- 11 Running 4-Week Average per title 22, section 60320.112.
- 12 The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month. No individual excursion from the range of pH values shall exceed 60 minutes.
- 13 Compliance verified at Monitoring Location REC-002, as described in Table E-1 of Attachment E of this Order.

**Table 5 Effluent Limitations Based on Primary MCLs**

Parameter <sup>1,2</sup>	Units	Running 4-Week Average
Aluminum	mg/L	1
Antimony	"	0.006
Arsenic	"	0.010
Asbestos (for fibers exceeding 10 micrometers (µm) in length <sup>3</sup> )	Million fibers per liter (MFL)	7
Barium	mg/L	1
Beryllium	"	0.004
Cadmium	"	0.005
Chromium	"	0.05

Parameter <sup>1,2</sup>	Units	Running 4-Week Average
Copper <sup>3</sup>	"	1.3
Cyanide	"	0.15
Fluoride	"	2.0
Lead <sup>3</sup>	"	0.015
Mercury	"	0.002
Nickel	"	0.1
Perchlorate	"	0.006
Selenium	"	0.05
Thallium	"	0.002

- <sup>1</sup> Parameters with primary MCLs established in title 22, section 64431, Table 64431-A.
- <sup>2</sup> Compliance with the running 4-week average will be determined based on the average of all samples collected during the 4-week period. The Discharger will be deemed in compliance with effluent limitation(s) during any 4-week period when samples are neither required nor collected.
- <sup>3</sup> The federal action levels for lead and copper are applied.

**Table 6 Effluent Limitations Based on Volatile Organic Chemicals (VOCs) with Primary MCLs**

Parameter <sup>1,2</sup>	Units	Running 4-Week Average
Benzene	mg/L	0.001
Carbon Tetrachloride	"	0.0005
1,2-Dichlorobenzene	"	0.6
1,4-Dichlorobenzene	"	0.005
1,1-Dichloroethane	"	0.005
1,2-Dichloroethane	"	0.0005
1,1-Dichloroethylene	"	0.006
Cis-1,2-Dichloroethylene	"	0.006
Trans-1,2-Dichloroethylene	"	0.01
Dichloromethane	"	0.005
1,2-Dichloropropane	"	0.005
1,3-Dichloropropene	"	0.0005

Parameter <sup>1,2</sup>	Units	Running 4-Week Average
Ethylbenzene	"	0.3
MTBE	"	0.013
Monochlorobenzene	"	0.07
Styrene	"	0.1
1,1,2,2-Tetrachloroethane	"	0.001
Tetrachloroethylene	"	0.005
Toluene	"	0.15
1,2,4-Trichlorobenzene	"	0.005
1,1,1-Trichloroethane	"	0.200
1,1,2-Trichloroethane	"	0.005
Trichloroethylene	"	0.005
Trichlorofluoromethane	"	0.15
1,1,2-Trichloro-1,2,2-Trifluoroethane	"	1.2
Vinyl Chloride	"	0.0005
Xylenes	"	1.750 <sup>3</sup>

- <sup>1</sup> Parameters with primary MCLs established in title 22, section 64444, Table 64444-A.
- <sup>2</sup> Compliance with the running 4-week average will be determined based on the average of all samples collected during the 4-week period. The Discharger will be deemed in compliance with effluent limitation(s) during any 4-week period when samples are neither required nor collected.
- <sup>3</sup> The MCL is for either a single isomer or the sum of the isomers.

**Table 7 Effluent Limitations Based on Synthetic Organic Chemicals (SOCs) with Primary MCLs**

Parameter <sup>1,2</sup>	Units	Running 4-Week Average
Alachlor	mg/L	0.002
Atrazine	"	0.001
Bentazon	"	0.018
Benzo(a)pyrene	"	0.0002
Carbofuran	"	0.018
Chlordane	"	0.0001

Parameter <sup>1,2</sup>	Units	Running 4-Week Average
2,4-Dichlorophenoxyacetic acid	"	0.07
Dalapon	"	0.2
1,2-Dibromo-3-chloropropane	"	0.0002
Di(2-ethylhexyl) adipate	"	0.4
Di(2-ethylhexyl) phthalate	"	0.004
Dinoseb	"	0.007
Diquat	"	0.02
Endothall	"	0.1
Endrin	"	0.002
Ethylene Dibromide	"	0.00005
Glyphosate	"	0.7
Heptachlor	"	0.00001
Heptachlor epoxide	"	0.00001
Hexachlorobenzene	"	0.001
Hexachlorocyclopentadiene	"	0.05
Gamma BHC (Lindane)	"	0.0002
Methoxychlor	"	0.03
Molinate	"	0.02
Oxamyl	"	0.05
Pentachlorophenol	"	0.001
Picloram	"	0.5
Polychlorinated Biphenyls (PCBs)	"	0.0005
Simazine	"	0.004
Thiobencarb	"	0.07
Toxaphene	"	0.003
1,2,3-Trichloropropane	"	0.000005
2,3,7,8-tetrachlorodibenzodioxin (Dioxin)	"	3 x 10 <sup>-8</sup>
2-(2,4,5-trichlorophenoxy)propionic acid (Silvex)	"	0.05

<sup>1</sup> Parameters with primary MCLs established in title 22, section 64444, Table 64444-A.

- <sup>2</sup> Compliance with the running 4-week average will be determined based on the average of all samples collected during the 4-week period. The Discharger will be deemed in compliance with effluent limitation(s) during any 4-week period when samples are neither required nor collected.

**Table 8 Effluent Limitations Based on Disinfection Byproducts with Primary MCLs**

Parameter <sup>1,2</sup>	Units	Running 4-Week Average
Total Trihalomethanes (TTHMs) <ul style="list-style-type: none"> <li>• Bromodichloromethane</li> <li>• Bromoform</li> <li>• Chloroform</li> <li>• Dibromochloromethane</li> </ul>	mg/L	0.080
Haloacetic acid (five) <ul style="list-style-type: none"> <li>• Monochloroacetic acid</li> <li>• Dichloroacetic acid</li> <li>• Trichloroacetic acid</li> <li>• Monobromoacetic acid</li> <li>• Dibromoacetic acid</li> </ul>	"	0.060
Bromate	"	0.010
Chlorite	"	1.0

<sup>1</sup> Parameters with primary MCLs established in title 22, section 64533, Table 64533-A.

- <sup>2</sup> Compliance with the running 4-week average will be determined based on the average of all samples collected during the 4-week period. The Discharger will be deemed in compliance with effluent limitation(s) during any 4-week period when samples are neither required nor collected.

**Table 9 Effluent Limitations Based on Radionuclides with Primary MCLs**

Parameter <sup>1,2</sup>	Units	Running 4-Week Average
Combined Radium-226 and Radium-228	Picocuries per Liter (pCi/L)	5
Gross Alpha particle activity (excluding Radon and Uranium)	pCi/L	15
Uranium	pCi/L	20
Beta/photon emitters	millirem/yr	4
Strontium-90	pCi/L	8

Parameter <sup>1,2</sup>	Units	Running 4-Week Average
Tritium	pCi/L	20,000

- <sup>1</sup> Parameters with primary MCLs established in title 22, section 64442 and 64443, Tables 64442 and 64443.
- <sup>2</sup> Compliance with the running 4-week average will be determined based on the average of all samples collected during the 4-week period. The Discharger will be deemed in compliance with effluent limitation(s) during any 4-week period when samples are neither required nor collected.

## V. NOTIFICATION AND RESPONSE LEVELS

- A. Notification Levels (NLs) are health-based advisory levels established by DDW for constituents in drinking water without MCLs. The Discharger must monitor the following constituents with NLs at Monitoring Location REC-001 as described in Table E-1 of the MRP. The Santa Ana Water Board does not use NLs for compliance determination. If DDW elevates an NL to an MCL through a formal regulatory process, the Santa Ana Water Board will use that MCL for compliance determination. Any exceedance of NLs must be reported to DDW within 72 hours.
- B. Table 10 lists the pollutants with NLs and their corresponding Response Levels (RLs) at the time of adoption of this Order. The Discharger must maintain an updated list of pollutants with notification levels and monitor these pollutants as DDW issues NL and RLs for additional pollutants pursuant to Health and Safety Code section 116455.

**Table 10 Notification Levels (NL) and Response Levels (RL)**

Parameter	Units	NL	RL
Boron	mg/L	1	10
n-Butylbenzene	"	0.26	2.6
sec-Butylbenzene	"	0.26	2.6
tert-Butylbenzene	"	0.26	2.6
Carbon Disulfide	"	0.16	1.6
Chlorate	"	0.8	8
2-Chlorotoluene	"	0.14	1.4
4-Chlorotoluene	"	0.14	1.4
Diazinon	"	0.0012	0.012
Dichlorodifluoromethane (Freon 12)	"	1	10

Parameter	Units	NL	RL
1,4-Dioxane	"	0.001	0.035
Ethylene Glycol	"	14	140
Formaldehyde	"	0.1	1
HMX (Octogen)	"	0.35	3.5
Isopropylbenzene	"	0.77	7.7
Manganese	"	0.5	5
Methyl Isobutyl Ketone	"	0.12	1.2
Naphthalene	"	0.017	0.17
N-Nitrosodimethylamine (NDEA)	"	0.00001	0.0001
N-Nitrosodimethylamine (NDMA)	"	0.00001	0.0003
N-Nitrosodi-n-propylamine (NDPA)	"	0.00001	0.0005
Perfluorobutanesulfonic acid (PFBS)	"	0.0005	0.005
Perfluorohexanesulfonic acid (PFHxS)	"	0.000003	0.00002
Perfluorooctanesulfonic acid (PFOS)	"	0.0000065	0.00004
Perfluorooctanoic acid (PFOA)	"	0.0000051	0.00001
Propachlor	"	0.09	0.9
n-Propylbenzene	"	0.26	2.6
1,3,5-Trinitroperhydro-1,3,5-triazine (RDX)	"	0.0003	0.03
Tertiary Butyl Alcohol (TBA)	"	0.012	1.2
1,2,4-Trimethylbenzene	"	0.33	3.3
1,3,5-Trimethylbenzene	"	0.33	3.3
2,4,6-Trinitrotoluene (TNT)	"	0.001	1
Vanadium	"	0.05	0.5

## VI. WATER RECYCLING REQUIREMENTS

- A. The Discharger must comply with the site-specific water recycling requirements (WRRs) contained in Attachment D, which are based on information from the Discharger's Engineering Report and recommendations in DDW's letter entitled *Division of Drinking Water's Conditional Acceptance of the Title 22 Engineering Report for the East Valley Water District – Sterling Natural Resource Center Groundwater Replenishment Project (3690026-701)*, dated August 1, 2023, as

revised by DDW's letter issued on October 13, 2023 to correct conditions and responsibilities regarding well-control zones.

- B. Attachment D is incorporated by reference into this Order.

## **VII. STANDARD PROVISIONS**

- A. The Discharger must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the Water Code and is grounds for (a) enforcement action; (b) termination and reissuance or modification of this Order; or (c) denial of an application for new or revised WDRs and Master Recycling Permit.
- B. The Discharger must allow the Santa Ana Water Board or an authorized representative, upon the presentation of credentials and such other documents as may be required by law, to:
1. Enter upon the Discharger's premises where the regulated Facility or activity is located, conducted, or where the Discharger keeps the required records under the conditions of this Order.
  2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order.
  3. Inspect, at reasonable times, the Facility, equipment (including monitoring and control equipment), practices, or operations that are regulated or required under this Order.
  4. Sample or monitor, at reasonable times, for the purpose of assuring compliance with this Order or as otherwise authorized by the Water Code, any substances or parameters at any location.
- C. The Discharger must report any noncompliance that may endanger human health, safety, or the environment. Pursuant to Health and Safety Code section 5411.5, any sewage overflow or spill must be immediately reported to the California Office of Emergency Services (OES) and the Environmental Health Division of the San Bernardino County Department of Public Health (SBCDPH). In addition, the Discharger shall verbally notify the Santa Ana Water Board within 24 hours from the time the Discharger becomes aware of the incident and submit a written report on the incident within 5 business days following the initial notification to the Santa Ana Water Board. The written report must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Santa Ana



Water Board may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

- D. The Discharger must report the following occurrence(s) to the Santa Ana Water Board and DDW within 24 hours:
1. Any intentional or unintentional bypass of any portion of the Facility,
  2. Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge, or any other circumstances,
  3. Any treatment plant upset resulting in an exceedance of the discharge specifications and effluent limitations of this Order,
  4. Failure of the disinfection system, and/or
  5. An exceedance of any primary MCLs.
- E. If the Discharger, without regard to intent or negligence, causes or permits an unauthorized discharge of 50,000 gallons or more of treated recycled water, or 1,000 gallons or more of recycled water that is treated at a level less than disinfected tertiary recycled water, the Discharger must immediately notify the Santa Ana Water Board in accordance with reporting requirements in Standard Provision VII.C. Consistent with Water Code section 13529.2, the Discharger must notify the Santa Ana Water Board as soon as (1) the Discharger has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures.
- F. Upon reduction, loss, or failure of the Facility the Discharger must, to the extent necessary to maintain compliance with this Order, control production and/or control all discharges until the Facility is restored or until an alternative method of treatment is provided. This provision applies, for example, when the primary source of power to the Facility has failed or is reduced and backup power sources are insufficient.
- G. Any person who, without regard to intent or negligence, causes or permits any hazardous substance to be discharged in or on any waters of the State, must immediately notify SBCDPH and OES of the discharge. The Discharger must notify SBCDPH and OES as soon as (a) the Discharger has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, in accordance with Health and Safety Code section 5411.5, and the spill reporting provision of the State toxic disaster contingency plan adopted Government Code, title 2, division 1, chapter 7, article 3.7 (commencing with section 8574.17). This provision does not require reporting of any discharge that is less than a reportable quantity as provided for under the Water Code section 13271, subdivisions (f) and (g) and California Code of Regulations, title 23, sections

2250 to 2251, unless the Discharger is in violation of a prohibition in the Basin Plan.

- H. Except for a discharge which is in compliance with this Order, any person who, without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where the oil or petroleum product is or probably will be discharged in or on any waters of the State must immediately notify OES of the discharge. The Discharger must notify OES as soon as (a) the Discharger has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Government Code, title 2, division 1, chapter, article 3.7 (commencing with section 8574.1). This requirement does not require reporting of any discharge that is less than 42 gallons unless the discharge is also required to be reported pursuant to Clean Water Act (CWA) section 311, or the discharge is in violation of a Basin Plan prohibition.
- I. The Discharger must maintain a copy of this Order at the Facility and must make the copy always available to operating personnel.
- J. This Order may be modified, rescinded and reissued, or terminated at any time for cause, including, but not limited to:
  - 1. The violation of any terms or conditions of this Order,
  - 2. The adoption of new regulations by the State Water Board or Santa Ana Water Board, including revisions to the Basin Plan,
  - 3. The discovery of the Discharger's misrepresentation or failure to disclose fully all relevant facts relating to the Order,
  - 4. A change in the character, location, or volume of discharge, and/or
  - 5. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge (such as the dissolution of the "Coalition" described in section IV.C. of Attachment F of this Order). The Discharger must provide written notification of the change in action to the Santa Ana Water Board, DDW, and SBCDPH.
- K. The filing of a request by the Discharger for the modification or rescission of this Order, or notification by the Discharger of planned changes or anticipated noncompliance, does not stay any condition of this Order.
- L. At least 120 days prior to any proposed changes to the Facility, the Discharger must notify DDW and submit a new or amended ROWD to the Santa Ana Water Board for review and response. The ROWD must be stamped and/or signed as

specified in section VII. Standard Provision O of this Order. The following are examples of changes that require submittal of a new or amended ROWD:

1. Significant change in the treatment or discharge method (e.g., change in the method of treatment which would significantly alter the nature of the waste).
  2. Change in the discharge area from that described in the findings of this Order.
  3. Increase in discharge flowrate beyond that specified in this Order.
  4. Addition or reduction of project monitoring, monitoring wells, and surface spreading basins not described in this Order. The Discharger is required to submit a new or updated boundary representing a zone of controlled drinking water well construction with the new or amended ROWD.
  5. Other circumstances that result in a material change in character, amount, or location of the waste discharge.
  6. Any planned change or activity in the Facility that may result in noncompliance with this Order.
- M. This Order is not transferable to any person except after notice to the Santa Ana Water Board. The notice must be in writing and received by the Santa Ana Water Board at least 120 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the existing and the new discharger. This agreement must include an acknowledgement that the existing Discharger is liable for violations occurring before the transfer date and that the new discharger is liable from the transfer date and thereafter. The Santa Ana Water Board may require modification or revocation and reissuance of this Order to change the name of the discharger and incorporate other requirements as may be necessary.
- N. Where the Discharger becomes aware that it failed to submit any relevant facts in an ROWD or submitted incorrect information in an ROWD or in any report to the Santa Ana Water Board or DDW, the Discharger must promptly submit such facts or information.
- O. The Discharger must sign and certify all applications, reports, or information submitted to the Santa Ana Water Board as follows:
1. An ROWD must be signed as follows:
    - a) For a municipality, State, federal or other public agency, by either a public executive officer or ranking elected official.

- b) Supporting documents must be signed and stamped by a California-licensed professional if the documents involve the practice of engineering, land surveying, geology, or geophysics.
2. All other reports required by this Order and other information required by the Santa Ana Water Board must be signed by a person designated in section VII. Standard Provision O.1 of this Order or a duly authorized representative of that person. An individual is a duly authorized representative only if all the following are true:
    - a) The authorization is made in writing by a person described in section VII. Standard Provision O.1.a of this Order.
    - b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity.
    - c) The written authorization is submitted to the Santa Ana Water Board.
    - d) Any document that involves the practice of engineering, land surveying, geology, or geophysics must be signed and stamped by a professional with an appropriate California license.
  3. Any person signing a document under this section must make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment."

- P. The Discharger must comply with the MRP (Attachment E) and any future revisions specified by the Santa Ana Water Board. Monitoring results must be reported at the frequency specified in MRP.
- Q. The Discharger must provide to the Santa Ana Water Board, within a reasonable time, any information which the Santa Ana Water Board may request to determine whether cause exists for modifying, rescinding and reissuing, or terminating this Order. The Discharger must also furnish to the Santa Ana Water Board, upon request, copies of records required to be kept by this Order.
- R. The Discharger must submit reports required under this Order to the Santa Ana Water Board via the GeoTracker database at <https://geotracker.waterboards.ca.gov/>. The Santa Ana Water Board may also request hard copies and/or electronic copies on a compact disc (CD) or universal serial bus (USB) drive or other appropriate media, including electronic mail (email). Report submittals must include a signed cover/transmittal letter that

includes the Facility name and Facility contact information, unless directed otherwise by the Executive Officer. Sections VI, VII, and VIII of the MRP (Attachment E) contain additional information regarding report submittal requirements.

## VIII. SPECIAL PROVISIONS

- A. **Asset Management Program (AMP).** The Discharger shall develop an AMP to cover the Facility. The Discharger shall:
1. Develop and utilize AMP within eighteen months of the effective date of this Order. This program shall include a detailed inventory of critical assets; condition rating and/or likelihood of failure of said assets; rehabilitation and replacement planning, capacity assurance planning, and maintenance strategy to ensure that the Discharger's system meets a desired level of service and plan for future needs and requirements; and funding sources to support the planned asset maintenance, rehabilitation, and replacement activities. Critical assets may include, but are not limited to sewer lines, manholes, outfalls, pump stations, force mains, and wastewater treatment plant assets.
  2. Develop and submit to the Santa Ana Water Board an AMP within eighteen months of the effective date of this Order. The AMP shall be re-evaluated and updated every five years. The AMP shall include the following components: A Rehabilitation and Replacement Plan identifying and prioritizing upcoming rehabilitation and replacement projects for critical assets and outlining a proposed schedule for completion of each project; a Maintenance Plan identifying major maintenance activities, frequency performed for critical assets, and estimates of ongoing and projected cost of maintenance activities; and Sanitary Sewer System Map incorporating assets from the asset management inventory. Finally, the AMP shall include estimated costs for the Rehabilitation and Replacement Plan and the Maintenance Plan. Expenses may include operational, administrative, interest, or capital expenses. The cost estimate shall include a determination of whether the planned expenditures are capital or operational and the source of funds: users or connection fees, grant, bonds, or reserves.
- B. **Pretreatment Program.** The Discharger has developed a pretreatment program that was submitted to the Santa Ana Water Board and is approved as part of this Order. This Order requires implementation of the approved pretreatment program and compliance with the following requirements:
1. Any change to the pretreatment program shall be reported to the Santa Ana Water Board in writing and major changes shall not become effective until

approved by the Executive Officer in accordance with procedures established in 40 CFR section 403.18.

2. The Discharger shall update as necessary the appropriate contractual agreements with all member agencies and sewerage agencies (governmental agencies) discharging wastewater into the Facility. The contractual agreement shall give the Discharger the authority to implement and enforce the approved pretreatment program within the sewer service areas of the wastewater treatment facility. The Discharger shall ensure that any other steps necessary to provide this implementation and enforcement authority (e.g., adoption of ordinances, etc.) are taken by all governmental agencies. If a governmental agency has an approved pretreatment program for any portion of the service area of the treatment facility, the Discharger's pretreatment program shall contain provisions ensuring that the governmental agency's pretreatment program is implemented. If any governmental agency discharging to the Facility fails to effectively implement its individual approved pretreatment program, the Discharger shall implement and enforce its approved pretreatment program within that governmental agency's service area. The Discharger shall ensure that the pretreatment programs for all governmental agencies discharging to the Facility are implemented and enforced.
3. The Discharger shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 CFR part 403, including any subsequent regulatory revisions to part 403. Where 40 CFR part 403 or subsequent revisions place mandatory actions upon the Discharger as a Control Authority but does not specify a timetable for completion of the actions, the Discharger shall submit for approval to the Santa Ana Water Board's Executive Officer, a schedule for implementation of the required actions and shall implement the approved schedule. The schedule for implementation shall be submitted within six months from the date that such mandatory actions are established.
4. The Discharger shall implement its approved pretreatment program and the program shall be an enforceable condition of this Order. For violations of pretreatment requirements, the Discharger shall be subject to enforcement actions, penalties, fines, and other remedies by the United States Environmental Protection Agency (USEPA), or other appropriate parties, as provided in the CWA. The USEPA or the Santa Ana Water Board may also initiate enforcement action against an industrial user (IU) for noncompliance with applicable standards and requirements as provided in the CWA.
5. The Discharger shall enforce the pretreatment standards promulgated under Clean Water Act sections 307(b), 307(c), 307(d) and 402(b) with timely, appropriate, and effective enforcement actions. The Discharger shall require all nondomestic users subject to federal categorical standards to achieve

compliance no later than the date specified in those requirements or, in the case of a new nondomestic user, upon commencement of the discharge.

6. The Discharger shall perform the pretreatment functions as required in 40 CFR part 403 including, but not limited to:
  - a) Enforce the pretreatment requirements under 40 CFR sections 403.5 and 403.6;
  - b) Implement the necessary legal authorities as provided in 40 CFR section 403.8(f)(1);
  - c) Implement the programmatic functions as provided in 40 CFR section 403.8(f)(2);
  - d) Publish a list of significant noncompliance as required by 40 CFR section 403.8(f)(2)(vii); and
  - e) Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR section 403.8(f)(3).
7. The Discharger shall implement, as more completely set forth in 40 CFR section 403.5, the necessary legal authorities, programs, and controls to ensure that the following incompatible wastes are not introduced to the treatment system, where incompatible wastes are:
  - a) Wastes which create a fire or explosion hazard in the treatment works;
  - b) Wastes which will cause corrosive structural damage to treatment works, but, in no case, wastes with a pH lower than 5.0 unless the works are designed to accommodate such wastes;
  - c) Wastes at a flow rate and/or pollutant discharge rate which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency; and
  - d) Solid or viscous wastes in amount that would cause obstruction to the flow in sewers or otherwise interfere with the proper operation of the treatment works.
  - e) Heat in amounts that inhibit or disrupt biological activity in the treatment works, or that raise influent temperatures above 40 degrees Celsius (104 degrees Fahrenheit), unless the Santa Ana Water Board approves alternate temperature limits;
  - f) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
  - g) Pollutants which result in the presence of toxic gases, vapors, or fumes within the treatment works in a quantity that may cause acute worker health and safety problems;
  - h) Any trucked or hauled pollutant, except at points pre-designated by the Discharger.

8. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under CWA section 307 or amendments thereto for any discharge to the municipal system.
9. The Discharger shall comply with effluent standards or prohibitions established under CWA section 307(a) for toxic pollutants within the time provided in the regulations that establish these standards or prohibition, even if this Order has not yet been modified to incorporate the requirement.
10. The Discharger shall require each user not in compliance with any pretreatment standard to submit periodic notice (over intervals not to exceed nine months) of progress toward compliance with applicable toxic and pretreatment standards developed pursuant to the CWA or amendments thereto. In addition, the user shall submit these periodic notices within 14 days of each interim date in the compliance schedule (40 CFR § 403.12(c)). The Discharger shall forward a copy of such notice to the Santa Ana Water Board and to the USEPA Regional Administrator.
11. The Discharger shall submit annually a report describing its pretreatment activities over the previous year. Report requirements are described in section X of Attachment E (Cal. Code Regs., tit. 23, § 2233).

- C. **Climate Change Action Plan.** The Discharger must develop a Climate Change Action Plan (CCAP) and must include the discharges, all components of the Facility, spreading, and monitoring wells regulated under this Order. The CCAP must indicate how the Discharger plans to protect the Facility against regional impacts of changing climate conditions (e.g., rising sea levels, flooding, higher storm surges, and changing hydrography, including more intense atmospheric rivers). The Discharger must submit the CCAP within three years of the effective date of this Order.
- D. All waste treatment, containment, and disposal facilities must be protected against a 100-year storm event as defined by the San Bernardino County Department of Public Works (SBCPW).
- E. All waste treatment, containment, and disposal facilities must be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24-hour storm event as defined by the SBCPW.
- F. If the Santa Ana Water Board or DDW directs the Discharger to suspend the discharge (surface application) of tertiary treated and disinfected recycled water due to noncompliance with this Order, the discharge must not resume until the Discharger has obtained approval from the Santa Ana Water Board and DDW.
- G. **Mitigation to Prevent TDS Cumulative Impacts to the Assimilative Capacity of the Bunker Hill-B GMZ.** To prevent cumulative impacts to the TDS assimilative capacity of the Bunker Hill-B GMZ beyond the 20% assimilative capacity allocated, the Discharger, in collaboration with its Coalition partners the



City of San Bernardino Municipal Water Department, San Bernardino Valley, and the City of Redlands (referred to as "Coalition" and further described in section IV.C. of Attachment F of this Order) shall implement the following TDS mitigation commitments:

1. By January 31, 2024, the Discharger shall submit to the Santa Ana Water Board a copy of the scope of work and other available details regarding the Bunker Hill-B Regional Recycled Water Salinity Management Feasibility Study (Feasibility Study) undertaken by the Coalition partners.
2. By June 30, 2025, the Discharger shall submit to the Santa Ana Water Board a report detailing the findings of the Feasibility Study.
3. By December 31, 2025, the Discharger shall submit to the Santa Ana Water Board a Salt Mitigation Implementation Plan (Plan) that provides a detailed plan and schedule for salinity management in the Bunker Hill-B GMZ based on the Feasibility Study. The Plan shall define the selected mitigation strategy(ies), operations, roles and responsibilities, cost share, and schedule.
4. By December 31, 2027, the Discharger shall initiate design of the identified salinity management strategy(ies) as described in the Plan.
5. By December 31, 2031, the Discharger shall initiate construction of the identified salinity management strategy(ies) as described in the Plan.
6. The Discharger shall include progress reports regarding the Coalition efforts to implement the TDS mitigation commitments in the quarterly self-monitoring reports submitted to the Santa Ana Water Board.
7. The Discharge shall notify the Santa Ana Water Board within 24 hours of becoming aware that it will not be able to implement the TDS mitigation commitments listed above.

If the Santa Ana Water Board finds that the Discharger has not satisfied the TDS mitigation commitments listed above, then the Discharger shall implement a TDS mitigation program approved by the Santa Ana Water Board to address the discharges of recycled water into the Bunker Hill-B GMZ in excess of the TDS effluent limitation included in footnote 3 of Table 4 of section IV.C. of this Order. This program must offset for the TDS cumulative impacts that have accrued in excess of the TDS water quality objective in the Basin Plan for the Bunker Hill-B GMZ of 330 mg/L. A proposed TDS mitigation plan and schedule shall be submitted within 60 days of notification by the Santa Ana Water Board's Executive Officer of the need to do so. The Discharger shall implement the plan and schedule upon approval by the Santa Ana Water Board's Executive Officer.

## **IX. NOTICES**

- A. If any person uses, transports, or stores recycled water in a manner which creates, or threatens to create conditions of pollution, contamination, or nuisance, as defined in the Water Code section 13050, the Santa Ana Water Board may initiate enforcement action against the Discharger, which may result in the termination of the recycled water discharge.
- B. This Order does not convey property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Discharger from liability under federal, State or local laws, nor create a vested right for the Discharger to continue the waste discharge.
- C. These requirements have not been reviewed by the United States Environmental Protection Agency (USEPA) and are not issued pursuant to CWA section 402.
- D. Any person aggrieved by this action of the Santa Ana Water Board may petition the State Water Board to review the action in accordance with the Water Code section 13320 and California Code of Regulations, title 23, section 2050. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except if this date falls on a Saturday, Sunday, or State holiday, then the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the internet at [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order must not be affected.

## ATTACHMENT A – DEFINITIONS

### Part 1 – ABBREVIATIONS and ACRONYMS

<b>Abbreviation</b>	<b>Definition</b>
40 CFR	Title 40, Code of Federal Regulations
ACU	Apparent color units
AGR	Agricultural Supply beneficial use
AhR	Aryl hydrocarbon receptor
AMP	Asset Management Program
AWWA	American Water Works Association
Basin Plan	Water Quality Control Plan for the Santa Ana River Basin
BEQ	Bioanalytical Equivalent Concentrations
BOD <sub>5</sub>	Biochemical Oxygen Demand (5-day @ 20° C)
CCAP	Climate Change Action Plan
Cal. Code Regs.	California Code of Regulations (abbreviation in parentheses and footnotes)
Coalition	Bunker Hill Regional Recycled Water Coalition formed by East Valley Water District, City of Redlands, City of San Bernadino Municipal Water Department and San Bernadino Valley Municipal Water District to manage salt loadings into the Bunker Hill-B GMZ
CEC	Constituents of Emerging Concern
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CT	Contact time
CWA	Clean Water Act
Water Code	California Water Code (abbreviation in sentences)
Wat. Code	California Water Code (abbreviation in parentheses and footnotes)
DDT	Dichlorodiphenyltrichloroethane
DDW	State Water Board, Division of Drinking Water
Dioxin	2,3,7,8-tetracholordibenzodioxin
Discharger	East Valley Water District (EVWD)
EC	Electrical conductivity

<b>Abbreviation</b>	<b>Definition</b>
EED	Electrical energy dose
EIR	Environmental Impact Report for the SNRC and Addendum No. 1 and Addendum No. 2
ELAP	Environmental Laboratory Accreditation Program
ER-α	Estrogen receptor alpha
EVWD	East Valley Water District
Facility	Sterling Natural Resource Center (SNRC) and Recycled Water Spreading Basins and appurtenances
FCD	SBCPW Flood Control
FCRCT	Free chlorine residual contact time
GMZ	Groundwater Management Zone
GRRP	Groundwater Replenishment Reuse Project
HA	Hydrologic Area
HAS	Hydrologic Subarea
IND	Industrial Service Supply beneficial use
Lindane	Gamma BHC
LRV	Log reduction value
MBAS	Methylene blue-activated substances
MTBE	Methyl-tert-butyl ether
MCL	Maximum contaminant level
MEC	Measured environmental concentrations
MF	Membrane filtration (microfiltration or ultrafiltration)
mg/L	Milligrams per liter
MGD	Million gallons per day
MIT	Membrane integrity testing (aka pressure decay test [PDT])
mJ/cm <sup>2</sup>	Millijoules per centimeter squared
mmho/cm	Millimho per centimeter
MRP	Monitoring and Reporting Program
MTL	Monitoring trigger levels
MUN	Municipal and Domestic Supply beneficial use
NDEA	N-Nitrosodiethylamine

<b>Abbreviation</b>	<b>Definition</b>
NDMA	N-Nitrosodimethylamine
NDPA	N-Nitrosodi-n-propylamine
NL	Notification level
NMOR	N-Nitrosomorpholine
ng/L	Nanograms per liter
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
OES	California Office of Emergency Services
OOP	Operation Optimization Plan
Order	Order No. R8-2023-0009
PCBs	Polychlorinated biphenyls
pCi/L	Picocuries per liter
PDT	Pressure decay test
PFBS	Perfluorobutanesulfonic acid
PFHxS	Perfluorohexanesulfonic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanesulfonic acid
POTW	Publicly Owned Treatment Works
PS Codes	Primary station codes
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
Recycled Water Policy	State Water Resources Control Board Water Quality Control Policy for Recycled Water
RL	Response Level
ROWD	Report of Waste Discharge
RMA	Running Monthly Average
Santa Ana Water Board	California Regional Water Quality Control Board, Santa Ana Region
SBCDPH	San Bernardino County Department of Public Health
SBCEHS	San Bernardino County Environmental Health Services

<b>Abbreviation</b>	<b>Definition</b>
SBCPW	San Bernardino County Public Works
SBMWD	City of San Bernardino Municipal Water Department
SIC	Standard Industrial Classification
Silvex	2-(2,4,5-trichlorophenoxy) propionic acid
SMR	Self-Monitoring Report
SIU	Significant Industrial User
SNRC	Sterling Natural Resource Center
SOC	Synthetic organic chemicals
SPCP	Spill preventive and contingency plan
SRT	Solids retention time
State Water Board	State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
TDS	Total Dissolved Solids
Title 22	California Code of Regulations Title 22
Title 23	California Code of Regulations Title 23
TOC	Total organic carbon
TON	Threshold odor number
TSS	Total Suspended Solids
TTHMS	Total trihalomethanes
USEPA	United States Environmental Protection Agency
UVI	Ultraviolet intensity
UVT	Ultraviolet transmittance
San Bernardino Valley	San Bernardino Valley Municipal Water District
VOC	Volatile organic compounds
WDRs	Waste Discharge Requirements
WQOs	Water Quality Objectives
WRRs	Water Recycling Requirements
µm	Microns or micrometers
µg/L	Micrograms per liter

## **Part 2 – Glossary of Common Terms**

### **Advanced Treated Recycled Water**

Advanced treated recycled water is the final effluent produced from a GRRP which is discharged to a groundwater basin for replenishment purposes and is regulated pursuant to the California Code of Regulations, title 22.

### **Agricultural Supply**

Agricultural Supply is the beneficial use of water resources as defined by the Basin Plan that includes uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

### **Average**

An average is the sum of measured values divided by the number of measured values.

### **Average Annual Effluent Limitation**

The average annual effluent limitation is the highest allowable average of daily discharges over a calendar year (January-December), calculated as the sum of all daily discharges measured during a calendar year divided by the number of daily discharges during that year.

### **Bioassay**

Bioassay is a test used to evaluate the relative potency of a chemical or a mixture of chemicals by comparing its effect on a living organism with the effect of a standard preparation on the same type of organism.

### **Biochemical Oxygen Demand**

BOD is a measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified period (usually 5 days, i.e. BOD5) in a wastewater sample; it is used as a measurement of the readily decomposable organic content of a wastewater.

### **California Code of Regulations**

The California Code of Regulations is the official compilation and publication of the regulations adopted, amended, or repealed by state agencies pursuant to the

Administrative Procedure Act. Properly adopted regulations that have been filed with the Secretary of State have the force of law.

### **Chlordane**

Chlordane is the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

### **Clean Water Act**

The CWA is legislation passed by the U.S. Congress to control water pollution, formerly referred to as the Federal Water Pollution Control Act of 1972 or Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500), 33 U.S.C. 1251 et. seq., as amended by: Public Law 96-483; Public Law 97-117; Public Laws 95-217, 97-117, 97-440, and 100-04.

### **Code of Federal Regulations**

CFR is the codification (arrangement of) the general and permanent rules published in the Federal Register by the executive departments and agencies of the federal government. The CFR is divided into 50 titles that represent broad areas subject to federal regulations. CFR, Title 40: Protection of Environment is the section of the CFR (40 CFR) that deals with USEPA's mission of protecting human health and the environment.

### **Composite Sample**

A 24-hour composite sample means an aggregate sample derived from no fewer than eight discrete samples collected at equal time intervals or collected proportional to the flow rate over the compositing period. The aggregate sample shall reflect the average source water quality covering the composite 24-hour sample period.

### **Daily Maximum Effluent Limitation**

The daily maximum effluent limitation is the highest allowable daily discharge of a pollutant.

### **Dichlorodiphenyltrichloroethane**

DDT is the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.



### **Disadvantaged Community**

For the purpose of this Order, a “disadvantaged community” is defined as a “community in which the median household income is less than 80 percent of the statewide annual median household income level.” (Wat. Code section 13149.2(f)(1)).

### **Grab Sample**

A grab sample is any individual sample collected in less than 15 minutes.

### **Facility**

The Facility is the East Valley Water District's Sterling Natural Resource Center, located at 25376 5th St., San Bernardino, CA 92410, and the Weaver Basins.

### **Indirect Potable Reuse**

Indirect potable reuse for groundwater recharge is defined in the California Water Code, section 13561(c), as “*the planned use of recycled water for replenishment of a groundwater basin or an aquifer that has been designated as a source of drinking water supply for a public water system.*”

### **Industrial Service Supply**

Industrial Service Supply is the beneficial use of water resources as defined by the Basin Plan for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.

### **Injection Well**

An injection well is a subsurface conduit that is used to discharge advanced treated recycled water into the groundwater within a GMZ.

### **Instantaneous Maximum Effluent Limitation**

Instantaneous maximum effluent limitation is the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

### **Instantaneous Minimum Effluent Limitation**

Instantaneous minimum effluent limitation is the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

### **Maximum Contaminant Level**

MCLs are standards set by the United States Environmental Protection Agency (USEPA) for drinking water quality. An MCL is the legal threshold limit on the amount of a substance that is allowed in public water systems under the Safe Drinking Water Act. MCL is for either a single isomer or the sum of the isomers. States may establish their own more stringent MCLs. California MCLs are found in the California Code of Regulations, title 22.

### **Million Gallons Per Day**

MGD is a unit of flow commonly used for wastewater discharges. One MGD is equivalent to 1.547 cubic feet per second.

### **Municipal and Domestic Supply**

Municipal and Domestic Supply is the beneficial use of water resources as defined by the Basin Plan that includes uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.

### **Off-Specification Water**

Off-specification water is effluent from the Facility that does not meet effluent limitations specified in this Order or treatment criteria specified in title 22, chapter 3 Water Recycling Criteria.

### **Polychlorinated biphenyls**

PCBs are the sum of polychlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

### **Percent Reduction**

Percent reduction is a percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the average values of the raw wastewater influent pollutant concentrations to the Facility and the average values of the effluent pollutant concentrations for a given time period.

### **Publicly Owned Treatment Works**

A POTW is a treatment works, as defined by section 212 of the CWA, which is owned by the State or a municipality. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. A POTW also includes the sewers, pipes, and other conveyances if they convey wastewater to a POTW treatment plant (40 CFR section 403.3).

### **Purified Recycled Water**

Same as advanced treated recycled water or full advanced treated (FAT) recycled water, which is the final effluent produced by a GRRP and discharged to recharge a GMZ.

### **Recycled Municipal Wastewater**

Recycled municipal wastewater is defined in title 22 section 60301.690 as recycled water that is the effluent from the treatment of wastewater of municipal origin.

### **Sludge**

Sludge is any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect.

### **Source of Drinking Water**

Source of drinking water is any water, surface or groundwater, designated as municipal and domestic supply (MUN) in the Basin Plan.

### **Total Nitrogen**

Total Nitrogen is the sum of concentrations of ammonia, nitrite, nitrate, and organic nitrogen containing compounds expressed as nitrogen.

### **Total Trihalomethanes**

Total trihalomethanes is the sum of bromoform, chloroform, bromodichloromethane, and dibromochloromethane.

### **Tribal Community**

For the purpose of this Order, a "tribal community" is defined as a "community within a federally recognized California Native American tribe or non-federally recognized Native American tribe on the contact list maintained by the Native American Heritage Commission for the purposes of Chapter 905 of the Statutes of 2004." (Wat. Code section 13149.2(f)(2))

### **Waste**

Waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

### **Water Quality Objectives**

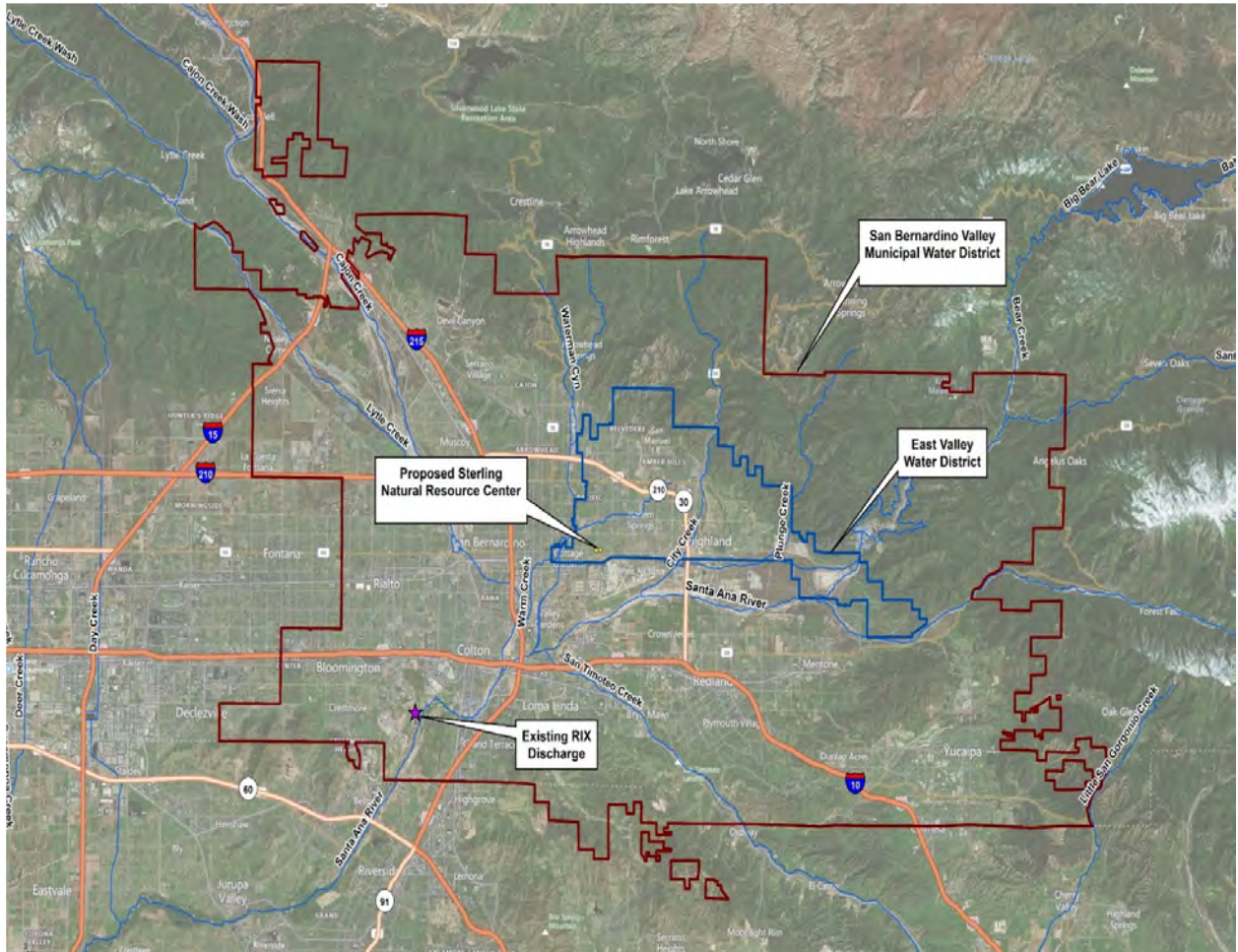
WQOs are the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

### **Water Recycling**

Water recycling is the treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

**ATTACHMENT B – MAPS AND FIGURES**

**FIGURE B-1 – SNRC LOCATION MAP**

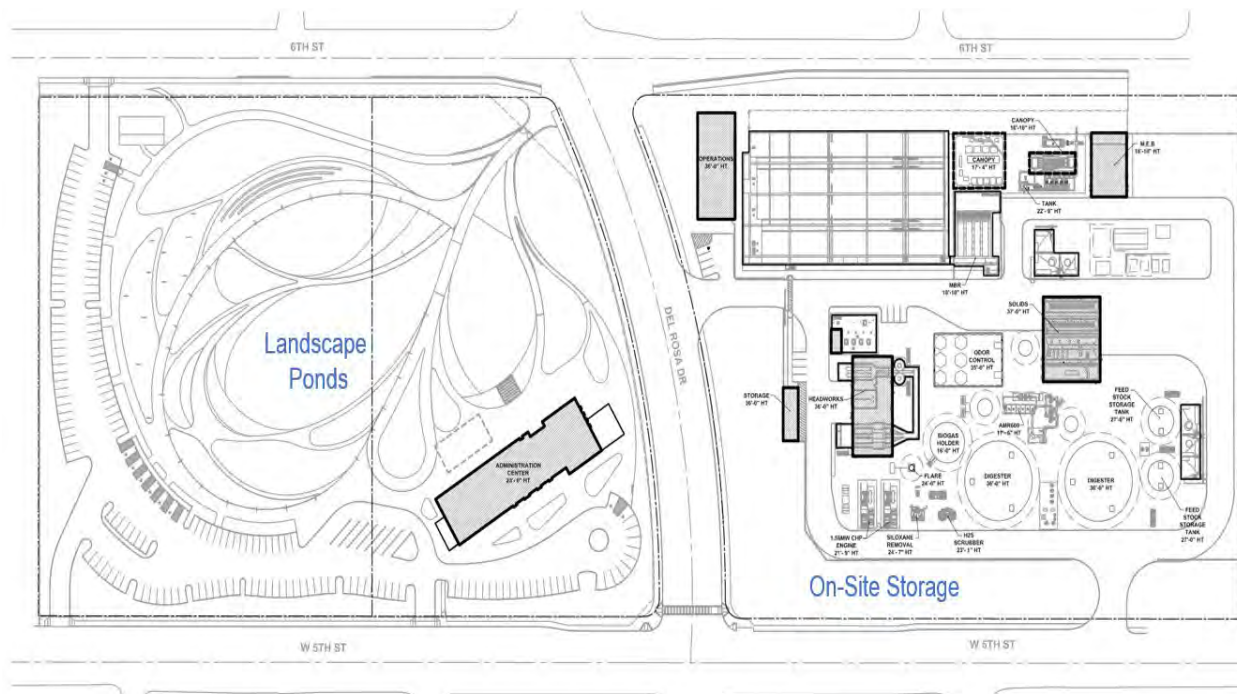




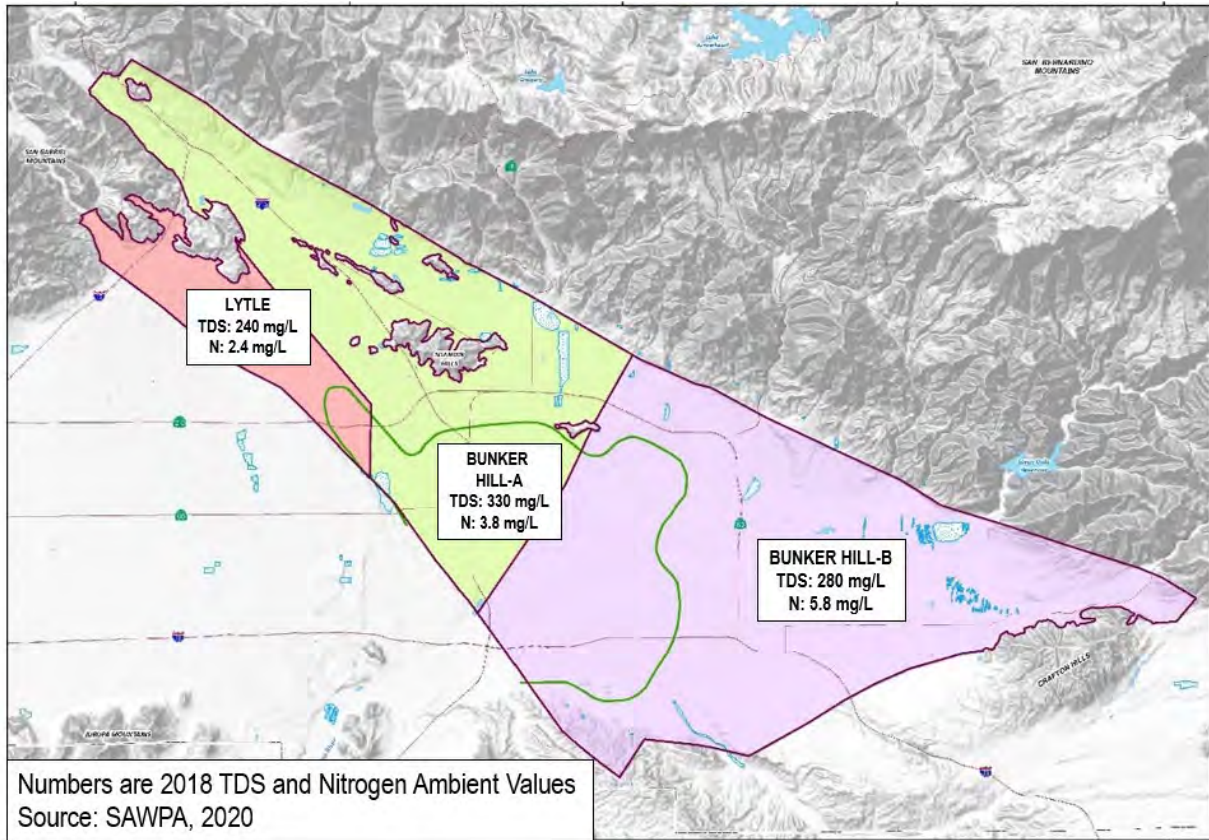
**FIGURE B-2 – FACILITY COMPONENTS MAP**



**FIGURE B-3 – CONCEPTUAL LAYOUT OF SNRC**

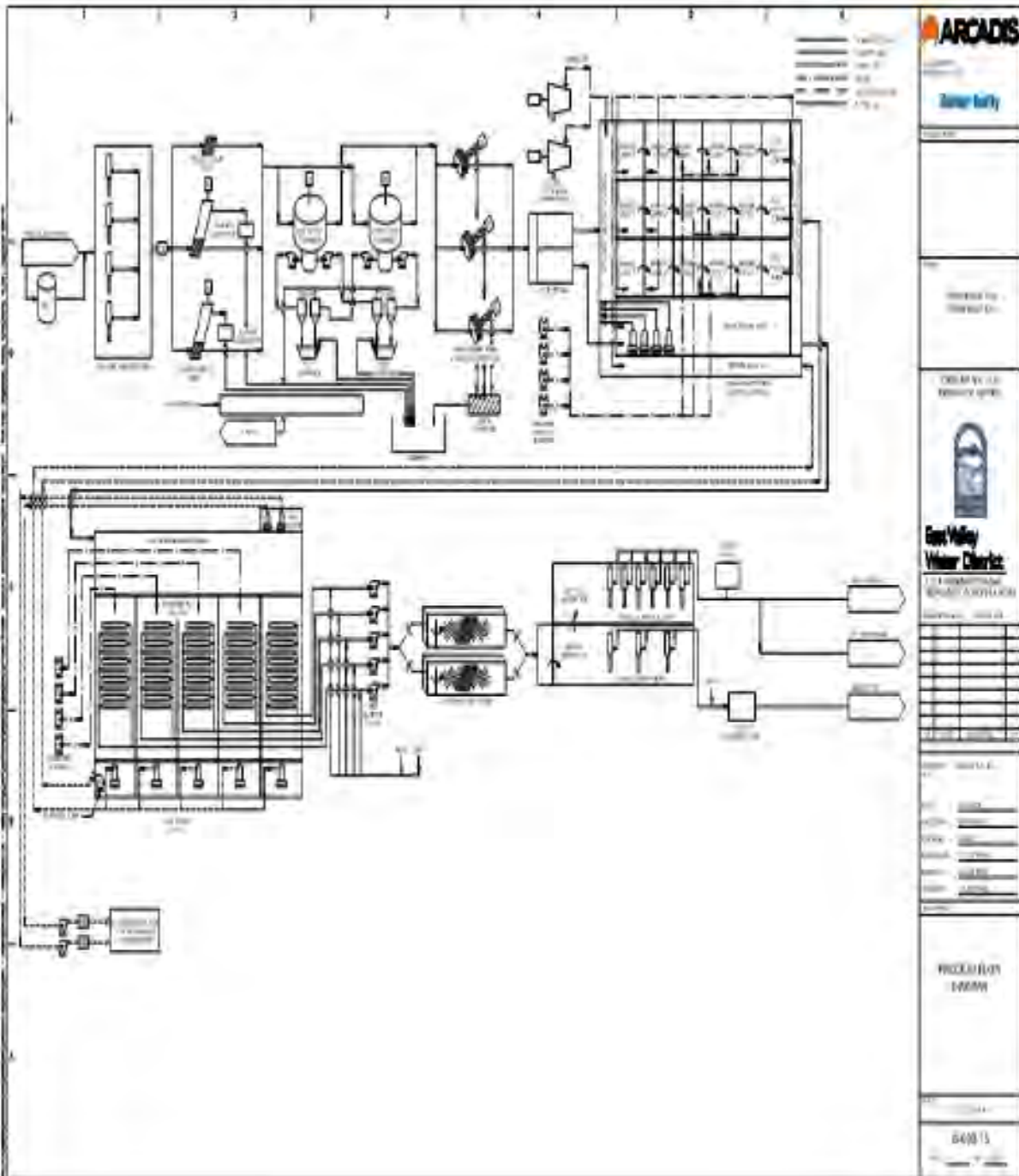


**FIGURE B-4 – BUNKER HILL SUBBASINS AND AMBIENT TDS AND NITROGEN VALUES**





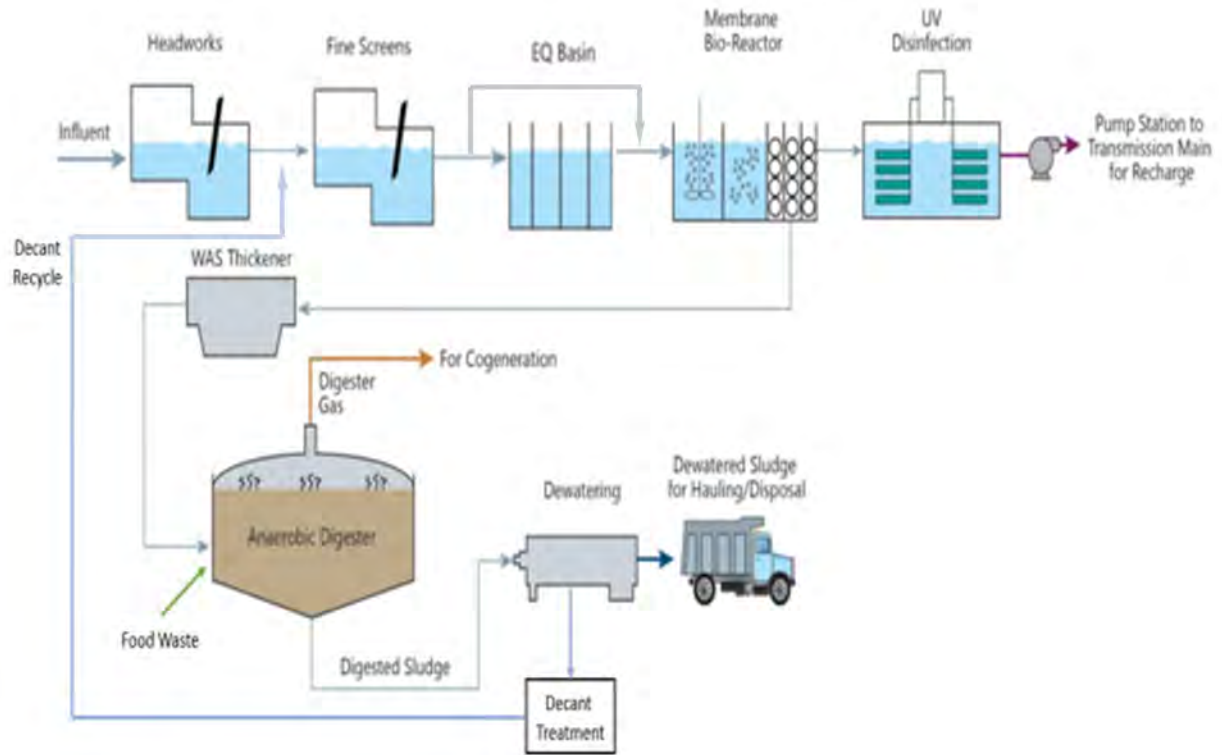
**FIGURE B-5 – SNRC PROCESS FLOW DIAGRAM**





### ATTACHMENT C – FLOW SCHEMATIC

FIGURE C-1 – SNRC FLOW SCHEMATIC



## **ATTACHMENT D – WATER RECYCLING REQUIREMENTS**

In accordance with section VI of Order No. R8-2023-0009, Waste Discharge Requirements and Master Recycling Permit for the East Valley Water District's Sterling Natural Resource Center (Order), East Valley Water District (Discharger) must comply with the following site-specific water recycling requirements (WRRs). The WRRs are based on information from the *Title 22 Engineering Report: Sterling Natural Resource Center, April 2023* (Engineering Report) and recommendations in State Water Resources Control Board (State Water Board) Division of Drinking Water's (DDW's) letter entitled, *Division of Drinking Water's Conditional Acceptance of the Title 22 Engineering Report for the East Valley Water District – Sterling Natural Resource Center Groundwater Replenishment Project (3690026-701)*, dated August 1, 2023 (DDW's Conditional Acceptance Letter) as revised by DDW's letter issued on October 13, 2023, to correct conditions and responsibilities regarding well-control zones.

### **I. GENERAL REQUIREMENTS**

- A. The Discharger must ensure that the operation of the Facility complies with California Code of Regulations, title 22, division 4, chapter 3, article 5.1 – Indirect Potable Reuse: Groundwater Replenishment – Surface Application.
- B. Prior to discharging tertiary treated and disinfected recycled water to the Bunker Hill-B GMZ, or as directed by DDW, the Discharger must:
  1. Demonstrate during an on-site inspection that all treatment processes, alarms, and associated responses were implemented and can achieve their intended function as described in the Engineering Report and the Operations Optimization Plan (OOP). The Discharger must repeat this testing on a regular basis as specified in the OOP or otherwise as requested by DDW. At a minimum, the testing must occur after any expansion or modification of the treatment train (Cal. Code Regs., tit. 22, § 60320.100(g)).
  2. Demonstrate to DDW that the alarms and responses, including automatic shutdown, are functional and in conformance with the Engineering Report, OOP, and DDW's Conditional Acceptance Letter. A full description of the alarms must be included in the OOP, in accordance with title 22, section 60320.122.
  3. Per title 22, section 60320.100(b), the Discharger must obtain the approval of DDW of a plan describing the steps that the Discharger will take to provide an alternate source of drinking water supply to all users of a producing drinking water well, or a DDW-approved treatment mechanism that the Discharger will

provide to all owners of a producing drinking water well, that as a result of the Facility operations, as determined by DDW, violates a California or federal drinking water standard, has been degraded to a degree that is no longer a safe source of drinking water, or receives water that fails to meet title 22, section 60320.108.

4. The Discharger must ensure the implementation of the following regarding zones of controlled drinking water well construction:
  - a) The Discharger must establish a primary zone of controlled drinking water well construction ("primary boundary" or "Well Control Zone"), including private wells, in accordance with title 22, section 60320.100(e)(2).
  - b) The Discharger must establish a secondary boundary representing a zone of potential controlled drinking water well construction ("secondary boundary"), including private wells, in accordance with title 22, section 60320.100(e)(3).
  - c) Regularly as needed, the Discharger must coordinate with local well permitting authorities (e.g., San Bernardino County Environmental Health Services) to administer the primary and secondary boundaries, in accordance with title 22, section 60320.100(e). The Discharger must ensure no well is used to produce drinking water and no new drinking water production wells are constructed within the Well Control Zone.
  - d) The Discharger must ensure that the San Bernardino County Department of Public Health notifies the Discharger of any new well drilling activity (including private wells) in the vicinity of the Facility.
  - e) In accordance with title 22, section 60320.100(e), the Discharger must submit the necessary boundary map(s), location of the Facility's monitoring wells, and location of drinking water wells within a two year underground travel time of the Facility based on groundwater flow direction and velocities expected under the Facility's normal operating conditions (8 MGD or lower) to DDW, the Santa Ana Water Board, and the San Bernardino County Environmental Health Services. The Discharger must provide revised versions of these materials when any conditions change such that the previous map(s) no longer accurately reflect current conditions.
  - f) Conversion or Closure of Existing Wells: The Discharger must ensure that the municipal supply wells EVWD No. 143, 146, 146A, and 147 (all of which are inside the Well Control Zone) will not be used for potable water production, as described in the Engineering Report. For each well, if the Discharger does not plan to convert the well to non-potable use, the well must be destroyed properly per Department of Water Resources (DWR) Bulletins 74-81 and 74-90. When a well is destroyed, the Discharger must submit to DDW a copy of the well destruction permit from the San Bernardino County Department of Public Health and the destruction log from the DWR.

- g) The Discharger must ensure that the irrigation well at the Village Lakes HOA site, located 7998 Village Lakes Road, Highland, CA 92346 (inside the Well Control Zone) will not be used for potable water production.
  - h) Also, the Discharger must ensure that the CEMEX "Well No. 01" that is located at 8731 Orange Street, Highland, CA 92374, and the "Alabama Street" wells, located at 8203 Alabama Street, Redlands, CA 92374, will not be used for potable water production.
- C. The Discharger must ensure that the Facility is designed and operated as detailed in the Engineering Report and the OOP. Per title 22, section 60320.122(b), the Discharger must ensure that all Facility treatment processes shall be operated in a manner providing optimal reduction of all chemicals and contaminants.
- D. Prior to implementing any change to the Facility that would require an update to the Engineering Report, the Discharger must consult with DDW and, if directed by DDW, submit an updated Engineering Report to DDW for review and approval.
- E. If directed by DDW, the Discharger must update the hydrogeological model, zones of controlled drinking water well construction, underground retention time, and response retention times in accordance with title 22, sections 60320.100(e), 60320.108, and 60320.124.
- F. The Discharger must staff the Facility with individuals possessing certificates of appropriate grade as specified by the State Water Board and Santa Ana Water Board. The Discharger must track the expiration dates for all certified operators to ensure certifications are maintained.
- G. If the Discharger has been directed by DDW or the Santa Ana Water Board to suspend the discharge of recycled water (surface application) to the Weaver Basins, the discharge of recycled water must not resume until the Discharger has obtained approval from DDW and the Santa Ana Water Board.
- H. If directed by DDW, the Discharger must optimize stabilization processes to control metal mobilization in groundwater impacted by the Facility; optimization of any Facility operations must be reflected in an updated OOP. If directed by DDW or the Santa Ana Water Board, the Discharger must conduct geochemical analysis for the purpose of controlling metal mobilization in the groundwater.

## **II. WASTEWATER SOURCE CONTROL**

- A. The Discharger must administer their pretreatment program to meet all requirements in title 22, section 60320.106 and in this Order.

## **III. DILUENT WATER AND RECYCLED MUNICIPAL WASTEWATER CONTRIBUTION REQUIREMENTS**

- A. Per title 22, section 60320.116(c), the initial maximum recycled municipal wastewater contribution (RWC) for the Facility is 0.2, as described in the Engineering Report.
- B. The Discharger must describe in the OOP how the Facility will meet the diluent water requirements of title 22, sections 60320.114(a) and (f). The calculation for diluent water must be reviewed and approved by DDW. Also, the Discharger may request credit for diluent water prior to the operations of the Facility per title 22, section 60320.114(e).
- C. The Discharger must propose in the OOP and implement a water quality monitoring program for the diluent water in accordance with title 22, section 60320.114(c), including actions to be taken in the event of noncompliance with a primary Maximum Contaminant Level (MCL), secondary MCL, or exceedance of a Notification Level (NL). The monitoring program must be reviewed and approved by DDW.
- D. To demonstrate ongoing compliance with title 22, sections 60320.114(d) and 60320.116, the Discharger must submit an annual RWC Management Plan to DDW and the Santa Ana Water Board for review. The first submittal of the RWC Management Plan must be submitted to DDW and the Santa Ana Water Board within the first six months of operation of the Facility. In the OOP, the Discharger must describe the purpose and anticipated contents of the RWC Management Plan.

#### **IV. PATHOGENIC MICROORGANISM CONTROL**

- A. The Discharger must design and operate the Facility to produce tertiary treated and disinfected recycled water that achieves at least a 12-log enteric virus reduction, 10-log Giardia cyst reduction, and 10-log Cryptosporidium oocyst reduction in accordance with title 22, section 60320.108(a).
- B. The Discharger must validate each of the treatment processes used to meet the required pathogen reduction for enteric virus, Cryptosporidium oocyst, and Giardia cyst, in accordance with title 22, section 60320.108(c) and as proposed in the Engineering Report and OOP. The Discharger must include in its approved OOP, the necessary monitoring and calculations that validate the performance of each treatment process's ability to achieve its pathogen log<sub>10</sub> reduction value (LRV) as proposed in the Engineering Report and OOP. Flow-weighted averaging cannot be used for the purpose of calculating the pathogen LRV for any treatment process, including between parallel treatment trains of the same process. Pathogen LRV for each pathogen for each of the treatment processes must be calculated and reported in accordance with the following:
  - 1. The MBR treatment process will be credited pathogen LRVs in accordance with recommendations for a Tier 1 strategy outlined in the Water Research Foundation Project 4997 "*Membrane Bioreactor Validation Protocols for*

*Water Reuse.*" To obtain pathogen LRV credit, the Discharger must conduct monitoring and reporting for the MBR as follows:

- a) The MBR will receive a credit of 1 LRV for enteric virus and 2.5 LRV for Giardia cyst and Cryptosporidium oocyst if MBR filter effluent turbidity does not exceed the turbidity specification listed in section VI.A.1 of this Attachment D of the Order.
  - b) To meet the MBR filtrate turbidity requirements, turbidity must be monitored as follows:
    - i. The primary compliance meters for turbidity will be the turbidity meters on each of the individual MBR filter effluent lines. When all individual MBR filter effluent turbidity meters are online, pathogen LRV credit for each online MBR train will be calculated using the respective MBR filter effluent turbidities. LRV credit for the MBR system must be calculated using the minimum calculated pathogen LRV of any online individual MBR train.
    - ii. The secondary compliance meter for turbidity will be the turbidity meter on the combined MBR filter effluent line. When any of the primary MBR filter effluent turbidity meters are offline, the LRV credit for the MBR system must be determined using the turbidity meter on the combined MBR filter effluent line.
  2. The ultraviolet (UV) disinfection treatment system will be credited 3.5 LRVs for enteric virus, Giardia cyst, and Cryptosporidium oocyst for use of a UV disinfection system that meets all of the conditions in the letter issued by DDW, with respect to the Discharger, entitled, "*Division of Drinking Water Acceptance of the Spot-check Bioassay Report for Trojan UVSigna™ UV Disinfection, East Valley Water District, Sterling Natural Resource Center,*" dated September 16, 2022.
- C. The Discharger must conduct a tracer study to validate underground retention time. The tracer study must be conducted prior to the end of the third month following the start of operations of the Facility in accordance with title 22, sections 60320.108(e) and 60320.124(c) and meet the following requirements:
1. The Discharger must submit a groundwater tracer study protocol for review and approval by DDW. The tracer study protocol must be submitted at least 60 days prior to the start of the tracer study in accordance with title 22, section 60320.124.
  2. The Discharger must submit the completed tracer study report to DDW and the Santa Ana Water Board. The Discharger must update the Engineering Report and the OOP based on the results of the tracer study; the update of

- the Engineering Report may coincide with the five-year update required under title 22, section 60320.128(b).
3. Until the validated underground retention time is determined by the completed tracer study and subsequently approved by DDW, the Discharger must use a minimum underground response retention time (RRT) of 7.5 months as described in the Engineering Report.
  4. Based on the results of the tracer study and in consultation with DDW, the Discharger must revise the primary and secondary boundaries representing zones of controlled drinking water well construction in accordance with title 22, 60320.100(e) and coordinate any necessary actions based on these updates with DDW, the Santa Ana Water Board, and the San Bernardino County Department of Public Health.
  5. The Discharger must update the hydrogeological model based on the results of the tracer study.
- D. The Discharger must comply with the Pathogenic Microorganism Control Reporting specified in section VII.E. of these WRRs.
- E. The Discharger, in accordance with title 22, section 60320.108(i), must investigate the cause and initiate corrective actions, within 24-hours of becoming aware that the required *Cryptosporidium* oocyst, *Giardia* cyst, and enteric virus reductions are not met based on the required on-going monitoring detailed in the approved OOP. If there is a failure to meet the pathogen reduction criteria longer than 4 consecutive hours or more than a total of 8 hours in any 7-day period, the Discharger must notify DDW and the Santa Ana Water Board within 24 hours of its knowledge of such a failure. Failures of shorter duration must be reported to DDW and the Santa Ana Water Board no later than 10 days after the end of the month in which the failure occurred.
- F. Per title 22, section 60320.108(j), if the effectiveness of a treatment train's ability to reduce enteric viruses is less than 10-logs, or *Giardia* cyst or *Cryptosporidium* oocyst reduction is less than 8-logs, the Discharger must immediately notify the Santa Ana Water Board and DDW, and discontinue the application of recycled water, unless directed otherwise by the Santa Ana Water Board or DDW.

**V. CROSS-CONNECTION CONTROL PROGRAM**

- A. The Discharger must have no undesired or unintended reversal of flow of water or other liquids, gases, or other substances into the Facility's product water lines. The Discharger must report any such undesired or unintended reversal of flow to DDW and the Santa Ana Water Board within 24 hours of becoming aware of the incident.
- B. The Facility must be designed and operated to prevent any inadvertent or improper cross-connections between the potable water, industrial water,

wastewater, recycled water, chemical, or other waste or non-potable systems. Potential points of vulnerability between the potable water, industrial water, wastewater, recycled water, chemical, and other on-site waste or non-potable piping systems must be identified in the OOP. The OOP must include procedures for routine inspection of these potential points of vulnerability, as well as reporting procedures if inadvertent or improperly designed cross-connections are discovered.

- C. The Discharger must submit a comprehensive cross-connection control program report for the Facility to DDW and the Santa Ana Water Board. The cross-connection control program report must be submitted as a standalone document, separate from the OOP. The Discharger must implement its cross-connection control program and update the cross-connection control program report to ensure that program is always representative of the current cross-connection control practices at the Facility. At a minimum, the cross-connection control program report must be updated yearly with the results of the annual cross-connection site inspections. Revisions to the cross-connection control program for any reason, including changes resulting from inspections, must be done in consultation with an individual with a valid and current Cross-Connection Control Program Specialist certification issued by the California-Nevada section of the American Water Works Association (AWWA).
- D. Prior to the operations of the Facility and once every year thereafter, the Discharger must ensure that the potable water, industrial water, wastewater, recycled water, chemical, or other waste or non-potable piping systems are inspected for possible cross-connections. Piping systems must be inspected for possible cross-connection after any modification to the Facility's piping system is made. The Facility must have internal protection from cross-connection. The cross-connection inspection must be performed by an individual with a valid and current Cross-Connection Control Program Specialist certification issued by the California-Nevada section of AWWA. The Discharger must include a written report documenting the results of the initial inspection with the program report



submitted to the DDW. Subsequent inspection results must be submitted with the annual program report to DDW.

## **VI. NON-POTABLE RECYCLED WATER SPECIFICATIONS**

- A. The recycled water used for non-potable reuse shall all times be adequately oxidized disinfected tertiary treated recycled water, which is a filtered and subsequently disinfected wastewater that meets the following limitations:
1. When filtration<sup>4</sup> is through microfiltration, ultrafiltration, nanofiltration, or reverse osmosis membrane turbidity shall not exceed any of the following:
    - a) 0.2 Nephelometric Turbidity Unit (NTU) more than 5 percent of the time within any 24-hour period; and
    - b) 0.5 NTU at any time.
  2. Disinfected wastewater shall meet the following:
    - a) The 7-day median concentration of total coliform bacteria in the disinfected effluent shall not exceed a Most Probable Number (MPN) of 2.2 per 100 milliliters (ml), utilizing the bacteriological results of the last seven days for which analysis has been completed.
    - b) The number of total coliform organisms shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any 30-day period.
    - c) No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.
    - d) UV disinfection shall meet the requirements specified in the Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse, published by the National Water Research Institute, Second Edition, and the acceptance conditions specified by DDW in the letter issued with respect to the Discharger, entitled, "*Division of Drinking Water Acceptance of the Spot-check Bioassay Report for Trojan UVSigma™ UV Disinfection, East Valley Water District, Sterling Natural Resource Center,*" dated September 16, 2022.
    - e) When a disinfection process combined with the filtration process is utilized, the combined process shall demonstrate inactivation and/or removal of 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration. The facility must be operated and maintained in accordance with the OOP described in Section VIII, of Attachment D. The OOP shall become an enforceable part of this Order.

---

<sup>4</sup> For recycled water use, other acceptable filtration technology that complies with tit. 22 of the Cal Code Regs. and approved by DDW may be used. Compliance determination will be based on DDW's guidance.

- B. Prior to the delivery of recycled water to any new user, the Discharger shall submit to the DDW's and the San Bernardino County Department of Public Health for review and approval a report containing the information listed in Section VI.G. of these WRRs, below.
- C. The Discharger shall be responsible for assuring that recycled water is delivered and utilized in conformance with this Order and the recycling criteria contained in California Code of Regulations, title 22, division 4, chapter 3, sections 60301 through 60355. The Discharger shall conduct periodic inspections of the facilities of the recycled water users to monitor compliance by the users with this Order.
- D. The Discharger shall establish and enforce Rules and Regulations for Recycled Water users, governing the design and construction of recycled water use facilities and the use of recycled water in accordance with the uniform statewide recycling criteria established pursuant to Water Code section 13521.
  - 1. Use of recycled water by the Discharger shall be consistent with its Rules and Regulations for Recycled Water Use.
  - 2. Any revisions made to the Rules and Regulations shall be subject to the review of the Santa Ana Water Board, DDW, and the San Bernardino County Department of Public Health.
- E. The Discharger shall conduct periodic inspections of recycled water reuse sites to monitor compliance with the Discharger's Rules and Regulations for Recycled

Water Use and the uniform statewide reclamation criteria established pursuant to Water Code section 13521.

- F. The storage, delivery, or use of recycled water shall not individually or collectively, directly or indirectly, result in pollution or nuisance, or adversely affect water quality, as defined in the Water Code.
- G. The Discharger shall maintain and make available upon request by the Santa Ana Water Board, DDW, and/or the San Bernardino County Department of Public Health the following information for any recycled water users:
  - 1. The average number of people estimated to be served at each use area daily.
  - 2. The specific boundaries of the proposed use area, which must be included in a map showing the location of each facility, drinking water fountain, and impoundment to be used.
  - 3. The person or persons responsible for operation of the recycled water system at each use area.
  - 4. Specific use to be made of the recycled water at each use area.
  - 5. The methods to be used to assure that the installation and operation of the recycled water system will not result in cross connections between the recycled water and potable water piping systems. This shall include a description of the pressure, dye or other test methods to be used to test the system.
  - 6. Plans and specifications which include following:
    - a) Proposed piping system to be used.
    - b) Pipe locations of both the recycled and potable water systems.
    - c) Type and location of the outlets and plumbing fixtures that will be accessible to the public.
    - d) The methods and devices to be used to prevent backflow of recycled water into the potable water system.
    - e) Plan notes relating to specific installation and use requirements.
- H. The Discharger shall require each user to designate an on-site supervisor responsible for the operation of the recycled water distribution system within the use area. The supervisor shall be responsible for complying with this Order, prevention of potential hazards, the installation, operation and maintenance of the distribution system as approved by DDW.
- I. For the use of recycled water for landscape pond impoundments at the Facility's administrative center, the Discharger must provide an addendum to the title 22 Engineering Report to DDW and the Santa Ana Water Board that details piping

plans, site drainage plans, supplemental water design and use, use area supervisor assignment and training, a cross-connection shut down test plan, and any other details required by the Recycled Water Criteria. The Discharger must receive approval by DDW before discharging recycled water to the ponds.

## **VII. COMPLIANCE MONITORING AND REPORTING**

- A. The Discharger must complete compliance monitoring and reporting as required by the Monitoring and Reporting Program (MRP), in Attachment E and these WRRs. If there are duplications, the Discharger must comply with the frequency of whichever requirement is more stringent.
- B. The Discharger must electronically submit compliance monitoring results to DDW, using the Primary Station Codes (PS Codes) provided by DDW to electronically submit monitoring results for the Facility. Data produced and reports submitted for analysis, as required by title 22, article 5.1, must be generated by a laboratory accredited by the State Water Board's Environmental Laboratory Accreditation Program (ELAP). Per title 22, section 60320.104, analyses for contaminants having primary or secondary MCLs shall be performed by laboratories approved to perform such analyses by DDW and utilizing DDW-approved drinking water methods or as authorized by DDW in case there are no approved drinking water methods available for a contaminant. Methods for analyses for chemicals other than those having primary and secondary MCLs must be described in the Discharger's OOP. The laboratories performing the analyses must submit the results electronically to DDW's database by the tenth day of the following month in which analysis was completed. Laboratory results that cannot be transmitted electronically via ps-codes to California Laboratory Intake Portal (CLIP), such as bacteriological data, must be submitted to DDW in the appropriate reports (e.g. quarterly reports). Also, the Discharger should contact DDW for any required water quality data that cannot be transmitted electronically.
- C. The Discharger must use analytical methods and sample at locations and frequencies as described in the OOP. Any changes of analytical methods, sample locations, or frequencies must be approved by DDW. The Discharger must not reduce the monitoring frequency for the chemicals having NLs, including all chemicals that overlap with constituents of emerging concern in the Recycled Water Policy (e.g., NDMA, PFOS, PFOA, and 1,4-dioxane), without the approval of DDW.
- D. Groundwater Monitoring and Reporting
  - 1. Per title 22, section 60320.100(c), prior to the operation of the Facility, the Discharger must collect at least four groundwater samples (at least one for each quarter) from each aquifer potentially affected by the Facility. The groundwater samples shall be representative of the water in each aquifer, taking into consideration seasonal variations, and be analyzed for the

- chemicals, contaminants, and characteristics in accordance with title 22, sections 60320.110, 60320.112, 60320.118, and 60320.120. Subsequently, the Discharger must submit a report to DDW documenting the results of the background groundwater quality of the aquifers conducted in accordance with title 22, section 60320.100(c).
2. Per title 22, section 60320.126(b), prior to the operation of the Facility, the Discharger must collect two groundwater samples from the monitoring wells. In addition, the Discharger must submit a report to DDW documenting the results of the background groundwater quality at the monitoring wells conducted in accordance with title 22, section 60320.126.
  3. Per title 22, section 60320.126(b), each quarter after the Facility operations begin, the Discharger must collect at least one groundwater sample from each monitoring well. The Discharger must propose in the OOP the water quality monitoring and reporting program for the groundwater monitoring wells. The groundwater monitoring and reporting program must be reviewed and approved by DDW. Also, the Discharger must notify DDW and the Santa Ana Water Board within 30 days of knowledge of any sample result from a monitoring well exceeding a primary MCL, secondary MCL, or NL.
- E. Pathogenic Microorganism Control Monitoring and Reporting
1. The Discharger must record the daily pathogen LRV for each pathogen achieved by (1) each treatment process and (2) the entire treatment train. The Discharger must also record "Yes" or "No" as to whether the daily total pathogen LRV for the entire treatment train met the total required LRVs for each pathogen. The required pathogen LRVs are 12-logs for enteric virus, 10-logs for Giardia cyst, and 10-logs for Cryptosporidium oocyst, in accordance with title 22, section 60320.108.
  2. Furthermore, the daily total pathogen LRV for the entire treatment train must be calculated as the sum of the minimum pathogen LRVs attributed to each treatment process for each pathogen for each day. The pathogen LRV for the treatment train must be calculated and recorded every day, unless the treatment train is offline for the full day (i.e., midnight to midnight).
- F. The Discharger must submit, electronically, Monthly Reports no later than the 10<sup>th</sup> day of the month following the month of sampling. These Monthly Reports must be prepared as described in the OOP.
- G. The discharger must submit, electronically, Quarterly Reports no later than the 15<sup>th</sup> day of the second month following the end of each quarterly monitoring period. These Quarterly Reports must be prepared as described in the OOP.
- H. The Discharger must submit an Annual Report to DDW and the Santa Ana Water Board no later than 6 months after the end of each calendar year. The Annual

Report must include the information required in title 22, section 60320.128(a). These Annual Reports must be prepared as described in the OOP.

- I. The Discharger must submit an updated Engineering Report to DDW and the Santa Ana Water Board at least every 5 years, addressing any changes at the Facility.

## **VIII. OPERATION OPTIMIZATION PLAN**

### **A. Draft and Final Operation Optimization Plan (OOP).**

1. The Discharger must operate the Facility in accordance with the OOP and ensure that the OOP thoroughly identifies and describes the operation, maintenance, analytical methods, monitoring, and reporting necessary to meet the requirements of the Order and title 22, section 60320.122. The Discharger shall submit a draft OOP to Santa Ana Water Board and DDW 90 days prior to DDW's site inspection (Cal. Code Regs., tit. 22, § 60320.100(g)) and meet the following requirements:
  - a) The Discharger must submit an amended OOP to the Santa Ana Water Board and DDW for review and approval after the completion of DDW's site inspection and incorporate and clearly identify any changes in operational procedures from startup and commissioning and any other changes as directed by DDW. The Discharger must operate the Facility in accordance with the final OOP and subsequent updates.
  - b) The OOP shall include a preventive maintenance program, which addresses UV lamp fouling; equipment repair and replacement (e.g., membranes); and instrumentation maintenance and calibration.
  - c) The OOP shall include a water quality monitoring program, which includes analytical methods, associated instrumentation, monitoring location PS Codes, and procedures for reporting analytical results. Also, the OOP shall incorporate any future revisions to the chemical monitoring list (e.g., MCLs, NLs). The OOP must incorporate the requirements of the MRP and this WRRs.
  - d) The OOP shall include contingency plans (including responses to the Facility's process upsets, communication failure, power interruptions, off specification water, water quality exceedances, and contact information for key personnel and agencies) and emergency response plan. Also, records (including records related to preventive maintenance program, contingency plan, sample templates for maintenance logs and monthly report) and reporting procedures.
  - e) In the OOP and in the main treatment control center, the Discharger must provide reliability features and a process control quick reference guide for operators that includes, at a minimum, the following elements:
    - i. The alarms that trigger responses other than diversion, retreatment, or shutdown.

- ii. The alarms that trigger reliability features: diversion, retreatment, or shutdown.
  - iii. For each alarm, include the associated response and key associated instrumentation information. At a minimum this must include the following: (1) instrument tag and description, (2) alarm type (e.g., low, low-low, high, high-high etc.), (3) alarm numerical set point and permission level for changing the set point (e.g., operator, supervisor, hardcoded), (4) alarm effect (e.g., SCADA alarm, call to operator phone, automatic diversion, shutdown), and (5) Alarm time delay.
  - iv. The required frequency of inspection, calibration, and verification for instrumentation associated with process monitoring and control.
- f) A staffing plan, for manned and unmanned operations (if any), which includes information on operator staffing hours, shifts, responsibilities, and certification classes. Include a log for tracking expiration dates for operator certification. The Discharger must provide for an on-going training program to ensure that each operator has been trained in the following during manned and unmanned (if any) shifts:
- i. The proper operation of all treatment processes utilized to achieve pathogen and chemical reduction.
  - ii. Maintenance, calibration, and verification of instrumentation and analyzers.
  - iii. Control systems, data trending, and the control strategy of plant systems.
  - iv. Incident response and investigation.
  - v. Critical Control Point systems approach.
  - vi. The California Safe Drinking Water Act, its implementing regulations, and all other relevant regulations.
  - vii. The potential adverse health effects associated with the consumption of drinking water that does not meet California drinking water standards.
- B. Operation Optimization Plan Updates. Within six months of optimizing treatment processes, pursuant to title 22, section 60320.122(b), and anytime thereafter when operations are optimized resulting in operational changes, the Discharger must update the OOP and clearly identify any such changes in operational procedures and submit the OOP to DDW for review and approval.

**IX. TOTAL ORGANIC CARBON AND SOIL-AQUIFER TREATMENT PROCESS REQUIREMENTS**

- A. Per title 22, section 60320.118, the Discharger must collect samples of the recycled water for analysis of total organic carbon (TOC). The Discharger must report the following in the quarterly reports:
1. Results of the TOC monitoring per title 22, section 60320.118(a),
  2. 20-week running average of all TOC results, and
  3. The average of the last four TOC results.
- B. Per title 22, section 60320.118(f), prior to the operation of the Facility and at five-year intervals thereafter, the Discharger must conduct a study to determine the occurrence of indicator compounds in the recycled municipal wastewater to be applied at the Facility. Based on this study, the Discharger must propose at least three indicator compounds for use in meeting title 22, section 60320.118(g). The protocol for the occurrence study, the study's results, and the indicator compounds to be used must be reviewed and approved by DDW.
- C. Per title 22, section 60320.118(g), on a quarterly basis, the Discharger must monitor the Facility's recycled municipal wastewater or recharge water prior to the soil-aquifer treatment process and the water after the soil-aquifer treatment process, but at a point no farther than 30 days downgradient of the spreading area. The monitoring must include at least three indicator compounds approved by DDW based on the results of the occurrence study conducted per title 22, section 60320.118(f). If the monitoring results do not indicate a reduction of at least 90 percent in the concentration of indicator compounds by the soil-aquifer treatment, excluding the effects of dilution by diluent water that may be present, the Discharger shall investigate the reason for the low reduction and report the indicator compound and investigative results within 90 days of receipt of the analytical results.
- D. Per title 22, section 60320.118(h), if the results of the investigation conducted pursuant to title 22, section 60320.118(g) concludes that the 90 percent reduction could not be demonstrated because the concentration of indicator compounds prior to the soil-aquifer treatment process was not sufficient, the Discharger must consult with DDW and comply with an alternative monitoring plan approved by DDW. If the Discharger demonstrates that there are not three indicator compounds available and suitable for indicating a 90 percent reduction pursuant title 22, section 60320.118(g), the Discharger may utilize an indicator compound that achieves a reduction of less than 90 percent, with DDW approval of the alternative indicator compound and reduction criteria.



## **ATTACHMENT E – MONITORING AND REPORTING PROGRAM**

### **I. FINDINGS**

- A. This Monitoring and Reporting Program (MRP) is issued to East Valley Water District (Discharger) pursuant to the Water Code section 13267, which authorizes the Santa Ana Water Board to require technical and monitoring reports. California Code of Regulations, title 22, division 4 also requires monitoring and reporting to confirm compliance with title 22 regulations.
- B. The requirements of this MRP provide information to determine compliance with Order No. R8-2023-0009, *Waste Discharge Requirements and Master Recycling Permit for the East Valley Water District's Sterling Natural Resource Center* (Order). The MRP requirements also provide information to the Santa Ana Water Board to assess the quality of groundwater and to protect beneficial uses. The Santa Ana Water Board's Executive Officer can modify this MRP as appropriate.
- C. This MRP establishes conditions for the Discharger to conduct routine or episodic self-monitoring of the discharges regulated under this Order at specified influent, internal operations, effluent, and receiving water monitoring locations. This MRP requires the Discharger to report the results to the Santa Ana Water Board and DDW with information necessary to evaluate discharge characteristics and compliance status.

### **II. GENERAL MONITORING PROVISIONS**

- A. The Discharger must ensure samples and measurements collected as required by the Order and this MRP are representative of the volume and nature of the monitored discharge. All samples must be collected at the monitoring points specified in this MRP and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. The Discharger must not change monitoring locations prior to notifying and receiving approval from the Santa Ana Water Board and DDW for the proposed change.
- B. The Discharger must select and use appropriate flowrate measurement devices and methods, consistent with accepted scientific practices to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The Discharger must install, calibrate, and maintain the devices according to manufacturer recommendations to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices must be capable of measuring flowrates with a maximum deviation of 5 percent from true discharge rates throughout the range of expected discharge volumes.
- C. In accordance with title 22, section 60320.104, the Discharger must ensure that all laboratories conduct analyses for contaminants having a primary or secondary MCL using a drinking water method for the contaminant approved by DDW. The Discharger must ensure that the laboratory is accredited by the DDW's

Environmental Laboratory Accreditation Program (ELAP) for the analytical method used or as authorized by DDW in case there are no approved drinking water methods available for a contaminant and the method must be described in the Discharger's OOP.

- D. The Discharger must ensure that monitoring for all constituents that do not have a primary or secondary MCL be conducted according to USEPA test procedures approved by ELAP for the analytical method used, or according to methods approved by in 40 CFR part 136, Guidelines Establishing Test Procedures for the Analysis of Pollutants, as amended, unless other test procedures have been specified in the Discharger's OOP. Analyses for constituents must be described in the Discharger's OOP.
- E. If the Discharger monitors any pollutants more frequently than required by this MRP, using approved test procedures, or as specified in this MRP, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Discharger's monitoring report. The Discharger must also report the increased frequency of monitoring.
- F. The Discharger must retain records of all monitoring information, including all calibration and maintenance records including all original strip chart and/or electronic recordings for continuous monitoring instrumentation and copies of all reports required by this MRP, and records of all data used to complete the implementation for this MRP. The Discharger must maintain records for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during any unresolved litigation regarding this discharge or as required by the Santa Ana Water Board. Records of monitoring information must include the following:
  - 1. The date, exact place, and time of sampling or measurements,
  - 2. The individual(s) who performed the sampling or measurements,
  - 3. The date(s) analyses were performed,
  - 4. The individual(s) who performed the analyses,
  - 5. The analytical techniques or methods used, and
  - 6. The results of such analyses.
- G. The Discharger, per manufacturer guidelines, must properly and routinely maintain and calibrate all monitoring instruments and devices used to comply with this MRP.
- H. The Discharger must sign and certify all applications, reports, or information submitted to the Santa Ana Water Board as detailed in section VII.O of the Order.

- I. The Discharger must identify all missing or non-valid monitoring or sampling results in submitted monitoring reports. All instances of missing or non-valid results must include an explanation of their root cause and the steps the Discharger has or will take to prevent future instances. Missing or non-valid results may be considered violations of the MRP that could result in enforcement action depending on the frequency of such instances and efforts by the Discharger to prevent such failures.
- J. Except as otherwise specified in this MRP, the Discharger may reduce sampling and reporting frequency for parameters in accordance with title 22 and the Water Recycling Requirements (WRRs), in Attachment D of the Order after receiving written approval from the Santa Ana Water Board for the reduction. The Santa Ana Water Board will consult with DDW on all title 22 related monitoring requirement changes.

### III. MONITORING LOCATIONS

The Discharger must establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in the Order:

**Table E- 1 Summary of Monitoring Locations**

<b>Monitoring Location Name</b>	<b>Latitude / Longitude</b>	<b>PS Code</b>	<b>Monitoring Location Description</b>
M-INF	34° 6' 33.70" N 117° 15' 3.92" W	CA3690026_001_001	A location in the influent before the headworks
REC-001	34° 6' 35.64" N 117° 14' 58.63" W	CA3690026_002_002	A location at the discharge to the Regional Recycled Water Pipeline
REC-002	34° 6' 30.48" N 117° 9' 57.60" W	To Be Assigned	At a lysimeter located at a spreading basin underground and at a depth prior to reaching the mound at the water table (for TOC, TN, and Indicator Compounds).
MW-A	34° 6' 22.36" N 117° 10' 11.60" W	CA3690026_101_101 CA3690026_102_102 CA3690026_103_103	Nested monitoring well site located downgradient of Weaver Basins. Monitoring well site includes three casings screened from: Shallow 220 to 280 ft bgs, Middle 490 to 550 ft bgs, Deep 720 to 780 ft bgs.

<b>Monitoring Location Name</b>	<b>Latitude / Longitude</b>	<b>PS Code</b>	<b>Monitoring Location Description</b>
MW-B	34° 5' 56.18" N 117° 10' 49.94" W	CA3690026_104_104 CA3690026_105_105 CA3690026_106_106	Nested monitoring well site located upgradient of Redlands wells. Monitoring well site includes three casings screened from: Shallow 330 to 390 ft bgs, Middle 540 to 600 ft bgs, Deep 740 to 800 ft bgs.
MW-C	To be Determined	To Be Determined	Nested monitoring well site location to be determined by the end of 2025 and will be located upstream of EVWD's production wells. Monitoring well site will include three casings and the screened interval will be determined by the end of 2025.
EVWD Plant No. 120	34° 6' 37.64" N 117° 9' 37.46" W	CA3690026_107_107	Single monitoring well site located upgradient of Weaver Basins. Monitoring well site includes one casing screened from 114 to 379 ft bgs.

#### IV. MONITORING REQUIREMENTS

- A. The Discharger must monitor the influent flow to the Facility for the parameters listed in Table E-2 below. Sampling stations shall be established and located upstream of any in-plant return flows and where a representative sample of the influent flow to the treatment facility can be obtained. The date and time of sampling (as appropriate) shall be reported with the analytical values determined.

**Table E- 2 Influent Monitoring at M-INF**

<b>Parameter</b>	<b>Units</b>	<b>Sample Type</b>	<b>Minimum Sample Frequency</b>
Flowrate	MGD	Flow meter / totalizer	Continuous
pH	pH units	Recorder	Continuous
Specific Conductance	µmhos/cm	Recorder	Continuous

Parameter	Units	Sample Type	Minimum Sample Frequency
COD	mg/L	Composite	Daily
Biochemical Oxygen Demand (5-day)	mg/L	Composite	Daily
Total Suspended Solids	mg/L	Composite	Daily
Nitrate-Nitrogen	mg/L	Composite	Monthly
Total Inorganic Nitrogen	mg/L	Composite	Monthly
Total Dissolved Solids	mg/L	Composite	Monthly
Volatile Organic Portion of USEPA Priority Pollutants	µg/L	Grab	Annually
Remaining USEPA Priority Pollutants	µg/L	Composite	Annually

B. The Discharger must monitor the effluent leaving the Facility for the parameters listed in Table E-3 below. Sampling station(s) shall be established where representative samples of recycled water can be obtained. Representative samples shall be collected and analyzed for the following parameters at frequencies specified herein.

**Table E- 3 Effluent Monitoring for Recycled Water (Title 22) at REC-001**

Parameter	Units	Sample Type	Minimum Sample Frequency
Flowrate	MGD	Flow Meter / Totalizer	Continuous
Ultraviolet Transmittance (UVT) at 254 nm <sup>5</sup>	Percent (%)	Recorder	"
Turbidity <sup>1,5,6</sup>	Nephelometric turbidity units (NTU)	Recorder	"
pH <sup>8</sup>	pH units	Recorder	"
Total Coliform	Most Probable Number (MPN / 100 mL)	Grab	Daily

<b>Parameter</b>	<b>Units</b>	<b>Sample Type</b>	<b>Minimum Sample Frequency</b>
Electrical Conductivity <sup>1,8</sup>	µm/cm	Recorder	Continuous
Total Dissolved Solids (TDS)	mg/L	24-hr Composite	Monthly
Biochemical Oxygen Demand, 5-day (BOD <sub>5</sub> )	"	"	Daily
Total Suspended Solids (TSS)	"	"	Daily
Chloride <sup>1</sup>	"	"	Quarterly
Sulfate <sup>1</sup>	"	"	Quarterly
Total Nitrogen <sup>2,7</sup>	"	"	Twice Per Week
Nitrate + Nitrite (as Nitrogen) <sup>3</sup>	"	Calculate	Quarterly
Nitrate (as Nitrogen) <sup>3,4</sup>	"	24-hr Composite	Monthly
Nitrite (as Nitrogen) <sup>3,4</sup>	"	"	Monthly
Ammonia (as Nitrogen) <sup>4</sup>	"	"	Monthly
Total Inorganic Nitrogen	"	Calculate	Monthly
Iron <sup>1</sup>	"	24-hr Composite	Quarterly
Manganese <sup>1</sup>	"	"	"
Methylene Blue-Activated Substances (MBAS) <sup>1</sup>	"	"	"
Odor <sup>1</sup>	Threshold Odor Number (TON)	"	"
Color Units <sup>1</sup>	Apparent Color Unit (ACU)	"	"
Lead <sup>3</sup>	µg/L	"	"
Copper <sup>1,3</sup>	"	"	"

Parameter	Units	Sample Type	Minimum Sample Frequency
Total Organic Carbon <sup>7</sup> (TOC)	mg/L	Recorder (online) or 24-hr composite or Grab	Weekly
Silver <sup>1</sup>	µg/L	24-hr Composite	Quarterly
Thiobencarb	"	"	"
Zinc <sup>1</sup>	"	"	"
Indicator Compounds <sup>7</sup>	"	"	"

- <sup>1</sup> Parameters with secondary maximum containment levels (MCLs) established in title 22, section 64449, Table 64449-A.
- <sup>2</sup> See section IV.C through IV.E of this MRP for details on monitoring.
- <sup>3</sup> Parameters with primary MCLs established in title 22, section 64431 Table 64431 or with Notification Levels.
- <sup>4</sup> These constituents are used to compute Total Inorganic Nitrogen (TIN) and verify compliance with the TIN effluent limitation.
- <sup>5</sup> UVT to be measured at the UV disinfection system or UVT and turbidity are measured at the UV disinfection system influent (after MBR) at the WWRF site.
- <sup>6</sup> Turbidity to be measured at the membrane filtration effluent.
- <sup>7</sup> To be sampled at REC-002 as 24-hour composite unless DDW approves a grab sample.
- <sup>8</sup> The effluent pH and EC will be monitored at the membrane filter feed location or other locations as authorized by Santa Ana Water Board.

C. The Discharger must perform additional monitoring, as described below, for parameters with secondary MCLs in Table E-3 in the event of an exceedance of a corresponding effluent limitation listed in the Order (Cal Code Regs., tit. 22, § 60320.112(e)).

1. If the annual average of the results of the monitoring performed exceeds a parameter's secondary MCL, the Discharger shall initiate quarterly monitoring for the parameter and if the running annual average of quarterly-averaged results exceeds a parameter's secondary MCL, describe the reason(s) for the exceedance and any corrective action taken in a report that must be submitted to the Santa Ana Water Board and DDW no later than 45 days following the quarter in which the exceedance occurred. The annual

monitoring frequency may resume if the running annual average of quarterly results does not exceed a parameter's secondary MCL.

- D. The Discharger must demonstrate control of nitrogen compounds. The Discharger must in each calendar week, at least three days apart, as specified in the Facility's OOP, collect at least two effluent water quality sample at Monitoring Location REC-001 or REC-002 and have the sample analyzed for total nitrogen.<sup>5</sup> The Discharger must ensure that the laboratory or person conducting the analysis provides the monitoring results within 72 hours, if the result of any single sample exceeds 10 mg/L. If the average of the results of two consecutive samples exceeds 10 mg/L total nitrogen, the Discharger must also take the following measures:
1. Take a confirmation sample and notify the Santa Ana Water Board and DDW within 48 hours of the laboratory notifying the Discharger of the results.
  2. Investigate the cause for the exceedances and take actions to reduce the total nitrogen concentrations to ensure continued or future exceedances do not occur.
  3. Initiate additional monitoring for nitrogen compounds as described in the Facility's OOP, including locations in the groundwater basin, to identify elevated concentrations and determine whether such elevated concentrations exceed or may lead to an exceedance of a nitrogen based MCL.
- E. If the average of the results of four consecutive samples exceeds a concentration of 10 mg/L of total nitrogen, suspend the discharge (surface application) of tertiary treated recycled water. The Discharger must not resume the discharge (surface application) until the Discharger takes corrective actions and at least two consecutive sampling results have a concentration of total nitrogen less than 10 mg/L.
- F. The Discharger must perform additional monitoring, as described below, for parameters with MCLs in Table E-3, and all parameters in Tables E-4 through E-8, in the event of an exceedance of a corresponding effluent limitation listed in the Order (Cal Code Regs., tit. 22, § 60320.112(d)).
1. For a parameter whose compliance with its MCL or Action Level (for lead and copper) that is not based on a running annual average (i.e., currently these are nitrate, nitrite, nitrate plus nitrite, perchlorate, chlorite, asbestos, lead, and copper):
    - a) Within 72 hours of being notified of a result exceeding an MCL or Action Level (AL) the Discharger must collect another sample, and have it analyzed for the parameter as confirmation.

---

<sup>5</sup> Per tit. 22, § 60301.860, "Total Nitrogen" means the sum of concentrations of ammonia, nitrite, nitrate, and organic nitrogen-containing compounds, expressed as nitrogen.



- b) If the average of the initial and confirmation sample exceeds the parameter's MCL or AL, or a confirmation sample is not collected and analyzed, the Discharger must initiate weekly monitoring for the parameter until four consecutive weekly results are below the parameter's MCL or AL. The Discharger must notify the Santa Ana Water Board and DDW within 24 hours if any sample exceeds an MCL or AL.
  - c) If the running four-week average exceeds the parameter's MCL or AL, the Discharger must notify the Santa Ana Water Board and DDW within 24 hours of knowledge of the exceedance and, if directed by the Santa Ana Water Board or DDW, conduct corrective actions up to and potentially including suspending the discharge of the recycled municipal wastewater.
2. For a parameter whose compliance with its MCL is based on a running annual average (Cal Code Regs., tit. 22, § 60320.112(d)):
- a) Within 72 hours of being notified of a result exceeding an MCL, the Discharger must collect another sample, and have it analyzed for the parameter as confirmation.
  - b) If the average of the initial and confirmation sample exceeds the parameter's MCL, or a confirmation sample is not collected and analyzed, the Discharger must initiate weekly monitoring for the parameter until the running four-week average no longer exceeds the MCL. The Discharger must notify the Santa Ana Water Board and DDW within 24 hours if any sample exceeds an MCL.
  - c) If the running four-week average exceeds the parameter's MCL, the Discharger must describe the reason(s) for the exceedance and provide a workplan with a schedule for completion of corrective actions in a report submitted to the Santa Ana Water Board and DDW no later than 45 days following the quarter in which the exceedance occurred.
  - d) If the running four-week average exceeds the parameter's MCL for sixteen (16) consecutive weeks, the Discharger must notify the Santa Ana Water Board and DDW within 48 hours of knowledge of the exceedance and, if directed by the Santa Ana Water Board or DDW, conduct corrective actions up to and potentially including suspending the discharge of the recycled municipal wastewater.

G. The Discharger must monitor the effluent at REC-001, as described in Table E-1, for the parameters listed in Tables E-4 through E-10 below:

**Table E- 4 Effluent Monitoring for Recycled Water (Title 22) at REC-001:  
 Inorganics with Primary MCLs**

Parameter <sup>1</sup>	Units	Sample Type	Minimum Sample Frequency
Aluminum	mg/L	Grab	Quarterly
Antimony	"	"	"

Arsenic	“	“	“
Asbestos (for fibers exceeding 10 µm in length)	Million fibers per liter (MFL)	“	“
Barium	mg/L	“	“
Beryllium	“	“	“
Cadmium	“	“	“
Total Chromium	“	“	“
Cyanide	“	“	“
Fluoride	“	“	“
Mercury	“	“	“
Nickel	“	“	“
Perchlorate	“	“	“
Selenium	“	“	“
Thallium	“	“	“

<sup>1</sup> Parameters with primary MCLs established in title 22, section 64431, Table 64431.

**Table E- 5 Effluent Monitoring for Recycled Water (Title 22) at REC-001: Volatile Organic Chemicals (VOCs) with Primary MCLs**

Parameter <sup>1</sup>	Units	Sample Type	Minimum Sample Frequency
Benzene	mg/L	Grab	Quarterly
Carbon Tetrachloride	“	“	“
1,2-Dichlorobenzene	“	“	“
1,4-Dichlorobenzene	“	“	“
1,1-Dichloroethane	“	“	“
1,2-Dichloroethane	“	“	“
1,1-Dichloroethylene	“	“	“
cis-1,2-Dichloroethylene	“	“	“
trans-1,2-Dichloroethylene	“	“	“
Dichloromethane	“	“	“
1,2-Dichloropropane	“	“	“
1,3-Dichloropropene	“	“	“

Parameter <sup>1</sup>	Units	Sample Type	Minimum Sample Frequency
Ethylbenzene	"	"	"
Methyl-tert-butyl-ether (MTBE)	"	"	"
Monochlorobenzene	"	"	"
Styrene	"	"	"
1,1,2,2-Tetrachloroethane	"	"	"
Tetrachloroethylene	"	"	"
Toluene	"	"	"
1,2,4-Trichlorobenzene	"	"	"
1,1,1-Trichloroethane	"	"	"
1,1,2-Trichloroethane	"	"	"
Trichloroethylene	"	"	"
Trichlorofluoromethane	"	"	"
1,1,2-Trichloro-1,2,2- Trifluoroethane	"	"	"
Vinyl Chloride	"	"	"
Xylenes	"	"	"

<sup>1</sup> Parameters with primary MCLs established in title 22, section 64444, Table 64444-A.

**Table E- 6 Effluent Monitoring for Recycled Water (Title 22) at REC-001: Synthetic Organic Chemicals (SOCs) with Primary MCLs**

Parameter <sup>1</sup>	Units	Sample Type	Minimum Sample Frequency
Alachlor	mg/L	Grab	Quarterly
Atrazine	"	"	"
Bentazon	"	"	"
Benzo(a)pyrene	"	"	"
Carbofuran	"	"	"
Chlordane	"	"	"
2,4-Dichlorophenoxyacetic acid	"	"	"
Dalapon	"	"	"
1,2-Dibromo-3-chloropropane	"	"	"

Parameter <sup>1</sup>	Units	Sample Type	Minimum Sample Frequency
Di(2-ethylhexyl) adipate	"	"	"
Di(2-ethylhexyl) phthalate	"	"	"
Dinoseb	"	"	"
Diquat	"	"	"
Endothall	"	"	"
Endrin	"	"	"
Ethylene Dibromide	"	"	"
Glyphosate	"	"	"
Heptachlor	"	"	"
Heptachlor epoxide	"	"	"
Hexachlorobenzene	"	"	"
Hexachlorocyclopentadiene	"	"	"
Gamma BHC (Lindane)	"	"	"
Methoxychlor	"	"	"
Molinate	"	"	"
Oxamyl	"	"	"
Pentachlorophenol	"	"	"
Picloram	"	"	"
Polychlorinated Biphenyls (PCBs)	"	"	"
Simazine	"	"	"
Thiobencarb	"	"	"
Toxaphene	"	"	"
1,2,3-Trichloropropane	"	"	"
2,3,7,8-tetrachlorodibenzodioxin (Dioxin)	"	"	"
2-(2,4,5-trichlorophenoxy) propionic acid (Silvex)	"	"	"

<sup>1</sup> Parameters with primary MCLs established in title 22, section 64444, Table 64444-A.

**Table E- 7 Effluent Monitoring for Recycled Water (Title 22) at REC-001: Disinfection Byproducts with Primary MCLs**

Parameter <sup>1</sup>	Units	Sample Type	Minimum Sample Frequency
Bromodichloromethane	mg/L	Grab	Quarterly
Bromoform	"	"	"
Chloroform	"	"	"
Dibromochloromethane	"	"	"
Monochloroacetic acid	"	"	"
Dichloroacetic acid	"	"	"
Trichloroacetic acid	"	"	"
Monobromoacetic acid	"	"	"
Dibromoacetic acid	"	"	"
Bromate	"	"	"
Chlorite	"	"	"

<sup>1</sup> Parameters with primary MCLs established in title 22, section 64533, Table 64533-A.

**Table E- 8 Effluent Monitoring for Recycled Water (Title 22) at REC-001: Radionuclides with Primary MCLs**

Parameter <sup>1</sup>	Units	Sample Type	Minimum Sample Frequency
Combined Radium-226 and Radium-228	Picocuries per liter (pCi/L)	Grab	Quarterly
Gross Alpha particle activity (excluding radon and uranium)	"	"	"
Uranium	"	"	"
Beta/Photon emitters	Millirem per year	"	"
Strontium-90	pCi/L	"	"
Tritium	"	"	"

<sup>1</sup> Parameters with primary MCLs established in title 22, sections 64442 and 64443, Tables 64442 and 64443.

**Table E- 9 Monitoring for Recycled Water (Title 22) at REC-001: Notification and Response Levels**

Parameter	Units	Sample Type	Minimum Sample Frequency
Boron	mg/L	Grab	Quarterly
n-Butylbenzene	"	"	"
sec-Butylbenzene	"	"	"
tert-Butylbenzene	"	"	"
Carbon disulfide	"	"	"
Chlorate	"	"	"
2-Chlorotoluene	"	"	"
4-Chlorotoluene	"	"	"
Diazinon	"	"	"
Dichlorodifluoromethane	"	"	"
1,4-Dioxane	"	"	"
Ethylene Glycol	"	"	"
Formaldehyde	"	"	"
HMX (Octogen)	"	"	"
Isopropylbenzene	"	"	"
Manganese	"	"	"
Methyl isobutyl ketone	"	"	"
Naphthalene	"	"	"
N-Nitrosodiethylamine (NDEA)	"	"	"
N-Nitrosodimethylamine (NDMA)	"	"	"
N-Nitrosodi-n-propylamine (NDPA)	"	"	"
Perfluorobutanesulfonic acid (PFBS)	"	"	"
Perfluorooctanesulfonic acid (PFOS)	"	"	"
Perfluorohexanesulfonic acid (PFHxS)	"	"	"
Perfluorooctanoic acid (PFOA)	"	"	"
Propachlor	"	"	"
n-Propylbenzene	"	"	"
1,3,5-Trinitroperhydro-1,3,5-triazine	"	"	"

Parameter	Units	Sample Type	Minimum Sample Frequency
Tertiary butyl alcohol	"	"	"
1,2,4-Trimethylbenzene	"	"	"
1,3,5-Trimethylbenzene	"	"	"
2,4,6-Trinitrotoluene	"	"	"
Vanadium	"	"	"

**Table E- 10 Monitoring for Recycled Water (Title 22) at REC-001: Remaining Priority Pollutants**

Parameter <sup>1</sup>	Units	Sample Type	Minimum Sample Frequency
Aldrin	µg/L	Grab	Quarterly
Dieldrin	"	"	"
4,4'-DDT	"	"	"
4,4'-DDE	"	"	"
4,4'-DDD	"	"	"
Alpha-endosulfan	"	"	"
Beta-endosulfan	"	"	"
Endosulfan sulfate	"	"	"
Endrin aldehyde	"	"	"
Alpha-BHC	"	"	"
Beta-BHC	"	"	"
Delta-BHC	"	"	"
Acrolein	"	"	"
Acrylonitrile	"	"	"
Chlorobenzene	"	"	"
Chloroethane	"	"	"
1,1-dichloroethylene	"	"	"
Methyl chloride	"	"	"
Methyl bromide	"	"	"
2-chloroethyl vinyl ether	"	"	"

<b>Parameter<sup>1</sup></b>	<b>Units</b>	<b>Sample Type</b>	<b>Minimum Sample Frequency</b>
2,4,6-trichlorophenol	"	"	"
3-methyl-4-chlorophenol(P-chloro-m-cresol)	"	"	"
2-chlorophenol	"	"	"
2,4-dichlorophenol	"	"	"
2,4-dimethylphenol	"	"	"
2-nitrophenol	"	"	"
4-nitrophenol	"	"	"
2,4-dinitrophenol	"	"	"
2-methyl-4,6-dinitrophenol	"	"	"
Phenol	"	"	"
Chromium (III) trivalent	"	"	"
Acenaphthene	"	"	"
Benzidine	"	"	"
Hexachloroethane	"	"	"
Bis (2-chloroethyl) ether	"	"	"
2-chloronaphthalene	"	"	"
1,3-dichlorobenzene	"	"	"
3,3'-dichlorobenzidine	"	"	"
2,4-dinitrotoluene	"	"	"
2,6-dinitrotoluene	"	"	"
1,2-diphenylhydrazine	"	"	"
Fluoranthene	"	"	"
4-chlorophenyl phenyl ether	"	"	"
4-bromophenyl phenyl ether	"	"	"
Bis(2-chloroisopropyl) ether	"	"	"
Bis(2-chloroethoxyl) methane	"	"	"
Hexachlorobutadiene	"	"	"
Isophorone	"	"	"
Nitrobenzene	"	"	"



Parameter <sup>1</sup>	Units	Sample Type	Minimum Sample Frequency
N-nitrosodiphenylamine	"	"	"
Bis(2-ethylhexyl) phthalate	"	"	"
Butyl benzyl phthalate	"	"	"
Di-n-butyl phthalate	"	"	"
Di-n-octyl phthalate	"	"	"
Diethyl phthalate	"	"	"
Dimethyl phthalate	"	"	"
Benzo(a)anthracene	"	"	"
Benzo(b)fluoranthene	"	"	"
Benzo(k)fluoranthene	"	"	"
Chrysene	"	"	"
Acenaphthylene	"	"	"
Anthracene	"	"	"
1,12-benzoperylene	"	"	"
Fluorene	"	"	"
Phenanthrene	"	"	"
1,2,5,6-dibenzanthracene	"	"	"
Indeno(1,2,3-cd) pyrene	"	"	"
Pyrene	"	"	"

<sup>1</sup> Remaining priority toxic pollutants that do not have primary or secondary MCLs or NLs.

H. The Discharger must perform additional monitoring, as described below, for all parameters listed in Table E-9 of the MRP, above, in the event of an exceedance.

1. If a monitoring result exceeds a Notification Level (NL), within 72 hours of notification of the result the Discharger must collect another sample, and have it analyzed for the parameter as confirmation. If the average of the initial and confirmation sample exceeds the parameter's NL, or a confirmation sample is not collected and analyzed pursuant to this section, the Discharger must initiate weekly monitoring for the parameter until the running four-week

average no longer exceeds the NL. The Discharger must notify the Santa Ana Water Board and DDW within 24 hours if any sample exceeds a NL.

2. If the running four-week average of monitoring results exceeds the parameter's NL, the Discharger must describe the reason(s) for the exceedance and provide a workplan and schedule for completion of corrective actions in a report submitted to the Santa Ana Water Board and DDW no later than 45 days following the quarter in which the exceedance occurred.
  3. If the running four-week average of monitoring results exceeds the parameter's NL for sixteen consecutive weeks, the Discharger must notify the Santa Ana Water Board and DDW within 48 hours of knowledge of the exceedance.
  4. The Discharger must not reduce the monitoring frequency for the parameters having NLs, including any parameters that overlap with constituents of emerging concern in the Recycled Water Policy, without the approval of the Santa Ana Water Board and DDW. The Discharger must use the analytical methods described in the approved OOP, and any changes must be approved by the Santa Ana Water Board and DDW.
- I. The Discharger must monitor the groundwater monitoring wells at monitoring locations MW-A, MW-B, and MW-C as described in Table E-1 for the parameters listed in Table E-11 below:

**Table E- 11 Groundwater Monitoring at MW-A, MW-B, and MW-C**

Parameter	Units	Minimum Sample Frequency
Groundwater Elevation	0.01 Feet (ft)	Quarterly
Depth to Groundwater	0.01 ft	"
Gradient	ft/ft	"
Gradient Direction	Degrees	"
Specific Conductance	µS/cm	"
Total Dissolved Solids (TDS)	mg/L	"
Chloride	"	"
Sulfate	"	"
Total Organic Carbon	"	"
Total Nitrogen	"	"
Nitrate (as nitrogen)	"	"
Nitrite (as nitrogen)	"	"

Parameter	Units	Minimum Sample Frequency
Iron	"	"
Manganese	"	"
Methylene Blue-Activated Substances (MBAS)	"	"
Odor	Threshold Odor Number (TON)	"
Color	Apparent Color Unit (ACU)	"
Turbidity	NTU	"
Copper	mg/L	"
Aluminum	"	"
Methyl- <i>tert</i> -butyl Ether (MTBE)	"	"
Silver	"	"
Thiobencarb	"	"
Zinc	"	"
Priority Toxic Pollutants per title 22, sections 60320.120 and 60320.126	"	"

J. If a groundwater monitoring result exceeds 80 percent of an MCL for nitrate, nitrite, or nitrate plus nitrite, within 48 hours of notification of the result the Discharger must collect another groundwater sample, and have the sample analyzed for the parameter as confirmation. If the average of the initial sample and the confirmation sample exceeds the parameter's MCL, the Discharger must notify the Santa Ana Water Board and DDW within 24 hours of being notified by the laboratory of the confirmation sample result and discontinue the discharge of the tertiary treated recycled water into the Weaver Basins. The Discharger must take steps to address the exceedance or submit evidence to the Santa Ana Water Board and DDW that the exceedance was not the result of the discharge from the Facility. The Discharger must not restart discharge until authorized by the Santa Ana Water Board and DDW.

**V. CONSTITUENTS OF EMERGING CONCERN MONITORING REQUIREMENTS**

A. The Discharger shall develop and must maintain a Quality Assurance Project Plan (QAPP) for monitoring Constituents of Emerging Concern (CEC) to ensure the Facility's monitoring data are of known, consistent, and documented quality

and that the monitoring is consistent with the State Water Board's *Water Quality Control Policy for Recycled Water* (Recycled Water Policy). The Discharger shall develop the QAPP using the *Guidance for Quality Assurance Project Plans, EPA QA/G-5* (EPA/240/R-2/009, 2002). The Discharger shall submit a QAPP to the Santa Ana Water Board and State Water Board for their review and approval. The QAPP must be updated and re-submitted to the Santa Ana Water Board and State Water Board for approval when significant changes are made that would affect the overall data quality and use (e.g., using a new analytical chemistry laboratory) or at least annually if any changes are made. Details on QAPP requirements are in Attachment A of the Recycled Water Policy.

- B. The Discharger must monitor constituents of emerging concern (CECs) using the following phased approach.
1. Health-based and performance CECs and surrogates for CECs.
    - a) The Discharger shall conduct an initial assessment monitoring phase for one year with quarterly sampling, except for surrogates, for which the monitoring frequency is monthly for the first 3 months and quarterly thereafter;
    - b) The Discharger shall conduct a baseline monitoring phase for three years, with semi-annual sampling, except where more frequent monitoring is necessary to respond to a concern as stated in Attachment A, section 4.2 of the Recycled Water Policy; and
    - c) The Discharger shall conduct a standard operation monitoring phase, with semi-annual or annual sampling, as determined by the Santa Ana Water Board based on the results from the previous phase (consistent CECs removal efficiency), treatment operational performance, and appropriate recycled water quality, except where more frequent monitoring is necessary to respond to a concern as stated in Attachment A, section 4.3 of the Recycled Water Policy.
    - d) After each sampling event for health-based CECs, the Discharger shall conduct the evaluations in Table E-15 and implement appropriate response actions.
      - i. For surrogates, the Discharger shall evaluate the data collected during the initial assessment phase and the surrogates CECs that exhibited reduction by unit processes and/or provided an indication of operational performance shall be selected for monitoring in the baseline monitoring phase. Likewise, the data collected during the baseline monitoring phase shall be evaluated and the surrogate CECs that exhibited reduction by unit processes and/or provided an indication of operational performance shall be selected for monitoring in the standard operation monitoring phase.
      - ii. If a health-based CEC also has a notification level or maximum contaminant level pursuant to title 22, sections 60320.112 or

60320.120, the more frequent monitoring requirements shall govern the sampling, regardless of the phase.

2. Bioanalytical Screening Tools.

- a) The Discharger shall conduct an initial assessment phase for three years with quarterly sampling for Estrogen receptor- $\alpha$  (ER- $\alpha$ ) and Aryl hydrocarbon receptor (AhR) bioanalytical screening tools and determine the range of responses for the bioassays;
- b) The Discharger shall conduct a baseline monitoring phase for one year and sample quarterly. After each sampling event, the Discharger shall conduct the evaluations in Table E-17 and implement appropriate response actions; and
- c) The Discharger shall conduct a standard operation monitoring phase, with semi-annual or annual sampling, as determined by the Santa Ana Water Board based on the results from the previous phase (consistent CECs removal efficiency), treatment operational performance, and appropriate recycled water quality, except where more frequent monitoring is necessary to respond to a concern as stated in Attachment A section 4.3 of the Recycled Water Policy. After each sampling event, the Discharger shall conduct the evaluations in Table E-17 and implement appropriate response actions.

**Table E- 12 CEC Monitoring: Health, Performance, and Surrogates at REC-001 and MW-A**

Parameter	Units	Relevance	Sample Type	Reporting Limit <sup>1</sup>
1,4-Dioxane	µg/L	Health	Grab	0.1
NDMA	"	Health/Performance	"	0.002
N-Nitrosomorpholine (NMOR)	"	Health	"	0.002
PFOS	"	"	"	0.0065
PFOA	"	"	"	0.007
Gemfibrozil	"	Performance	"	0.01
Iohexol	"	"	"	0.05
Sucralose	"	"	"	0.1
Sulfamethoxazole	"	"	"	0.01
Ammonia-N	mg/L	Surrogate	"	--
Dissolved Organic Carbon	"	"	"	--
Nitrate-N	"	"	"	--

Total Fluorescence	RFU <sup>2</sup>	“	Grab or online	--
Ultraviolet (UV) Light absorbance at 254 nm	Percent (%)	“	“	--

- 1 The Santa Ana Water Board may approve higher reporting limits if it determines these reporting limits cannot be practicably met in recycled water sample matrices using existing methods, as long as the ratio between the reporting limit and the monitoring trigger limit is no less than 2.0 micrograms per liter (µg/L) (see Tables 1 and 7 of Attachment A of the Recycled Water Policy).
- 2 RFU = Relative Fluorescence Units.

**Table E- 13 CEC Monitoring: Bioanalytical Screening Tools at REC-001 and MW-A**

End Point Activity	Units	Example Relevant CECs	Sample Type	Reporting Limit
Estrogen receptor-α (ER-α)	ng/L	Estradiol, Bisphenol A, Nonylphenol	Grab	0.5
Aryl hydrocarbon receptor (AhR)	“	Dioxin-like chemicals, polycyclic aromatic hydrocarbons, pesticides	“	0.5

- C. The Discharger must use the monitoring results for CECs, surrogates, and bioanalytical screenings to evaluate the overall operational performance of the treatment process and the effectiveness of the treatment process in removing CECs. Monitoring reports submitted to the Santa Ana Water Board must include an evaluation of monitoring results.
  1. The Discharger must evaluate health-based CEC monitoring results from monitoring location REC-001. To determine the appropriate response actions, the Discharger must compare measured environmental concentrations (MECs) to their respective monitoring trigger levels (MTLs) listed in Table E-14 to determine MEC/MTL ratios. The Discharger must compare the calculated MEC/MTL ratios to the thresholds specified in Table E-15 and implement the response actions corresponding to the threshold.

**Table E- 14 Monitoring Trigger Levels: Health, Performance, and Surrogates**

Parameter	Relevance	Monitoring Trigger Level (µg/L)
-----------	-----------	---------------------------------

1-4, Dioxane	Health	1
NDMA	Health/Performance	0.010
NMOR	Health	0.012
PFOS	"	0.013
PFOA	"	0.014
Gemfibrozil	Performance	N/A
Iohexol	"	"
Sucralose	"	"
Sulfamethoxazole	"	"
Ammonia-N	Surrogate	"
Dissolved Organic Carbon	"	"
Nitrate-N	"	"
Total Fluorescence	"	"
Ultraviolet (UV) Light Absorbance at 254 nm	"	"

**Table E- 15 MEC/MTL Thresholds and Response Actions**

<b>MEC/MTL Threshold</b>	<b>Response Action</b>
If greater than 75 percent of the MEC/MTL ratio results for a CEC are less than or equal to 0.1 during the baseline monitoring phase and/or subsequent monitoring	After completion of the baseline monitoring phase, consider requesting removal of the CEC from the monitoring program.
If MEC/MTL ratio is greater than 0.1 and less than or equal to 1	Continue to monitor.
If MEC/MTL ratio is greater than 1 and less than or equal to 10	Check the data for accuracy. Continue to monitor.
If MEC/MTL ratio is greater than 10 and less than or equal to 100	Check the data for accuracy, resample within 72 hours of notification of the result and analyze to confirm CEC result. Continue to monitor.
If MEC/MTL ratio is greater than 100	Check the data for accuracy, resample within 72 hours of notification of the result and analyze to confirm CEC result. Continue to monitor. Contact the Santa Ana Water Board and the State Water

	Board to discuss additional actions. (Additional actions may include, but are not limited to, additional monitoring, toxicological studies, engineering removal studies, modification of facility operation, implementation of a source identification program, and monitoring at additional locations.)
--	--

D. The Discharger must evaluate the bioanalytical assay monitoring results during the baseline monitoring phase and standard operation monitoring phase and the Discharger must determine the appropriate response actions. The Discharger must compare Bioanalytical Equivalent Concentrations (BEQs) to their respective MTLs listed in Table E-16 to determine BEQ/MTL ratios. The Discharger must compare the calculated BEQ/MTL ratios to the thresholds presented in Table E-17 and implement the response actions corresponding to the threshold.

**Table E- 16 Required Equivalency Agonists and Monitoring Trigger Levels for Bioanalytical Screening Tools**

Parameter	Equivalency Agonist	Monitoring Trigger Level (ng/L)
ER- $\alpha$	17-beta-estradiol	3.5
AhR	2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)	0.5

**Table E- 17 BEQ/MTL Thresholds and Response Actions for Bioanalytical Screening**

BEQ/MTL Threshold	Response Action
If BEQ/MTL ratio is consistently less than or equal to 0.15 for ER- $\alpha$ or 1.0 for AhR	After completion of the baseline monitoring phase, consider decreasing monitoring frequency or requesting removal of the endpoint from the monitoring program.
If BEQ/MTL ratio is greater than 0.15 and less than or equal to 10 for ER- $\alpha$ or greater than 1.0 and less than or equal to 10 for AhR	Continue to monitor
If BEQ/MTL ratio is greater than 10 and less than or equal to 1000	Check the data for accuracy, resample within 72 hours of notification of the result and analyze to confirm bioassay result. Continue to monitor. Contact the Santa Ana Water Board and State Water Board to discuss additional actions, which



	<p>may include, but are not limited to, targeted analytical chemistry monitoring, increased frequency of bioassay monitoring, and implementation of a source identification program.</p>
<p>If BEQ/MTL ratio is greater than 1000</p>	<p>Check the data for accuracy, resample within 72 hours of notification of the result and analyze to confirm bioassay result. Continue to monitor. Contact the Santa Ana Water Board and the State Water Board to discuss additional actions, which may include, but are not limited to, targeted and/or nontargeted analytical chemistry monitoring, increased frequency of bioassay monitoring, toxicological studies, engineering removal studies, modification of facility operation, implementation of a source identification program, and monitoring at additional locations.</p>

E. The Discharger must evaluate the effectiveness of the treatment process to remove CECs by determining the removal percentages for performance indicator CECs and surrogates. The removal percentage is the difference in the concentration of a compound in recycled water prior to (at REC-001) and after soil aquifer treatment (at MW-A), divided by the concentration prior to the treatment process and multiplied by 100. The Discharger must report the removal percentages with the CEC monitoring results.

$$\text{Removal Percentage} = ([X_{in} - X_{out}] / X_{in}) (100)$$

$X_{in}$  - Concentration in recycled water prior to the treatment process

$X_{out}$  - Concentration in recycled water after the treatment process

F. During the initial assessment, the Discharger must monitor performance of the treatment process to determine removal percentages for performance indicator CECs and surrogates. The Discharger must confirm removal percentages during the baseline monitoring phase. The established removal percentages for each project must be used to evaluate treatment effectiveness and operational performance.

G. The list of parameters and monitoring frequencies may be adjusted by the Executive Officer, of the Santa Ana Water Board, if the Discharger makes a

request and the Executive Officer determines that the modification is adequately supported by monitoring data submitted.

**VI. DILUENT WATER MONITORING**

A. Sampling station(s) shall be established where representative samples of diluent water can be obtained. Representative samples shall be collected and analyzed for the following parameters at frequencies specified herein:

**Table E- 18 Monitoring Program for Diluent Water at Monitoring Well EVWD Plant No. 120**

<b>Constituent</b>	<b>Sample Station</b>	<b>Units</b>	<b>Type of Sample</b>	<b>Minimum Frequency of Analysis</b>
Diluent water Volume	Before Blending	Acre-feet	Calculated	Annually
Nitrate and Nitrite	"	mg/L	Grab	See VI.B below
Constituent with Secondary MCLs per title 22, sections 64449 and 64449, Tables 64449-A and 64449-B	Monitoring Well EVWD Plant No. 120	mg/L	"	Quarterly
Inorganics with Primary MCLs per title 22, section 64431, Table 64431	"	"	"	"
VOCs with Primary MCLs per title 22, section 64444, Table 64444-A	"	"	"	"
SOCs with Primary MCLs per title 22, section 64444, Table 64444-A	"	"	"	"
Disinfection Byproducts with Primary MCLs per title 22, section	"	"	"	"

64533, Table 64533-A				
Radionuclides with Primary MCLs per title 22, sections 64442 and 64443, Tables 64442 and 64443	“	“	“	“
Constituents with NLs	“	“	“	“

B. A non-DDW approved drinking water source diluent water, as defined in title 22, section 60301.190, shall be monitored quarterly for nitrate and nitrite. Within 72 hours of being informed by the laboratory of a nitrate and/or nitrite or nitrate plus nitrite result greater than an MCL, a confirmation sample shall be collected. If the average of the initial and confirmation samples exceeds an MCL, the provisions of title 22, section 60320.114, Diluent Water Requirements shall apply.

**VII. SELF-MONITORING REPORTS**

- A. The Discharger must submit to DDW a monthly report as required by the WRRs and this MRP. These monthly reports must be submitted to DDW by the 10th day of the following month.
- B. The Discharger must submit the results of all other monitoring required by this MRP in Self-Monitoring Reports (SMRs) to the Santa Ana Water Board via the State Water Board's GeoTracker system at <http://geotracker.waterboards.ca.gov/> (GeoTracker). The Discharger must upload SMRs on or prior to the SMR due dates set forth in Table E-23.
  - 1. The Discharger must divide documents larger than 400 megabytes (MB) into separate files at logical places in the report to keep the file sizes under 400 MB.
  - 2. The Discharger must submit Laboratory Analytical Data for all samples in Electronic Deliverable Format (EDF).
  - 3. The Discharger must report the latitude and longitude of all sampling locations for which data are reported.
- C. If requested by the Santa Ana Water Board, the Discharger must also provide any or all of the following to the Santa Ana Water Board: a hard copy of the complete SMR, a hard copy of the cover/transmittal letter, a hard copy of

oversized drawings or maps, and an electronic copy (see section VII.R of the Order – Standard Provisions) of the complete SMR.

- D. If requested by the Santa Ana Water Board, the Discharger must also provide a complete copy (in a text-searchable PDF file) of all documents including signed transmittal letters, professional certifications, and all data presented in the SMR. Upon receipt of the documents, the Santa Ana Water Board must use the email date and time to determine compliance with the regulatory due dates specified in this Order.
- E. The Discharger must summarize all reported data in a tabular format. The reports must present data to clearly illustrate whether the Facility is operating in compliance with discharge specifications and effluent limitations.
- F. The Discharger must attach a cover letter to the SMR. The information contained in the cover letter must clearly identify violations of the Order; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. For identified violations, the letter must include a description of the requirement in the Order that was violated and a description of the violation.
- G. The monitoring results in each SMR must be based on the sampling frequency, monitoring period, and due dates specified in Table E-19:

**Table E- 19 Monitoring Periods and Reporting Schedule**

<b>Sampling Frequency</b>	<b>Start of Monitoring Periods</b>	<b>Monitoring Period</b>	<b>SMR Due Date</b>
Continuous	January 1, 2024 or at commissioning of the WWRF	All	Submit with Quarterly SMR
Daily	“	Midnight through 11:59 p.m. or any 24-hour period that reasonably represents a calendar day for the purpose of sampling	“
Weekly	“	Sunday through Saturday	“
Monthly (Pathogen Credit)	“	First day of calendar month through last day of calendar month	On the 10 <sup>th</sup> of the month following the monitoring period
Monthly (All other monthly data)	“	“	Submit with quarterly SMR.
Quarterly	“	January 1 through March 31 April 1 through June 30 July 1 through September 30	May 15 August 15 November 15

		October 1 through December 31	February 15 (following year)
Once per 6 months	“	January 1 through June 30 July 1 through December 31	August 15 February 15 (following year)
Annually	“	January 1 through December 31	June 30

**VIII. ONE TIME REPORTING DUE DATES**

This section, and Table E-20 below, summarizes all one time reports due to the Santa Ana Water Board and DDW after adoption of the Order and accompanying attachments.

**Table E- 20 One Time Reporting Schedule**

<b>Report Type</b>	<b>Reference Section</b>	<b>Reviewing/ Approving Agency</b>	<b>Report Due Date</b>
Noncompliance Report	Order section VII.C	Santa Ana Water Board	5 days after noncompliance
Report of Waste Discharge	Order section VII.L	Santa Ana Water Board	120 days prior to proposed major change
Transfer of Ownership	Order section VII.M	Santa Ana Water Board	120 days prior to proposed change
Asset Management Program Plan	Order section VIII.A	Santa Ana Water Board	18 months from the effective date of the Order, reevaluate and update every 5 years
Climate Change Action Plan (CCAP)	Order section VIII.C	Santa Ana Water Board	3 years from the effective date of the Order
Groundwater Tracer Study Protocol	Attachment D, section IV.C.1	DDW	60 days prior to the start of the tracer study
Groundwater Tracer Study Report	Attachment D, section IV.C.2	DDW	Upon completion of the tracer study
Comprehensive Cross-Connection Control Program Report	Attachment D, section V.C	DDW	Prior to the operations of the Facility

Cross-Connection Inspection Report	Attachment D, section V.C	DDW	Prior to the operations of the Facility
Indicator Compound Study	Attachment D, section IX.B	DDW	Prior to the operations of the Facility
Alternate Source of Drinking Water Supply Plan	Attachment D, section I.4	DDW	Prior to the operations of the Facility
RWC Management Plan	Attachment D, section III.D.	DDW	Within the first 6 months of operation of the Facility and on an annual basis thereafter.
Background Groundwater Quality Report	Attachment D, section VII.D.1	DDW	Within the first 6 months of operation of the Facility.
Operation Optimization Plan (OOP)	Attachment D, section VIII	DDW	Draft due prior to the Facility commissioning. Final due within 90 days following completion of the Facility startup and commissioning, within six months of optimizing treatment processes and anytime thereafter operations are optimized that result in a change in operation

**IX. VOLUMETRIC REPORTING REQUIREMENTS**

- A. The Discharger must submit an annual volumetric report to the State Water Board by April 30 of each year. The Discharger must submit this annual volumetric report containing monthly data in electronic format via GeoTracker.

The Discharger must report in accordance with each of the items in section 3 of the Recycled Water Policy as described below:

1. Influent. Monthly total volume of wastewater collected and treated by the Facility.
2. Production. Monthly volume of wastewater treated, specifying level of treatment.
3. Discharge. Monthly volume of treated wastewater discharged to emergency storage and specifying level of treatment.
4. Reuse. Monthly volume of recycled water distributed.
5. Reuse Categories. Annual volume of treated wastewater distributed for beneficial use in compliance with title 22 in each of the reuse categories listed below:
  - a) Agricultural irrigation: pasture or crop irrigation.
  - b) Landscape irrigation: irrigation of parks, greenbelts, and playgrounds; school yards; athletic fields; cemeteries; residential landscaping, common areas; commercial landscaping; industrial landscaping; and freeway, highway, and street landscaping.
  - c) Golf course irrigation: irrigation of golf courses, including water used to maintain aesthetic impoundments within golf courses.
  - d) Commercial application: commercial facilities, business use (such as laundries and office buildings), car washes, retail nurseries, and appurtenant landscaping that is not separately metered.
  - e) Industrial application: manufacturing facilities, cooling towers, process water, and appurtenant landscaping that is not separately metered.
  - f) Other non-potable uses: including but not limited to dust control, flushing sewers, fire protection, fill stations, snow making, and recreational impoundments.
  - g) Groundwater recharge: the planned use of recycled water for replenishment of a groundwater basin or an aquifer that has been designated as a source of drinking water supply for a public water system. This includes surface or subsurface applications, except use of recycled water for seawater intrusion barrier.

**X. PRETREATMENT PROGRAM MONITORING AND REPORTING REQUIREMENTS**

- A. The Discharger shall submit to the Santa Ana Water Board and USEPA, Region 9, a quarterly compliance status report. The quarterly compliance status report shall cover the periods of January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31. Each report shall be submitted by the end of the month following the quarter. This quarterly reporting requirement

shall commence for the first full quarter following the issuance of this Order. The reports shall identify:

1. All significant industrial users (SIUs) which violated any standard or reporting requirements during that quarter;
  2. The violations committed (distinguish between categorical and local limits);
  3. The enforcement actions undertaken; and
  4. The status of active enforcement actions from previous periods, including closeouts (facilities under previous enforcement actions which attained compliance during the quarter).
- B. Annually, the Discharger shall submit a report to the Santa Ana Water Board, State Water Board, and USEPA Region 9 describing the pretreatment activities within the service area during the previous year. If any control authority within the service area is not in compliance with any conditions or requirements of this Order or their approved pretreatment program (such as industrial users discharges, interjurisdictional agency agreement implementation issues, or other causes,) then the Discharger shall also include the reasons for noncompliance and state how and when the Discharger and the control authority shall comply with such conditions and requirements. This annual report shall cover operations from July 1 to June 30 of each fiscal year and is due on September 1 of each year. The report shall contain A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the, but not limited to, the following information:
1. POTW's influent and effluent wastewaters for those pollutants which are known or suspected to be discharged by industrial users (IUs) as identified by USEPA under section 307(a) of the CWA. The summary will include the results of annual full priority pollutant scan, with quarterly samples analyzed only for those pollutants detected in the full scan. The Discharger shall also provide any influent or effluent monitoring data for non-priority pollutants that the Discharger believes may be causing or contributing to interference or pass-through, or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR part 136 and amendments thereto.
  2. A discussion of any upset, interference, or pass-through incidents at the treatment plant (if any), which the Discharger knows or suspects were caused by IUs of the POTW system. The discussion shall include the following:
    - a) The reasons why the incidents occurred, the corrective action taken, and, if known, the name and address of the IU(s) responsible.
    - b) A review of the applicable pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be



necessary to prevent pass-through, interference or noncompliance with sludge disposal requirements.

3. A complete and updated list of the Discharger's SIUs, including names, Standard Industrial Classification (SIC) code(s) and addresses, and a list of any SIUs deletions and/or additions. The Discharger shall provide a brief explanation for each deletion. The SIU list shall identify the SIUs subject to Federal Categorical Standards by specifying which set(s) of standards are applicable to each SIU. The list shall also indicate which SIUs are subject to local limitations more stringent than Federal Categorical Standards and those which are not subject to local limits.
4. A list or table characterizing the industrial compliance status of each SIU, including:
  - a) SIU name;
  - b) Industrial category;
  - c) The type (processes) of wastewater treatment in place;
  - d) Number of samples taken by the POTW during the year;
  - e) Number of samples taken by the SIU during the year;
  - f) Whether all needed certifications (if allowed) were provided by SIUs which have limits for total toxic organics;
  - g) Federal and Regional Standards violated during the year, reported separately;
  - h) Whether the SIU at any time in the year was in Significant Noncompliance (SNC), as defined by 40 CFR section 403.12(f)(2)(vii). SNC is determined at the beginning of each quarter based on data of the previous six months;
  - i) A summary of enforcement actions against the SIU taken during the year, including the type of action, final compliance date, and amount of fines assessed/collected (if any). Proposed actions, if known, should be included; and
  - j) Number of inspections conducted at each SIU during the year.
5. A compliance summary table which includes:
  - a) SIUs which were in SNC at any time during the year;
  - b) The total number of SIUs which are in SNC with pretreatment compliance schedules during the year;
  - c) The total number of notices of violation and administrative orders issued against SIUs during the year;
  - d) The total number of civil and criminal judicial actions filed against SIUs during the year;
  - e) The number of SIUs which were published as being in SNC during the year; and
  - f) The number of IUs from which penalties were collected during the year.

6. A short description of any significant changes in operating the pretreatment program which differ from the previous year including, but not limited to changes concerning:
    - a) The program's administrative structure;
    - b) Local industrial discharge limitations;
    - c) Monitoring program or monitoring frequencies;
    - d) Legal authority or enforcement policy;
    - e) Funding mechanisms; and
    - f) Resource requirements and/or staffing levels.
  7. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.
  8. A summary of public participation activities to involve and inform the public.
  9. A description of any changes in sludge disposal methods and discussion of any concerns not described elsewhere in the report.
- C. The cumulative number of IUs that the Discharger has notified regarding Baseline Monitoring Reports and the cumulative number of IU responses.

**ATTACHMENT F – FACT SHEET**

**ORDER NO. R8-2023-0009**

This Fact Sheet includes background information, legal requirements, technical rationale; and serves as the basis for the requirements of Order No. R8-2023-0009, *Waste Discharge Requirements and Master Recycling Permit for East Valley Water District's Sterling Natural Resource Center* (Order), the directives in Monitoring and Reporting Program (MRP) in Attachment E and the Water Recycling Requirements in Attachment D. This Fact Sheet is incorporated into and constitutes findings for the Order, Attachment D, and MRP.

**I. ORDER INFORMATION**

A. Table F-1 below, summarizes the administrative information related to the East Valley Water District's Sterling Natural Resource Center (Facility).

**Table F- 1 Facility Information**

WDID	8 300112001
Discharger	East Valley Water District
Name of Facility	Sterling Natural Resource Center
Facility Address	25376 5th St., San Bernardino, CA 92410
Facility Contact, Title and Phone	Jeff Noelte, Director of Engineering & Operations, (909) 806-4096
Authorized Person to Sign and Submit Reports	Jeff Noelte, Director of Engineering & Operations
Mailing Address	31111 Greenspot Rd, Highland, CA 92346
Billing Address	31111 Greenspot Rd, Highland, CA 92346
Type of Facility	Publicly Owned Treatment Works
Threat to Water Quality	2
Complexity	A
Pretreatment Program	Yes
Permitted Discharge Flowrate	8 Million Gallons per Day (MGD)
Design Flowrate	8 MGD
Watershed	Bunker Hill-B Groundwater Management Zone (GMZ)
Receiving Water Type	Groundwater

B. East Valley Water District (EVWD or Discharger) owns and operates the Sterling Natural Resource Center (SNRC or Facility) located at 25376 5th St., San Bernardino, CA 92410.

C. The SNRC will discharge disinfected and tertiary treated recycled water into the Bunker Hill-B GMZ. Attachment B, Figure B-2 shows the location of the spreading basins for the discharge of disinfected and tertiary treated recycled

water into the Bunker Hill-B GMZ. The Facility will begin operation approximately by January 2024.

- D. The Discharger submitted a Report of Waste Discharge, dated February 5, 2022, applying for waste discharge requirements and/or water recycling requirements for the use of the 8 MGD of disinfected and tertiary treated recycled water for groundwater replenishment and reuse by surface application at the spreading basins. The Discharger also submitted to DDW the *Title 22 Engineering Report: Sterling Natural Resource Center* (Engineering Report) dated November 2021 to demonstrate compliance with California Code of Regulations, title 22, division 4, chapter 3, article 5.1, *Indirect Potable Reuse: Groundwater Replenishment – Surface Application*. Upon DDW's review of the Engineering Report, DDW issued a letter entitled, *Division of Drinking Water's Conditional Acceptance of the Title 22 Engineering Report for the East Valley Water District – Sterling Natural Resource Center Groundwater Replenishment Project (3690026-701)*, dated August 1, 2023, as revised by DDW's letter issued on October 13, 2023, to correct conditions and responsibilities regarding well-control zones. The Santa Ana Water Board has reviewed DDW's recommendations included in their August 1, 2023, Conditional Acceptance Letter, and DDW's revisions, and has incorporated the recommendations as requirements in this Order and its pertinent attachments.

## II. FACILITY DESCRIPTION

The Discharger is responsible for providing potable water treatment and delivery services and wastewater collection for the Discharger's domestic, commercial and irrigation customers. EVWD has a service population of approximately 104,000 and its service area is about 18,000 acres. The Discharger has constructed the SNRC that will discharge disinfected and tertiary treated recycled water to replenish the Bunker Hill-B GMZ. The SNRC is in southwestern San Bernardino County. The SNRC is a project by the Discharger with the collaboration of the San Bernardino Valley Municipal Water District (San Bernardino Valley). The SNRC is a water supply project that supplements existing water supplies by providing a reliable, high-quality source of water to recharge the Bunker Hill-B GMZ. The SNRC consists of two major components: Wastewater Recycling Facility (WWRF) and the Weaver Basins. Non-potable use of treated water from the WWRF is an additional minor component. The SNRC includes both treatment processes and pumping stations. Produces disinfected and tertiary treated recycled water for mostly indirect potable reuse and for non-potable reuse, at a lower volumetric scale.

### A. Wastewater Treatment

#### 1. Wastewater Recycling Facility (WWRF)

The WWRF of the SNRC is designed to produce up to 8 MGD of disinfected and tertiary treated recycled water, and, in the future, its treatment capacity

may be expanded to 10 MGD by adding additional treatment trains. Wastewater generated in the EVWD's service area, which includes a small portion of the SBMWD's service area, is primarily from residential and commercial sources with negligible industrial contribution. The wastewater is conveyed by gravity to the WWRF. The WWRF's raw wastewater treatment processes include coarse screens, vortex-type grit removal units, and cylindrical fine screens (preliminary treatment), flow equalization, followed by a membrane bioreactor (MBR) system that includes activated sludge aeration basins with nitrification and denitrification capabilities (secondary treatment) and microfiltration membranes (tertiary treatment), and Ultra-Violet (UV) irradiation for disinfection of the tertiary treated effluent. Also, the WWRF includes solids handling facilities, which include sludge thickening, anaerobic co-digestion of waste activated sludge and food waste, biosolids dewatering, and digester gas cogeneration. Biosolids generated will be hauled offsite for disposal.

## 2. Conveyance Piping

Following wastewater tertiary treatment and disinfection, the Facility will pump the recycled water to the Weaver Basins, for surface application, through a 30-inch conveyance pipeline, the Regional Recycled Water Pipeline (RRWP), that is approximately 5 miles long and is owned by San Bernardino Valley. The Facility is equipped with a treated wastewater pumping station that includes a storage tank divided into two separate compartments: one storing the treated wastewater intended for recycling and the other storing plant service water. The treated wastewater pumping station is equipped with six (6) 2800-gallons per minute pumps equipped with a variable frequency drive to cover a full range of discharge flows, as needed, and send recycled water to the spreading basins. In the future, through coordination with San Bernardino Valley, turnouts from the conveyance pipeline may be installed to convey recycled water to other spreading locations and/or non-potable customers. In addition, the San Bernardino Valley is working collaboratively with SBMWD on the development of the extension of the RRWP that will connect the SNRC and the San Bernardino Water Reclamation Plant (SBWRP).

## B. Discharge Locations

### 1. Weaver Basins

The Discharger will utilize the Weaver Basins, which are owned by San Bernardino Valley, to spread and percolate, initially, up to 8 MGD of the disinfected and tertiary treated recycled water to recharge the Bunker Hill-B GMZ. The Weaver Basins include five (5) rectangular spreading basins with 9 feet of depth and the volume of each basin varies from 5.5 to 19 million gallons. The effective recharge area is 15 acres, the estimated infiltration rate is 7.6 feet per day, the overall recharge capacity is estimated at 37.1 MGD,

depth to groundwater is 113 feet below ground surface, and the vadose zone travel time is estimated to be 15 days.

The diluent water source for the Facility will consist primarily of groundwater underflow that will include Santa Ana River water and imported water that is percolated into the subsurface at the Santa Ana River Spreading Grounds, which are located upstream and about 2 miles east of the Weaver Basins.

## 2. Non-Potable Recycled Water Reuse

The Discharger produces recycled water for non-potable reuse at present and future use sites such as the ornamental landscape ponds located by the Administration Center building.

### C. Monitoring wells

The Discharger will monitor the groundwater quality downgradient from the groundwater recharge locations using 2 existing monitoring well sites and one future monitoring well site (MW-C). Monitoring wells MW-A and MW-B will be used to assess compliance with discharge of recycled water at the Weaver Basins and will be multi-nested to be able to monitor water-bearing layers 1, 3, and 5 of the Bunker Hill-B GMZ. Also, monitoring well MW-C is proposed to be located 11,800 ft downgradient from the Weaver Basins and will be constructed by 2025. Monitoring well MW-C will be located 180 days of travel time upgradient of the nearest EVWD's production well. Monitoring well EVWD Plant No. 120 will be used to assess water quality upgradient from the Weaver Basins (diluent water quality). The monitoring wells will allow groundwater elevations to be measured and water quality samples to be collected from the aquifer initially receiving recycled water as a source of drinking water supply. Section IV.H of the MRP requires groundwater monitoring to assess any potential impacts to receiving waters from the discharge. In accordance with the Water Code section 13750.5; construction, alteration, and destruction of monitoring wells shall be performed by contractors licensed in accordance with the California Contractors' License Law (division 3, chapter 9, Business and Professions Code), except where exempted by law.

### D. Production Wells

The Bunker Hill-A and B GMZs meet approximately 90 percent of the water supply demand in the EVWD's service area. The Discharger operates eighteen production wells to pump from the Bunker Hill-A and B GMZs. This Order does not regulate the extraction or discharge of groundwater from the production wells. The Discharger has established primary and secondary boundaries representing zones of controlled drinking water well construction in accordance with title 22, section 60320.100(e).

## III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

- A. **Legal Authorities.** The Order is issued pursuant to the Water Code, sections 13263, 13267, and 13523.1. The Order serves as Waste Discharge Requirements (WDRs) issued pursuant to the Water Code, article 4, chapter 4, division 7.
- B. **California Environmental Quality Act (CEQA).** San Bernardino Valley, as lead agency under CEQA, prepared an Environmental Impact Report (EIR) for the SNRC (State Clearinghouse [SCH] No. 2015101058). The San Bernardino Valley certified the EIR on March 15, 2016 and filed a Notice of Determination on March 16, 2016. Since the certification of the 2016 EIR, EVWD became the lead agency for SNRC in or about 2018. Prior to 2018, EVWD provided sewer collection services in its sphere of influence. EVWD received approval from the Local Agency Formation Commission (LAFCO) for San Bernardino County to include wastewater treatment, reclamation, and disposal to its services under Resolution No. 3276 issued in August 2018. This gave EVWD the authority to collect, treat, reclaim, and dispose of wastewater and, therefore, authorization to construct and operate the SNRC. LAFCO's approval was contingent upon EVWD's assumption of San Bernardino Valley's obligations under the Final EIR and the associated Mitigation Monitoring and Reporting Plan (MMRP). In October 2018, through an Assignment and Assumption Agreement, EVWD accepted, assumed, and agreed to perform, fulfill and comply with all the obligations and responsibilities of San Bernardino Valley, express and implied, arising from and/or related to the SNRC Final EIR and associated MMRP. Since then, two addenda to the EIR have been completed. In July 2019, EVWD as the lead agency adopted Addendum No. 1 to the 2016 EIR, which evaluated specified operational changes to the SNRC facility that included emergency operations and recycled water detentions ponds, use of an adjacent parcel, and food waste facilities. In January 2021, EVWD as lead agency adopted Addendum No. 2 to the 2016 EIR to allow the recharge of recycled water produced at SNRC at two additional recharge basin locations (including the Weaver Basins) in the City of Highland and an extension of the 2016-EIR certified treated water conveyance pipeline system to the new recharge basin locations. EVWD filed a Notice of Determination for Addendum No. 2 on July 23, 2021. Neither of these changes created new or increased environmental impacts beyond those analyzed and mitigated in the 2016 EIR. The Santa Ana Water Board is a responsible agency under CEQA for the purposes of issuing this Order and is relying upon the analysis in the EIR and subsequent addenda.
- C. **Water Reclamation Statute.** The California Legislature declared in the Water Code section 13511, that a substantial portion of the future water requirements of the State may be economically met by the beneficial use of recycled water. The Legislature also expressed in the Water Code section 13512, the State's intent to undertake all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water requirements of the State. The adoption of the Order is consistent with the

legislature's declaration because it facilitates the use of recycled water to supplement potable water supplies.

- D. **Water Quality Control Plan.** The Santa Ana Water Board's *Water Quality Control Plan for the Santa Ana River Basin* (Basin Plan) designates beneficial uses, establishes water quality objectives (WQOs), and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

On January 22, 2004, the Santa Ana Water Board adopted Resolution No. R8-2004-0001, amending the Basin Plan to incorporate revised boundaries for groundwater subbasins, now termed "management zones," new nitrate-nitrogen and total dissolved solids (TDS) objectives for the new management zones, and new nitrogen (N) and TDS management strategies applicable to both surface and groundwaters. The State Water Board and the office of Administrative Law approved the N/TDS Amendment on September 30, 2004 and December 23, 2004, respectively. The water quality objectives for TDS and N as well as management strategies contained in the Basin Plan have since been amended several times. Effluent limitations for TDS and total inorganic nitrogen (TIN) in this Order are based on N and TDS wasteload allocations included in the Basin Plan and TDS assimilative capacity considerations for the Bunker Hill-B GMZ (see section IV.C of this Attachment F).

The Order implements the Basin Plan by prescribing requirements for the production, reuse, and disposal of recycled water that will not adversely impact water quality, beneficial uses, human health, or the environment. The beneficial uses of groundwaters listed in the Basin Plan for the Bunker Hill-B Groundwater Management Zone are municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PROC).

- E. **Recycled Water Policy.** The purpose of the State Water Board's *Water Quality Control Policy for Recycled Water* (Recycled Water Policy) is to increase the production and use of recycled water from wastewater sources in a manner that implements State and federal water quality laws and protects public health and the environment. The Recycled Water Policy provides requirements for the Regional Water Quality Control Boards (Regional Water Boards), proponents of recycled water projects, and the public regarding the methodology and appropriate criteria for the State Water Board and the Regional Water Boards to use when issuing permits for recycled water projects. The State Water Board first adopted the Recycled Water Policy on February 3, 2009; and amended the policy on January 22, 2013 and December 11, 2018. The 2018 Amendment, effective April 8, 2019, includes permitting guidance for groundwater recharge projects and updated monitoring requirements for CECs. This Order includes



monitoring and reporting requirements for CECs and volumetric data which are consistent with the Recycled Water Policy.

- F. **Antidegradation Policy.** The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Resolution No. 68-16). Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Santa Ana Water Board's Basin Plan implements and incorporates by reference the State antidegradation policy. Requirements specified in this Order should prevent any degradation of the receiving waters. A constituent of concern for potential degradation of receiving waters is TDS. The effluent limit for TDS is set at 545 mg/L, which is higher than the TDS water quality objective (WQO) of 330 mg/L for the Bunker Hill-B GMZ in the Basin Plan. However, this effluent limitation is based on available TDS assimilative capacity for the Bunker Hill-B GMZ and subject to TDS mitigation commitments and potential offsets. See the explanation in section IV.C of this Attachment F below. Therefore, the permitted discharge is consistent with the antidegradation provisions of the State Water Board Resolution No. 68-16.
- G. **Indirect Potable Reuse Regulations.** Groundwater Replenishment – Surface Application. Title 22, chapter 3 establishes specific requirements for indirect potable reuse groundwater recharge projects. This Order incorporates discharge specifications, effluent limitations, and monitoring and reporting requirements from title 22, sections 60320.100 through 60320.130.
- H. **Water Rights and Wastewater Change Petition.** Water Code section 1211 requires the owner of a wastewater treatment plant to obtain approval from the State Water Board prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater where changes in the discharge or use of treated wastewater result in decreasing the flow in any portion of a watercourse. On September 16, 2016, the San Bernardino Valley filed Wastewater Change Petition WW0095 with the State Water Board's Division of Water Rights pursuant to Water Code section 1211. The purpose of the petition is for the San Bernardino Valley to obtain the State Water Board's authorization for the construction and operation of the SNRC, however, the SNRC was, initially, to be jointly owned by the San Bernardino Valley and EVWD prior to EVWD receiving approval from LAFCO to include wastewater treatment, reclamation, and disposal to its authorized services in 2018 (EVWD owns and operates the WWRF and the San Bernardino Valley owns and operates the RRWP and Weaver Basins). The petition seeks to change the point of discharge, place of use, purpose of use, and quantity of discharge of treated wastewater currently discharged to the Santa Ana River. The State Water Board determined that the petition for change will not cause injury to any other user of water. On April 28, 2017, the State Water Board's Division of Water Rights issued an order approving Wastewater Change Petition WW0095. As part of the authorization order, the State Water Board prepared a Mitigation Monitoring and Reporting

Plan (MMRP) that is based on the information and mitigations measures contained in the EIR for SNRC. The MMRP list mitigation measures recommended in the EIR for SNRC and specifies implementation and monitoring responsibilities. One of the mitigation measures, BIO-3, included in the MMRP specifies that the diversion of wastewater flow to SNRC shall not occur either until the Upper Santa Ana River Habitat Conservation Plan (HCP) has been fully executed by the US Fish and Wildlife Service (Service) and the California Department of Fish and Wildlife (Department) or a Habitat Mitigation and Monitoring Plan (HMMP) has been approved by the Service and the Department (see section III.I below).

- I. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & Game Code, §§ 2050-2097) or the Federal Endangered Species Act (16 USC §§ 1531-1544). The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act. On March 13, 2017, the US Fish and Wildlife Service (Service) issued a Biological Opinion (BO; FWS-SB-16B0182-17F0387) addressed to the United States Environmental Protection Agency (USEPA) with regards to proposed federal funding for the construction and operation of SNRC through the Clean Water State Revolving Fund that is administered by the State Water Board's Division of Financial Assistance. The BO addresses the effect of SNRC on the federally endangered San Bernardino Kangaroo Rat (SBKR) and its designated critical habitat and the federally threatened Santa Ana Sucker (SAS) and its designated critical habitat in accordance with section 7 of the Federal Endangered Species Act. The BO concludes that providing that USEPA and the San Bernardino Valley comply with the measures included in the Incidental Take Statement of the BO, the proposed construction and operation of SNRC is not likely to jeopardize the continued existence of SBKR or SAS, or adversely modify SBKR or SAS critical habitat. An amendment to the BO was issued on August 11, 2017 (FWS-SB-16B0182-17F0387-R001) that addressed the roles and responsibilities of both the EPA and State Water Board associated with implementation of the SNRC conservation measures. On January 3, 2022, the Service issued a second amendment to the BO (FWS-SB-16B0182-17F0387-R002) to revise the conservation measures for SBKR and Santa Ana River woolly-star based on changes to the SNRC project. These changes did not change project effects on SAS and the analysis in the 2017 BO remains valid. General and Species-Specific Conservation Measure No. 17 (CM-17), included in the BO for SAS, restricts the diversion of wastewater by the EVWD from the Rapid Infiltration and Extraction (RIX) Facility, which discharges into the Santa Ana River, until the Santa Ana Sucker HMMP has been approved by the Service and the actions proposed in CM-17 have been completed or show evidence of significant progress toward successful implementation.
- J. **Pretreatment Program.** This Order contains requirements for the implementation of an effective pretreatment program pursuant to the California

Code of Regulations, title 23, section 2233, Clean Water Act section 307, and 40 CFR parts 35 and 403. The Discharger has established and approved regional pretreatment program that also meets the requirements of title 22, section 60320.106. The approved pretreatment program and its components, such as implementing ordinances, local limits, enforcement response plan, and control mechanisms, among others, are an enforceable condition of this Order.

- K. **Assembly Bill 2108.** Water Code section 13149.2(b) requires that the Santa Ana Water Board, “[w]hen issuing...individual [WDRs]...that regulate activity or a facility that may impact a disadvantaged or tribal community, and that includes a time schedule in accordance with subd. (c) of Section 13263 for achieving an applicable [WQO], an alternative compliance path that allows time to come into compliance with [WQO], or water quality variance...” must include finding(s) regarding “potential environmental justice, tribal impact, and racial equity considerations” that are relevant to the permitting action (see definitions for disadvantaged and tribal communities in the Glossary of Common Terms of Attachment A of this Order). This Order does not incorporate a time schedule for compliance with applicable WQOs or any other provisions described in Water Code section 13149.2(d). Accordingly, no additional findings are necessary under Water Code section 13149.2.
- L. **Other Plans, Policies, and Regulations.** Pursuant to CWA section 402(p) and 40 CFR part 122, 123, and 124, the State Board adopted a general NPDES permit to regulate stormwater discharges associated with industrial activities (State Water Board Industrial General Permit Order No. 2014-0057-DWQ, NPDES No. CAS000001) on April 1, 2014, which became effective on July 1, 2015. Stormwater discharges from the Facility are regulated under the State Water Board Industrial General Permit Order No. 2014-0057-DWQ (as amended by Order 2015-0122-DWQ and subsequent 2018 amendment).

#### IV. **RATIONALE FOR DISCHARGE PROHIBITIONS, DISCHARGE SPECIFICATIONS, AND EFFLUENT LIMITATIONS**

This Order establishes requirements based on the Basin Plan, Recycled Water Policy, and title 22 for the indirect potable reuse of tertiary treated and disinfected recycled water discharged to groundwater from the Facility and for non-potable reuse.

- A. **Discharge Prohibitions.** This Order establishes discharge prohibitions for the Facility as listed in Section III of this Order. The discharge prohibitions are based on the Basin Plan and State Water Board's plans and policies. These prohibitions are consistent with the requirements set for other discharges regulated by waste discharge requirements adopted by the Santa Ana Water Board.
- B. **Tertiary Treatment and Disinfection Effluent Limitations.** Title 22, section 60320.108(b) requires that, at a minimum, the recycled municipal wastewater applied at a groundwater replenishment and reuse project (GRRP) shall be

filtered wastewater as defined under title 22, section 60301.320 and disinfected tertiary recycled water as defined under title 22, section 60301.230. The tertiary treatment and disinfection effluent limitations in section IV.B of this Order and section V.A of Attachment D of this Order ensure proper oxidation, filtration, and disinfection of the treated wastewater effluent prior to surface application at a GRRP.

- C. **Discharge Specifications and Effluent Limitations.** The discharge specifications and effluent limitations are derived from the basin-specific WQOs, except for TDS, for the Bunker Hill-B GMZ as listed in Table 4-1 of the Basin Plan, and from non-basin specific WQOs included in the Basin Plan for the protection of groundwater quality in general. Constituents with both WQOs and maximum contaminant levels (MCLs) have effluent limitations set at the lower concentration of the two objectives. In the case of TDS, the effluent limit is 545 mg/L, which is higher than the TDS WQO of 330 mg/L for the Bunker Hill-B GMZ and is based on available TDS assimilative capacity for the Bunker Hill-B GMZ.

The State Water Board's Recycled Water Policy allows the allocation of up 20% of the TDS assimilative capacity of a groundwater basin to a group of dischargers. The Santa Ana Water Board has allocated 20% (10 mg/L) of the available TDS assimilative capacity concentration of 50 mg/L (TDS WQO for Bunker Hill-B GMZ of 330 mg/l – ambient groundwater TDS concentration of 280 mg/l), based on the 2018 ambient water quality computation results (SAWPA's 2020 *Ambient Water Quality in the Santa Ana Watershed for the Period of 1999 to 2018*) to a group of three wastewater dischargers that includes the Discharger, the City of Redlands, and the San Bernardino Municipal Water Department (SBMWD). The Discharger has demonstrated through an antidegradation groundwater modeling for TDS and nitrate that the effluent limit of 545 mg/L, in conjunction with two other wastewater discharge sources, will not result in the increase of the ambient groundwater TDS concentration in the Bunker Hill-B GMZ above its TDS WQO of 330 mg/L for the next 20 years.

However, the Discharger groundwater model results indicate that the three wastewater discharge sources, in conjunction, will increase the TDS concentration in the ambient groundwater to 289.1 mg/L within 10 years of operation, which will almost use the entire 20% of available assimilative capacity that was allocated to the group of dischargers, which is equivalent to an ambient groundwater TDS concentration of 290 mg/l. To avoid exceeding the 20% of available TDS assimilative capacity allocated by the Santa Ana Water Board to the group of dischargers, the Discharger, the City of Redlands, SBMWD, and the San Bernardino Valley have formed the Bunker Hill Regional Recycled Water Coalition (Coalition) and have entered into an agreement entitled, *Memorandum of Understanding for the Mitigation of Salt Loading in the Bunker Hill-B Groundwater Management Zone* (MOU). According to the MOU, the Coalition partners are working together to develop and implement a regional approach to

salinity management for the Bunker Hill-B GMZ, prior to completion and implementation of the Upper Santa Ana River Salt and Nutrient Management Plan, which may result in revised findings regarding the available TDS and nitrate assimilative capacity for the Bunker Hill-B GMZ. Based on the Coalition modeling to date, the 20% allocation of the available TDS assimilative capacity of the Bunker Hill-B GMZ, which is currently equivalent to 10 mg/L, is estimated to be allocated amongst three Coalition partners, as an internal agreement, as follows, based on the current anticipated discharges from the parties: 3.7 mg/L for EVWD, 2.9 mg/L for City of Redlands, and 3.4 mg/L for SBMWD.

The Coalition partners' salinity management approach includes the development of solutions to prevent exceeding the 20% TDS assimilative capacity allocation. The solutions that are being considered by the Coalition include a regional recycled water desalter and associated brine line, enhanced upstream recharge of low TDS water, and/or other regional project constructed via partnership between all Coalition partners that contribute TDS loadings to the Bunker Hill-B GMZ. According to the Discharger, in September 2023, the Coalition partners contracted an engineering firm to develop a regional feasibility study for a regional recycled water desalter and/or other preferred salinity management strategy(ies).

This Order includes a timeline for the implementation by the Discharger, in collaboration with its Coalition partners, of TDS mitigations commitments (section VIII.G. of this Order) that are required to be completed as a condition for the allocation of the 20% available TDS assimilative capacity for the group of wastewater dischargers. If the Discharger and its Coalition partners do not implement the entire TDS mitigation commitments, the Santa Ana Water Board may determine (as detailed in section VIII.G. of the Order) that the Discharger and other wastewater dischargers have failed to fulfill the conditions by which the 20% TDS assimilative capacity was granted by the Santa Ana Water Board and require that an approved TDS mitigation plan be implemented by the Discharger to offset TDS loadings in excess of the TDS effluent limitation of 330 mg/L that would be applied to the Discharger instead of the TDS effluent limitation of 545 mg/L (footnote 3 of Table 4 of section IV.C. of the Order).

- D. **Primary and Secondary Maximum Contaminant Levels (MCLs).** Title 22 section, 60320.100(j) requires the Discharger to not exceed effluent limits pertaining to groundwater replenishment pursuant to article 5.1 and primary and secondary MCLs are applied in this Order as effluent limits to protect the MUN beneficial use of the Bunker Hill-B GMZ. Title 22, section 60320.112 also requires the Discharger to notify the Santa Ana Water Board and DDW if the MCLs are exceeded. Tables 5 through 9 of this Order lists the effluent limitations for the constituents with primary MCLs. For constituents with both a secondary MCL and WQO established in the Basin Plan the effluent limitation was set at the

more protective of the two values. The MCLs and corresponding effluent limitations are based on the following:

1. Inorganic parameters are established in title 22, section 64431, Table 64431-A.
  2. Volatile organic compounds parameters are established in title 22, section 64444, Table 64444-A.
  3. Synthetic organic compounds parameters are established in title 22, section 64444, Table 64444-A.
  4. Disinfection byproducts parameters are established in title 22, section 64533, Table 64533-A.
  5. Radionuclides are established in title 22, sections 64442 and 64443, Tables 64442 and 64443.
  6. Constituents with secondary MCLs are established in title 22, section 64449, Tables 64449-A and 64449-B.
  7. Actions Levels for copper and lead per title 22, section 64678.
- E. **Notification Levels.** Title 22, section 60320.120 requires the Discharger to monitor all constituents with notification levels. The notification levels and response levels are listed in Table 10 of this Order.
- F. **Water Reclamation Requirements.** Water Code section 13520 requires DDW to make recommendations to the Santa Ana Water Board based on the Engineering Report for the Facility. The Santa Ana Water Board has reviewed those recommendations made in DDW's *Division of Drinking Water's Conditional Acceptance of the Title 22 Engineering Report for the East Valley Water District – Sterling Natural Resource Center Groundwater Replenishment Project (3690026-701)*, issued on August 1, 2023, as revised by DDW's letter issued on October 13, 2023 to correct conditions and responsibilities regarding well-control zones, and has incorporated the recommendations as requirements in Attachment D and the MRP (Attachment E) of this Order.

## V. RATIONALE FOR PROVISIONS

- A. **Standard Provisions.** The standard provisions contain requirements that allow the Santa Ana Water Board to enforce this Order. Provisions include need for inspection, spill and emergency reporting, records maintenance, and reporting of

changes. Standard provisions apply to all WDRs and are consistent with Santa Ana Water Board findings.

- B. **Special Provisions.** These requirements ensure the Facility operates properly, within design parameters, and is protected from storm events to not cause or contribute to a condition of pollution or nuisance and to protect beneficial uses.
- C. **Notices.** Notices are included in this Order to inform the Discharger of administrative issues regarding this Order.

## VI. RATIONALE FOR MONITORING AND REPORTING PROVISIONS

- A. The purpose of the MRP is to determine and ensure compliance with discharge specifications, effluent limitations, and other requirements established in this Order. The MRP also helps the Santa Ana Water Board and the Discharger to assess treatment efficiency, characterize effluents, ensure water quality objectives and beneficial uses of the groundwater basin are protected, and minimize the effects of the discharge on the receiving water quality. The MRP also specifies requirements concerning the proper use, maintenance, methods, and the monitoring type intervals and frequency necessary to provide data that are representative of the activities and discharges regulated under this Order.
- B. The MRP is issued pursuant to the Water Code section 13267, which authorizes the Santa Ana Water Board to require dischargers to submit technical and monitoring reports. The Santa Ana Water Board and DDW need the technical and monitoring reports submitted by the Discharger to determine compliance with the Order and to protect water quality and beneficial uses. The Santa Ana Water Board has assessed this MRP to reduce and eliminate unnecessary or overlapping monitoring and reporting requirements where appropriate. Based on the nature and possible consequences of the discharge, the burden of providing the required reports, including the costs, bears a reasonable relationship for the need for the reports and the benefits to be obtained from the reports.
- C. Title 22 requires monitoring and reporting for groundwater replenishment projects through subsurface discharge, including for indirect potable reuse through groundwater recharge. Title 22, division 4, chapter 3 establishes specific requirements for indirect potable reuse groundwater replenishment – surface discharge projects. The MRP and WDRs incorporate the monitoring and reporting requirements from title 22, sections 60320.100 through 60320.130.
- D. The Recycled Water Policy requires monitoring and reporting of volumetric data and CECs, as detailed in the MRP. The State Water Board uses volumetric data to track and report the percentage of wastewater recycled throughout the State of California. The CEC monitoring tracks the Facility's ability to remove CECs and

requires the Discharger to conduct additional sampling and commence response actions as needed.

- E. Pretreatment program monitoring and reporting requirements are established pursuant to California Code of Regulations, title 23, section 2233 and 40 CFR part 403 regulations.

## VII. PUBLIC PARTICIPATION

The Santa Ana Water Board has considered the issuance of waste discharge requirements (WDRs) and a Master Recycling Permit for East Valley Water District's SNRC, San Bernardino County. As a step in the WDRs adoption process, the Santa Ana Water Board staff developed tentative WDRs and encouraged public participation in the WDR adoption process.

- A. **Title 22 Hearing.** The Discharger held a public hearing (mixed in-person and virtual) regarding the Facility on August 30, 2022, which satisfied the requirements of title 22, section 60320.102. One member of the public submitted written comments; however, no comments warranted a revision to the title 22 Engineering Report. One member of the public made oral comments.
- B. **Notification of Interested Parties.** The Santa Ana Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs and a Master Recycling Permit for the discharge and has provided an opportunity to submit written comments and recommendations. A Notice of Public Hearing was disseminated to interested persons and posted on the Santa Ana Water Board's website. The public had access to the agenda and any changes in dates and locations through the Santa Ana Water Board's website at: <http://www.waterboards.ca.gov/santaana>.
- C. **Written Comments.** Interested persons were invited to submit written comments concerning tentative WDRs. Comments were due either in person or by mail to the Executive Officer at the Santa Ana Water Board at the address on the cover page of this Order, by fax to (951) 320-6362, or by email to Julio Lara at [Julio.Lara@waterboards.ca.gov](mailto:Julio.Lara@waterboards.ca.gov). The deadline to submit written comments was by 5:00 pm on November 27, 2023.
- D. **Public Hearing.** The Santa Ana Water Board held a public hearing on the tentative Order during its regular meeting on the following date and time and at the following location:

Date:	December 1, 2023
Time:	9:00 a.m.
Location:	City of Loma Linda 25541 Barton Road. Loma Linda, California 92534



Interested persons were invited to attend. At the public hearing, which was a video, teleconference and physical meeting, the Santa Ana Water Board heard testimony pertinent to the discharge and WDRs.

**DATE:** January 2, 2024

**TO:** Board of Directors

**FROM:** Adekunle Ojo, Manager of Water Resources  
Michael Plinski, Chief of Water Resources

**SUBJECT:** Consider Amendment No. 1 to the Consulting Services Agreement with Dudek in the amount of \$34,625 for the preparation of the Yucaipa SGMA Annual Report

---

### **Staff Recommendation**

Authorize the CEO/General Manager to execute Amendment No. 1 to the existing Consulting Services Agreement with Dudek to include the preparation of the third annual report of Yucaipa SGMA in the amount of \$34,625.

### **Summary**

At its regular board meeting on October 25, 2023, the Yucaipa Sustainable Groundwater Management Agency (Yucaipa SGMA) approved the proposal by Dudek to prepare the third annual report, which is due to the California Department of Water Resources by April 1, 2024. Dudek prepared the Groundwater Sustainability Plan (GSP) and the first two annual reports. San Bernardino Valley is the fiscal agent for Yucaipa SGMA and manages its contractual arrangements. For internal control purposes, the San Bernardino Valley Board of Directors must authorize the CEO/General Manager to execute a contract for the full amount of \$34,625, with the net fiscal impact to San Bernardino Valley being \$2,164. Amendment No. 1 will add the scope and fee for the annual report preparation to the existing Consulting Services Agreement for annual support services.

### **Background**

On [May 18, 2023](#), the San Bernardino Valley Board of Directors authorized the CEO/General Manager to execute a support services agreement with Dudek in the amount of \$33,490 on behalf of Yucaipa SGMA for the period from May 1, 2023 to April 30, 2024. This action was sequel to a Yucaipa SGMA Board of Directors approval on April 26, 2023. The annual support services contract covers the preparation for and facilitation of the quarterly Board meetings, updating and maintaining the data management system that supports the GSP, addressing data gaps identified in the GSP, and monitoring and evaluating compliance with protocols established in the GSP; the 2023-2024

support services contract also covers developing and implementing a private well owner outreach to address data gaps and broaden the monitoring program. It has been the practice of Yucaipa SGMA to keep the annual support services contract separate from the annual report preparation to maintain flexibility to consider other consultants for former, latter, or both in the future.

**District Strategic Plan Application**

This item is consistent with being a trusted partner and working collaboratively to provide a reliable, resilient, and sustainable water supply.

**Fiscal Impact**

The total cost of the annual report preparation is \$34,625. Funds for these services are available in the Consultants, 6360 line item of the approved FY 2023-2024 General Fund Budget. The net fiscal impact to San Bernardino Valley is \$2,164 or 6.25% of the total; the balance will be paid by the other seven (7) Yucaipa SGMA member agencies as detailed below.

Agency	TOTAL PROPOSAL	Total (%)	Cost split per MOA	split amount
1 South Mesa Water Company	\$ 6,492	18.75%	75%	\$ 25,968.75
2 South Mountain Water Company	\$ 6,492	18.75%		
3 Western Heights Water Company	\$ 6,492	18.75%		
4 Yucaipa Valley Water District	\$ 6,492	18.75%		
5 San Bernardino Valley Municipal Water District	\$ 2,164	6.25%	25%	\$ 8,656.25
6 San Geronio Pass Water Agency	\$ 2,164	6.25%		
7 City of Redlands	\$ 2,164	6.25%		
8 City of Yucaipa	\$ 2,164	6.25%		
	<b>\$ 34,625</b>	<b>100%</b>	<b>100%</b>	<b>\$ 34,625.00</b>

**Attachment**

Amendment No. 1 to the Dudek’s Consulting Services Agreement for Yucaipa SGMA

## **FIRST AMENDMENT TO THE CONSULTING SERVICES AGREEMENT**

This First Amendment to the Consulting Services Agreement (“*Amendment*”) is entered into as of December 19, 2023, by and between Dudek (“*Consultant*”), and San Bernardino Valley Municipal Water District, a water district organized and existing under the California Municipal Water District Law of 1911 (“*District*”). Consultant and District are hereafter referred to individually as “*Party*” and collectively as the “*Parties*.”

### **RECITALS**

A. The Parties entered into that certain Consulting Services Agreement, dated May 1, 2023 (“*Consulting Agreement*”), whereby Consultant agreed to provide certain professional services to District defined as support services to the Yucaipa Sustainable Groundwater Management Agency. The Consulting Agreement provided for a Maximum Fee of \$33,490.

B. The Parties desire to amend the Consulting Agreement further in accordance with Article 1.3 of the Agreement on Task Orders.

### **OPERATIVE TERMS**

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained in this Amendment, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. Recitals; Defined Terms. The Recitals are material to this Amendment, and by this reference are hereby incorporated herein. For purposes of this Amendment, all capitalized terms shall have the meanings given to such terms in the Consulting Agreement, unless such terms are otherwise defined herein.

2. Additional Services. In accordance with Article 1.3 of the Consulting Agreement, the Parties hereby expand the Services to include the additional professional services and activities described in the Proposal, dated October 11, 2023, which is attached as *Attachment “A”* to this Amendment and incorporated herein by this reference. Said services and activities shall be considered Additional Services under the Consulting Agreement and shall be performed and completed in accordance with the standards and obligations set forth in the Consulting Agreement.

3. Compensation. The Maximum Fee is hereby increased to Sixty-Eight Thousand One Hundred and Fifteen Dollars and Zero Cents (\$68,115.00), reflecting Thirty-Four Thousand Six Hundred and Twenty-Five Dollars and Zero Cents (\$34,625.00) increase for the cost of the Additional Services described in Attachment “A” hereto. All references to Maximum Fee in the Consulting Agreement shall refer to the amount set forth herein.

4. Binding Effect. This Amendment shall be binding upon and inure to the benefit of the Parties’ permitted successors and assigns. The Parties acknowledge and agree that except to

the extent specifically provided in this Amendment, the Consulting Agreement shall continue in full force and effect as previously written.

5. No Other Modifications. The Parties acknowledge that this Amendment evidences the entire agreement between the Parties with respect to the matters addressed herein and supersedes all previous negotiations and discussions related thereto.

6. Counterparts. This Amendment may be executed in two or more counterparts, each of which shall be an original, but all of which shall constitute one and the same instrument.

***[Signature Page Follows]***

**IN WITNESS WHEREOF**, the Parties hereby execute this Amendment as of the date first set forth above.

**DISTRICT:**

**SAN BERNARDINO VALLEY MUNICIPAL  
WATER DISTRICT**

By: \_\_\_\_\_  
Heather P. Dyer  
CEO/General Manager

**CONSULTANT:**

**DUDEK**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Its: \_\_\_\_\_

**Attachment A**  
**Dudek Proposal**

October 11, 2022

Yucaipa Groundwater Sustainability Agency  
c/o San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, California 92408

Subject: Proposal to Prepare the 2023 Annual Update Report for the Yucaipa Subbasin  
Groundwater Sustainability Plan

Dear Yucaipa GSA Member Agencies:

Dudek is pleased to present this scope of work and fee to the Yucaipa Groundwater Sustainability Agency (Yucaipa GSA) to prepare the third annual update report for the Yucaipa Subbasin following the adoption of the Groundwater Sustainability Plan (GSP). Per Subarticle 7 of Article 5 of the California Code of Regulations Division 2 Chapter 1.5 (23 CCR §356.2), each Groundwater Sustainability Agency is required to submit an annual report by April 1 of each year following the adoption of a GSP. In summary, the third annual report for the Yucaipa Subbasin will include information collected during the 2022-2023 water year, or 2023 WY, which extended from October 1, 2022 to September 30, 2023. This information will include groundwater elevation, groundwater production, groundwater quality, an accounting of surface water supply, and an estimate of the annual change in storage in the 2023 WY.

The 2023 WY data will be compiled in Microsoft Excel templates provided by the Department of Water Resources to report groundwater extractions by water source type (e.g., urban, agricultural, managed recharge, native vegetation) and surface water sources. The Excel templates will be completed and uploaded, along with an annual report elements guide, to DWR's SGMA Portal website per requirements under SGMA.

The annual report will include a description of the progress in implementing the GSP, including any management actions and/or projects that were implemented to achieve or maintain sustainability. The volume of groundwater pumped per user will be compared to their respective sustainable yield pumping allocations to determine if pumping credits were earned or used, and whether supplemental water was used to directly recharge the aquifer. The accounting of pumping credits and supplemental water that directly recharges the aquifer will help determine if a management action is required.

The following scope of work and fee details the tasks Dudek will undertake to prepare and submit to DWR an annual report that is compliant with the requirements under the Sustainable Groundwater Management Act (SGMA).



# 1 Scope of Work

## Task 1 Groundwater Evaluations

### Task 1.1 Update Groundwater Elevation Hydrographs

Static groundwater elevation data measured at the 76 wells identified in the monitoring network in the GSP will be updated for the 2023 WY. The observed groundwater elevation data collected at the representative monitoring points (RMPs) will be compared to their respective measurable objectives and minimum thresholds to evaluate whether the Subbasin is managed sustainably and if any management actions need to be implemented. In addition to the static groundwater elevation, the status of the well at the time of measurement will be reported and any issues regarding access to the well, modifications made to the well that affect the method for measuring the groundwater elevation, will be included in the report. This task will also identify the seasonal high and low groundwater elevations observed in the 2023 WY.

*Fee for Task 1.1* ..... \$3,400.00

### Task 1.2 Update Water Year-Types

The monthly precipitation data collected at the 17 San Bernardino County Flood Control District (SBCFCD) climatic stations located throughout the Subbasin, plus monthly precipitation data collected at three National Oceanic and Atmospheric Administration (NOAA) climatic stations will be compiled and analyzed to characterize the water year-types for the 2023 WY. Any new climatic stations installed in the Subbasin since the adoption of the GSP will be assessed and included in the climate network.

A figure identifying the water year-types beginning in 1953 (Figure 2-3 in Chapter 2 of the GSP) will be updated to include the 2023 WY. Additionally, the monthly precipitation data will be used to update the cumulative departure from mean monthly precipitation chart (Figure 2-2 in Chapter 2 of the GSP) to update the precipitation trends observed since the early 1960s. These two updated figures will be included in the annual report.

*Fee for Task 1.2* ..... \$1,180.00

### Task 1.3 Plan View Maps of Seasonal Highs and Lows

Plan view maps depicting static groundwater elevations and the hydraulic gradient across the Yucaipa Subbasin will be prepared for the seasonal highs and lows observed in the 2023 WY. The figures will be prepared similarly to Figures 2-29 and 2-30 in Chapter 2 of the GSP that depicted the seasonal low and high, respectively, for the 2018 WY. Each plan view map will include the measured groundwater elevation at the 76 wells in the monitoring network (if available) and indicate the direction of groundwater flow.

*Fee for Task 1.3* ..... \$3,920.00

## Task 1.4 Update Groundwater Production Database

Groundwater production data will be collected and compiled to report the annual volume of groundwater extracted by the active water supply wells in the Subbasin, and wells located outside the Subbasin that pump water into the Subbasin. The annual groundwater production data will be included in the groundwater elevation hydrographs, where applicable, to demonstrate the influence of pumping on groundwater elevations. The annual production will be compared to the sustainable yield pumping allocations assigned to each water purveyor. This analysis will determine if a water purveyor earned pumping credits or will need to implement a management action to offset the pumping exceedance (e.g., purchase SWP water to artificially recharge the aquifer, reduce pumping, implement water conservation policies, supplement groundwater with recycled water, etc.). A summary of this analysis and accounting for each water purveyor will be included in tabular form in the annual report.

*Fee for Task 1.4* ..... \$1,180.00

## Task 1.5 Update Groundwater Quality Database

This task includes updating the GSP groundwater quality database with data collected for the Maximum Benefits Monitoring Program, and will include a review of groundwater monitoring reports uploaded to the Santa Ana River Regional Water Quality Control Board's (Water Board) GeoTracker website for the sites identified in the GSP as active remediation sites in the Subbasin. Groundwater quality hydrographs presented in the GSP will be updated with data collected from the 2023 WY. These hydrographs will include updated data for concentrations of nitrate (as nitrogen) and total dissolved solids.

*Fee for Task 1.5* ..... \$1,180.00

## Task 1 Deliverables

- Groundwater Elevation hydrographs for the 76 wells in the GSP monitoring network
- Groundwater Quality hydrographs showing concentrations of nitrate (as nitrogen) and TDS in groundwater
- Groundwater production table summarizing the volume of groundwater produced for each groundwater user
- Updated figure showing the historical water year-types beginning with the 1953 water year (Figure 2-3 in Chapter 2 of the GSP)
- Plan view maps showing groundwater elevation contours in the Yucaipa Subbasin for the following seasonal highs and lows:
  - Spring 2023
  - Fall 2023

*Total Fee for Task 1* ..... \$10,860.00

## Task 2 Surface Water Supply

### Task 2.1 Update State Water Project Water Importation

An accounting of the volume of State Water Project (SWP) water imported into the Subbasin will be included in the annual report. The volume of SWP water directed to Yucaipa Valley Water District's Yucaipa Valley Water Filtration Facility (YVWFF) and SWP water that was discharged to the Wilson Creek and Oak Glen Creek spreading basins will be reported with an update to Figure 2-21 of Chapter 2 of the GSP.

*Fee for Task 2.1* ..... \$1,180.00

### Task 2.2 Update Surface Water Diversions

This task will include an update to the volume of surface water diverted in the 2023 WY for consumptive use in the Subbasin.

*Fee for Task 2.2* ..... \$295.00

***Total Fee for Task 2*** ..... **\$1,475.00**

## Task 3 Change in Groundwater in Storage

### Task 3.1 Update YIHM

The annual change in groundwater in storage for the 2023 WY will be conducted using the YIHM. The YIHM will be updated with actual pumping information, climatic data (precipitation and temperature) and surface water discharged to spreading basins (and potentially storm water flows captured by storm water basins). An annual water budget analysis will be completed for the 2023 WY by identifying the components of inflows and outflows in the Subbasin and the four management areas. This task will also serve as an exercise in validating the YIHM by comparing simulated results to observed conditions since 2018. Validation is a process of evaluating the uncertainty of a numerical model and helps define the error in the results.

*Fee for Task 3.1* ..... \$5,530.00

### Task 3.2 Water Budget Analyses and Figure Updates

The estimated annual changes in storage by the YIHM will be used to update the following figures depicting the annual water budget analyses and changes in storage: Figure 2-62 (Yucaipa Subbasin), Figure 2-66 (North Bench Management Area), Figure 2-69 (Calimesa Management Area), Figure 2-71 (Western Heights Management Area), and Figure 2-73 (San Timoteo Management Area) in Chapter 2 of the GSP.

*Fee for Task 3.2* ..... \$4,050.00

***Total Fee for Task 3*** ..... **\$9,580.00**

## Task 4 Annual Report

### Task 4.1 Prepare Draft Annual Report

Dudek will prepare a draft of the annual report for the Yucaipa GSA to review and provide comments. The draft report will include all required reporting sections listed in 23 CCR §356.2, including tables, figures, and appendices to support the findings in the annual report. The annual report will conclude with an assessment of the implementation of the GSP, addressing data gaps identified in the GSP, and a description summarizing whether any management actions were implemented and why. The report will also include an assessment of the monitoring network and will identify any modifications or issues that affect the collection of data and evaluation of conditions in the Subbasin.

Dudek anticipates providing a draft copy of the annual report to the Yucaipa GSA to review on March 6, 2024. Dudek anticipates two weeks for the Yucaipa GSA to review and provide comments; and two weeks for Dudek to address all comments and revise the draft annual report accordingly. The scheduled date to submit the 2023 annual report to DWR is April 1, 2024.

DWR has prepared Microsoft Excel data upload templates for GSA's to report basin wide groundwater extraction, surface water supplies, and total water use data. Dudek will utilize these templates to ensure that the data is reported consistently per the requirements by DWR and uploaded successfully to the Monitoring Network Module on their SGMA Portal (<https://sgma.water.ca.gov/portal/>).

There is no formal requirement per SGMA for the Yucaipa GSA to release a draft of an annual report for public review. Therefore, this task does not include the submittal of a draft of the annual report for public review.

*Fee for Task 4.1* ..... \$12,120.00

### Task 4.2 Prepare Final Annual Report

The draft annual report will be revised per comments and suggested edits received by the Yucaipa GSA. A final version of the annual report will be prepared for submittal to DWR by April 1, 2023.

*Fee for Task 4.2* ..... \$590.00

### Task 4 Deliverables

- Draft Annual Report to the Yucaipa GSA
- Final Annual Report for Submittal to DWR

*Total Fee for Task 4* ..... \$12,710.00

## Schedule

The anticipated schedule for preparing the first annual report for the Yucaipa Subbasin follows:

- **December 2023** - Anticipated Start Date per authorization by the Yucaipa GSA to proceed and executed contract with SBVMWD
- **March 8, 2024** - Draft Annual Report to Yucaipa GSA to review and provide comments
- **March 11 – 22, 2024** – Review period for Yucaipa GSA
- **March 25 – 29, 2024** – Dudek to revise draft annual report per Yucaipa GSA comments
- **April 1, 2024** – Submit Final Annual Report to DWR with Excel Data templates

## Fee Summary

The fee presented in this proposal will be charged on a time and materials basis in accordance with Dudek’s 2023 Standard Schedule of Charges. The time and materials fee provided in this proposal represents an estimate of the anticipated level of effort required to complete the tasks described in the proposal. Should the actual effort required to complete the tasks be less than anticipated, the amount billed will be less than the total fee. Conversely, should the actual effort to complete the proposed tasks be greater than anticipated, additional fee authorizations will be requested. No work in excess of the proposed fee or outside of the proposed scope of work will be performed without written authorization from the Yucaipa GSA.

**TOTAL FEE..... \$34,625.00**

Dudek appreciates the opportunity to present this proposal to prepare the second annual report for the Yucaipa Subbasin following the adoption of the GSP. We look forward to continuing our working relationship with the Yucaipa GSA and assisting the GSA in sustainably managing the Subbasin now and in to the future.

If you have any questions regarding this proposal, please call me at 760-415-9079 or email me at [stuart@dudek.com](mailto:stuart@dudek.com).

Sincerely,



---

Steven Stuart, PE C79764  
Principal Hydrogeologist, Project Manager

Att.: *Table 1. Fee for 2023 Yucaipa GSP Annual Report*  
*Dudek 2023 Standard Schedule of Charges*  
cc: *Adekunle Ojo, San Bernardino Valley Municipal Water District*  
*Michael Plinski, San Bernardino Valley Municipal Water District*

---

# Attachment A

Table 1. Fee for the 2023 Yucaipa GSP Annual Report  
Dudek 2023 Standard Schedule of Charges

TABLE I. FEE FOR 2023 YUCAIPA SUBBASIN GSP ANNUAL UPDATE REPORT  
DUDEK FEE SCHEDULE

		<i>Team Member:</i>	Steven Stuart, PE	Trevor Jones, PhD	Sharlynn Pimentel	TOTAL HOURS	LABOR COST	TOTAL
		<i>Project Team Role:</i>	Project Manager	Numerical Model	Hydrogeologist			
		<i>Labor Class:</i>	Principal Hydrogeologist II	Sr. Hydrogeologist IV	Hydrogeologist III			
		<i>Billable Rate :</i>	\$295	\$250	\$185			
<b>Task 1 - Groundwater Evaluations</b>								
1-1	Update Groundwater Elevations	4		12	16	\$ 3,400	\$ 3,400	
1-2	Update Water Year-Types	4			4	\$ 1,180	\$ 1,180	
1-3	Plan View Maps of Seasonal Highs and Lows	2		18	20	\$ 3,920	\$ 3,920	
1-4	Update Groundwater Production	4			4	\$ 1,180	\$ 1,180	
1-5	Update Groundwater Quality	4			4	\$ 1,180	\$ 1,180	
	<b>Subtotal Task 1</b>	<b>18</b>		<b>30</b>	<b>48</b>	<b>\$ 10,860</b>	<b>\$ 10,860</b>	
<b>Task 2 - Surface Water Supplies</b>								
2-1	SWP Water Importation	4			4	\$ 1,180	\$ 1,180	
2-2	Surface Water Diversions	1			1	\$ 295	\$ 295	
	<b>Subtotal Task 2</b>	<b>5</b>			<b>5</b>	<b>\$ 1,475</b>	<b>\$ 1,475</b>	
<b>Task 3 - Change in Groundwater in Storage</b>								
3-1	Update YIHM	2	2	24	28	\$ 5,530	\$ 5,530	
3-2	Water Budget Analyses and Figure Updates	2	2	16	20	\$ 4,050	\$ 4,050	
	<b>Subtotal Task 3</b>	<b>4</b>	<b>4</b>	<b>40</b>	<b>48</b>	<b>\$ 9,580</b>	<b>\$ 9,580</b>	
<b>Task 4 - Annual Report</b>								
4-1	Draft Report and Address Comments	16		40	56	\$ 12,120	\$ 12,120	
4-2	Final Report	2			2	\$ 590	\$ 590	
	<b>Subtotal Task 4</b>	<b>18</b>		<b>40</b>	<b>58</b>	<b>\$ 12,710</b>	<b>\$ 12,710</b>	
<b>Total Hours and Fee</b>		<b>45</b>	<b>4</b>	<b>110</b>	<b>159</b>	<b>\$34,625.00</b>	<b>\$34,625.00</b>	

## DUDEK 2023 Standard Schedule of Charges

### Engineering Services

Project Director .....	\$325.00/hr
Principal Engineer III .....	\$290.00/hr
Principal Engineer II .....	\$280.00/hr
Principal Engineer I .....	\$270.00/hr
Program Manager .....	\$260.00/hr
Senior Project Manager .....	\$260.00/hr
Project Manager .....	\$250.00/hr
Senior Engineer III .....	\$245.00/hr
Senior Engineer II .....	\$235.00/hr
Senior Engineer I .....	\$225.00/hr
Project Engineer IV/Technician IV .....	\$215.00/hr
Project Engineer III/Technician III .....	\$205.00/hr
Project Engineer II/Technician II .....	\$195.00/hr
Project Engineer I/Technician I .....	\$175.00/hr
Senior Designer II .....	\$195.00/hr
Senior Designer I .....	\$190.00/hr
Designer .....	\$180.00/hr
Assistant Designer .....	\$175.00/hr
CADD Operator III .....	\$170.00/hr
CADD Operator II .....	\$160.00/hr
CADD Operator I .....	\$145.00/hr
CADD Drafter .....	\$130.00/hr
CADD Technician .....	\$120.00/hr
Project Coordinator .....	\$150.00/hr
Engineering Assistant .....	\$125.00/hr

### Environmental Services

Senior Project Director .....	\$300.00/hr
Project Director .....	\$265.00/hr
Senior Specialist V .....	\$250.00/hr
Senior Specialist IV .....	\$235.00/hr
Senior Specialist III .....	\$225.00/hr
Senior Specialist II .....	\$210.00/hr
Senior Specialist I .....	\$200.00/hr
Specialist V .....	\$185.00/hr
Specialist IV .....	\$175.00/hr
Specialist III .....	\$165.00/hr
Specialist II .....	\$155.00/hr
Specialist I .....	\$145.00/hr
Analyst V .....	\$135.00/hr
Analyst IV .....	\$125.00/hr
Analyst III .....	\$115.00/hr
Analyst II .....	\$105.00/hr
Analyst I .....	\$95.00/hr
Technician III .....	\$85.00/hr
Technician II .....	\$75.00/hr
Technician I .....	\$65.00/hr

### Mapping and Surveying Services

Application Developer II .....	\$195.00/hr
Application Developer I .....	\$155.00/hr
GIS Analyst V .....	\$205.00/hr
GIS Analyst IV .....	\$165.00/hr
GIS Analyst III .....	\$145.00/hr
GIS Analyst II .....	\$130.00/hr
GIS Analyst I .....	\$115.00/hr
UAS Pilot .....	\$115.00/hr
Survey Lead .....	\$185.00/hr
Survey Manager .....	\$145.00/hr
Survey Crew Chief .....	\$120.00/hr
Survey Rod Person .....	\$95.00/hr
Survey Mapping Technician .....	\$95.00/hr

### Construction Management Services

Principal/Manager .....	\$195.00/hr
Senior Construction Manager .....	\$185.00/hr
Senior Project Manager .....	\$175.00/hr
Construction Manager .....	\$170.00/hr
Project Manager .....	\$165.00/hr
Resident Engineer .....	\$160.00/hr
Construction Engineer .....	\$155.00/hr
On-site Owner's Representative .....	\$145.00/hr
Prevailing Wage Inspector .....	\$145.00/hr
Construction Inspector .....	\$140.00/hr
Administrator/Labor Compliance .....	\$100.00/hr

### Hydrogeology/HazWaste Services

Project Director .....	\$325.00/hr
Principal Hydrogeologist/Engineer II .....	\$295.00/hr
Principal Hydrogeologist/Engineer I .....	\$275.00/hr
Senior Hydrogeologist V/Engineer V .....	\$260.00/hr
Senior Hydrogeologist IV/Engineer IV .....	\$250.00/hr
Senior Hydrogeologist III/Engineer III .....	\$240.00/hr
Senior Hydrogeologist II/Engineer II .....	\$230.00/hr
Senior Hydrogeologist I/Engineer I .....	\$220.00/hr
Project Hydrogeologist V/Engineer V .....	\$205.00/hr
Project Hydrogeologist IV/Engineer IV .....	\$195.00/hr
Project Hydrogeologist III/Engineer III .....	\$185.00/hr
Project Hydrogeologist II/Engineer II .....	\$175.00/hr
Project Hydrogeologist I/Engineer I .....	\$165.00/hr
Hydrogeologist/Engineering Assistant .....	\$130.00/hr

### District Management & Operations

District General Manager .....	\$225.00/hr
District Engineer .....	\$215.00/hr
Operations Manager .....	\$165.00/hr
District Secretary/Accountant .....	\$140.00/hr
Collections System Manager .....	\$140.00/hr
Grade V Operator .....	\$130.00/hr
Grade IV Operator .....	\$115.00/hr
Grade III Operator .....	\$105.00/hr
Grade II Operator .....	\$85.00/hr
Grade I Operator .....	\$80.00/hr
Operator in Training .....	\$75.00/hr
Collection Maintenance Worker .....	\$75.00/hr

### Creative Services

Creative Services IV .....	\$165.00/hr
Creative Services III .....	\$150.00/hr
Creative Services II .....	\$135.00/hr
Creative Services I .....	\$120.00/hr

### Publications Services

Technical Editor IV .....	\$165.00/hr
Technical Editor III .....	\$150.00/hr
Technical Editor II .....	\$135.00/hr
Technical Editor I .....	\$120.00/hr
Publications Specialist IV .....	\$125.00/hr
Publications Specialist III .....	\$115.00/hr
Publications Specialist II .....	\$105.00/hr
Publications Specialist I .....	\$95.00/hr
Clerical Administration .....	\$90.00/hr

**Expert Witness** – Court appearances, depositions, and interrogatories as expert witness will be billed at 2.00 times normal rates.

**Emergency and Holidays** – Minimum charge of two hours will be billed at 1.75 times the normal rate.

**Material and Outside Services** – Subcontractors, rental of special equipment, special reproductions and blueprinting, outside data processing and computer services, etc., are charged at 1.15 times the direct cost.

**Travel Expenses** – Mileage at current IRS allowable rates. Per diem where overnight stay is involved is charged at cost.

**Invoices, Late Charges** – All fees will be billed to Client monthly and shall be due and payable upon receipt. Invoices are delinquent if not paid within 30 days from the date of the invoice. Client agrees to pay a monthly late charge equal to 1% per month of the outstanding balance until paid in full.

**Annual Increases** – Unless identified otherwise, these standard rates will increase in line with the CPI-U for the nearest urban area per the Department of Labor Statistics to where the work is being completed) or by 3% annually, whichever is higher.

The rates listed above assume prevailing wage rates does not apply. If this assumption is incorrect Dudek reserves the right to adjust its rates accordingly.





---

**DATE:** January 2, 2024  
**TO:** Board of Directors  
**FROM:** Heather Dyer CEO/General Manager  
Karen Resendez, Human Resources/Risk Manager  
**SUBJECT:** Celebrating Excellence: 2023 Inland Empire Top Workplace Award

---

### **Staff Recommendation**

Receive and file.

### **Summary**

Prioritizing the employee experience creates a culture where employees are happier, more engaged, more innovative, more productive, and have a greater sense of belonging and commitment to the agency's mission, which all promotes long-term retention of staff and serves as a draw for the top talent in our region. This continued commitment by the Board and management has led to San Bernardino Valley being recognized as a 2023 Inland Empire Top Workplace, placing 4<sup>th</sup> out of 16 recognized employers and the top public agency within our size cohort. The results can be found here: <https://topworkplaces.com/award/pressenterprise/2023/35-124/> and are being featured in local papers.

### **Background**

Each year, The Press Enterprise and Inland News Group partner with Energage to publish the list of Inland Empire Top Workplaces. Once nominated, Energage provides an engagement survey to all employees. Top Workplace awards are based entirely on employee feedback received from the survey. The survey is scientifically designed, using data captured from more than 700,000 organizations of all sizes and sectors.

The Board of Directors nominated San Bernardino Valley for a 2022 Inland Empire Top Workplace award and San Bernardino Valley was named a 2022 Inland Empire Top Workplace, placing 7<sup>th</sup> out of 21 employers in the small employer category (35-124 employees).

## **Discussion**

San Bernardino Valley was invited to participate in the 2023 Inland Empire Top Workplace survey and San Bernardino Valley is honored to have been named a 2023 Inland Empire Top Workplace.

Energage compared the results of the 2022 and 2023 employee engagement surveys and the results demonstrated an increase in employee engagement (i.e. satisfaction) from 89% to 95%. The 26-question survey completed by employees sought their feedback on various cultural drivers to assess how the organization prioritizes a people-centered culture where employees have a voice. Following are the broad areas surveyed:

- **Alignment** – Questions assess perceptions of company direction, values, and work meaningfulness, including the direction of the Agency, meaningfulness of work and Agency values.
- **Empowerment** – Questions assess perception of communication, collaboration, meetings, and execution efficiency and quality.
- **Growth** – Questions assess growth and development themes related to formal training, working to potential, and manager impact on development.
- **Engagement** – Questions assess the psychological construct of employee engagement including motivation, loyalty and willingness to recommend San Bernardino Valley to others.
- **Value** – Questions assess perceptions around fairness of pay, benefits, work expectations and work-life flexibility.
- **Respect & Support** – Questions assess perceptions of appreciation, inclusion, leadership support, and respect for new ideas and differing points of view.

Prioritizing the employee experience and being recognized as a top workplace demonstrates the fundamental importance of nurturing a positive and supportive work environment, which aligns with our strategic objectives:

1. Employee satisfaction and retention
2. Enhanced innovation
3. Driven employees

## **District Strategic Plan Application**

Strategy #5: Attract and support top talent and promote a rewarding culture of growth and opportunity.

**Fiscal Impact**

No additional fiscal impact.



---

**DATE:** January 2, 2024  
**TO:** Board of Directors  
**FROM:** Heather Dyer, Chief Executive Officer/General Manager  
**SUBJECT:** CEO/General Manager's Report

---

**In this report:**

- I. Engagement Activities**
- II. Santa Ana River Enhanced Recharge Project Phase 1b**
- III. Forecast Informed Reservoir Operations (FIRO) at Seven Oaks Dam**
- IV. CSUSB Institute for Watershed Resiliency- Regional Water Fellowship**
- V. Notice of Funding: Hidden Valley Creek Aquatic and Riparian Habitat Restoration Project**
- VI. Update on 2023 Watermaster Annual Water Level Monitoring for the Colton and Riverside North Basins**
- VII. Update on the Basin Optimization Study**
- VIII. 2023 Grant Update**
- IX. Regional Recycled Water System**
- X. Staff Updates**
- XI. New Team Members**
- XII. CEO / General Manager Upcoming Speaking Engagements**
- XIII. Project Updates**

The following is an update from the Chief Executive Officer/General Manager on the status of several items at the Agency.

## **I. Engagement Activities**

The Board of Directors, Heather Dyer, and staff have participated in multiple community and industry events in recent months to highlight the on-going priorities of the Strategic Plan. Activities have included:

- October 16- Tour of the Santa Ana River Enhanced Recharge project for staff of the Metropolitan Water District of Southern California.
- October 17- Demand Management Incentive Check Presentation to City of Colton
- October 18- Sunrise Ranch Master Plan Workshop #2 gathering feedback from community members and local agencies.
- October 24- CA-NV AWWA Conference presentation inspiring audience to reimagine the water management landscape to achieve water resilience.
- October 26- Girls on the Ranch Sunrise Ranch Activity highlighting the biology connection between endangered species protection and water infrastructure projects.
- November 4- American Association of University Women presentation highlighting local projects and the importance of planning for a resilient water future.
- November 7-9- National Habitat Conservation Plan Conference where Agency staff and Board attended as well as served as moderators on multiple technical panels.
- November 28- ESRI Redlands Forum presentation highlighting the importance of understanding and making decisions with consideration of our interdependent and interconnected ecosystem.
- November 28-30- ACWA Fall Conference which included a California Water for All educational luncheon and a presentation regarding the importance of Zooming Out for Success.
- December 4- Joint Press Conference with US EPA regarding Phase 1 WIFIA funding for regional water infrastructure projects.
- December 16- Secretary of the Interior Press Conference hosted by Congressman Aguilar and the San Bernardino Valley Water Conservation District

## **II. Santa Ana River Enhanced Recharge Project Phase 1B**

On March 7, 2023, the Board of Directors approved the award of the construction contract for the Enhanced Recharge in the Santa Ana River Basins Project Phase 1B to Bogn Engineering, Inc. based on the bid amount of \$51,380,900. During the early stages of the project, the contractor has been performing construction activities such as grading, excavation, forming concrete structures, biological monitoring, and installing San Bernardino Kangaroo Rat fencing to comply with environmental permitting. Most recently, the contractor completed inlet and outlet structures for the basins, as well as poured some of the major junction structures within the main channel of the project. Overall, the project is approximately 35% complete and is currently within budget. The substantial completion date is projected to be December 2024, with some of the recharge basins available for recharge by February 2024.

## **III. Forecast Informed Reservoir Operations (FIRO) at Seven Oaks Dam**

San Bernardino Valley staff participated in the Steering Committee meeting for Seven Oaks Dam FIRO on November 14. I co-chair the Steering Committee with Dr. Marty Ralph (CW3E and Scripps Institution of Oceanography) and Cary Talbot (US Army Corps of Engineers). At the November 14 meeting, the Steering Committee approved the Terms of Reference, which define the goals of Seven Oaks Dam FIRO and outline how the Steering Committee conducts its work. We also reviewed the status of preparation of the Work Plan, which is on schedule, to be completed in June 2024. On November 28, Chris Jones and Janel Mayo of CW3E led a meeting of the Environmental Work Team, which is preparing the Environmental section of the Work Plan.

## **IV. CSUSB Institute for Watershed Resiliency- Regional Water Fellowship**

The five fellowship positions at California State University, San Bernardino which are funded by San Bernardino Valley's sponsorship, have been successfully selected and brought into the program. Fellows are undergoing necessary training and orientation activities. Field activities will begin in early 2024. Staff is currently coordinating with Dr. Jennifer Alford and the fellows for an opportunity to join a San Bernardino Valley Board Meeting or Workshop in the first quarter of 2024.

**V. Notice of Funding: Hidden Valley Creek Aquatic and Riparian Habitat Restoration Project**

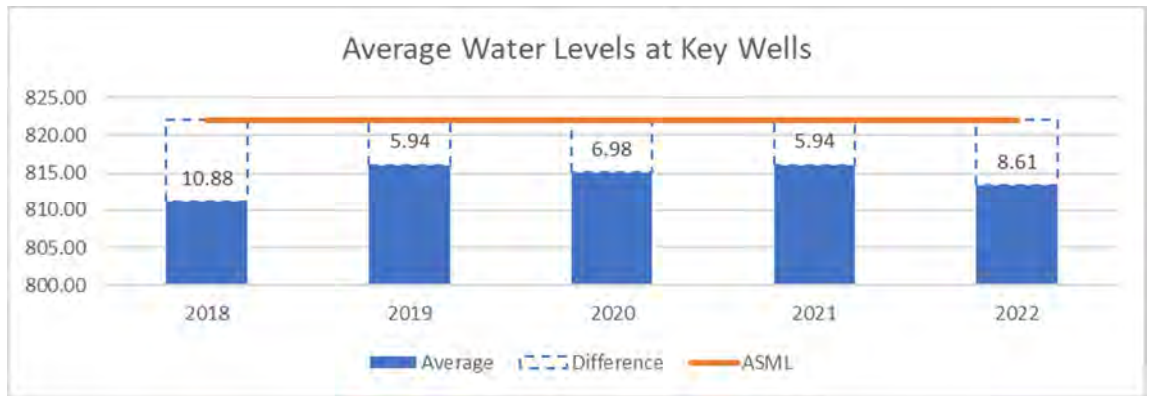
The Bureau of Reclamation notified San Bernardino Valley on November 15 that the WaterSMART Environmental Water Resources Grant application for the Hidden Valley Creek Aquatic and Riparian Habitat Restoration Project was among those receiving the highest ratings and will be awarded the full grant request of \$3,000,000 in Federal funds. The Federal funds will be combined with the Prop 84 funds previously secured for the Tributary Restoration Projects, thereby significantly reducing San Bernardino Valley's (and the River HCP Partners) costs to complete the project.

**VI. Update on 2023 Watermaster Annual Water Level Monitoring for the Colton and Riverside North Basins**

One of the requirements of the 1969 Western-San Bernardino Judgement is that San Bernardino Valley, on behalf of "other than Plaintiffs", must maintain the 1963 average static groundwater surface elevation of 822.04 feet above mean sea level (AMSL) as measured at three key wells (Johnson 1, Flume 2, and Flume 5).

On November 6, 7, and 8 of this year, the Watermaster parties conducted the annual key well measurements for 2023. We are pleased to share that for calendar year 2023, the average "non-static" water level elevation was 847.23 feet AMSL, or **25.19 feet above** the 1963 average water level. Meaning, San Bernardino Valley will be in compliance with the water level requirements in the Colton and Riverside Basin Areas in the 2024 Western-San Bernardino Watermaster Report. The current water level results are due to the wet year locally and the high level of in-stream recharge in the Santa Ana River of local runoff in combination with the large amounts of imported state water recharged in multiple facilities in 2023.

Although the current readings are welcome news, it is important to remember that the groundwater conditions are highly dependent upon local rainfall. After many years of drought in our region, in 2018 the static water level at the three key wells fell below 822.04 feet AMSL, which meant San Bernardino Valley was out of compliance with the water level requirement in the Colton and Riverside Basin Areas.



San Bernardino Valley and Western Water staff have been working cooperatively and diligently to develop a plan to increase water levels in the Colton and Riverside Basin Areas, including conducting studies, improving existing facilities, and obtaining environmental permits to facilitate water recharge in this area. The Judgement provided two actions to achieve compliance including: (1) transferring Plaintiff extractions to the SBBA, and/or (2) replenishing the Colton and Riverside Basin with wet water.

## VII. Update on the Basin Optimization Study

In 2023, San Bernardino Valley and Western Water contracted with WSC and Dopoudja & Wells to Phase 1 of a Basin Optimization Plan. Phase 1 included a series of facilitated workshops to hear input from our regional stakeholders (i.e. groundwater producers from Bunker Hill Basin and adjacent basins that we work closely with) and develop consensus towards the desired outcomes for our regional water supply, goals/priorities for near-term basin management, and future planning elements, or efforts, needed to achieve these goals.

On May 15, 2023, a kick-off meeting was held to introduce the Basin Optimization Study to the stakeholders / basin producers and develop an official Purpose Statement with input from participants. Workshop No. 1 on August 29, 2023, refined the Purpose Statement and Desired Outcomes describing how the Bunker Hill Basin could be managed for maximum value to the region.

In late September and early October, the consulting team conducted interviews with each of the basin producers and heard their specific needs related to groundwater and future water supply. Based on the interviews with the basin producers, 5 draft Goals were developed that support the Desired Outcomes. On October 16, 2023, Workshop No. 2 was held, during which the Purpose Statement and Desired Outcomes were revisited, and the draft Goals were



refined. Additionally, the Basin Optimization Goals were further discussed, and Plan Elements were developed to describe a potential path forward to achieving the described shared Goals.

On December 13, 2023, the final workshop (Workshop No. 3) of Phase 1 was held. At this workshop, technical consensus was reached on the Purpose Statement, Desired Outcomes, and Goals of a Basin Optimization Plan and the draft Plan Elements were refined. The next steps and timing of subsequent planning efforts were also discussed. The consultants will take input received throughout the process to prepare a framework document summarizing the Phase 1 technical conclusions by March 2024. The framework is the foundational document that lays out the proposed regional strategy and technical elements needed to develop a “Basin Optimization and Stewardship Program” (i.e. a program of work determining how all the regional partners will work together to ensure a sustainable groundwater basin) which San Bernardino Valley and Western Water will bring to their respective Boards for feedback and requests to move into Phase 2. This process is highly collaborative and forward-looking in that we are being proactive as a region to develop a plan of action towards long-term stability of the groundwater levels. This effort builds upon all the work of previous decades including integrated regional planning documents, the Groundwater Council, the Upper Santa Ana River Habitat Conservation Plan, and the Integrated Model. Collectively, this body of work and the collective intention of the region is quite remarkable in California water planning and something to be very proud of. Staff will bring a summary of the Phase 1 efforts to the Board in the first quarter of 2024.

**VIII. 2023 Grant Update**

San Bernardino Valley worked closely with Kennedy Jenks to successfully identify federal funding partnership opportunities that aligned with the Agency’s Strategic Plan. These world-class projects combined with a history of delivering on expectations, resulted in successful applications to support water supply reliability efforts in the San Bernardino Valley with approximately \$13 million in federal and state grant money awarded in 2023.

Cactus Basins Connector Pipeline Project	USBR WaterSMART Drought Resiliency, FY2023	\$ 1,375,523
Development of alternative sampling methodologies for year-round Santa Ana sucker monitoring	Endangered Species Conservation and Recovery Grant (Federal Endangered	\$ 117,858

	Species Act Traditional Section 6 Grant)	
Hidden Valley Creek Aquatic and Riparian Habitat Restoration Project	USBR WaterSMART Environmental Water Resources Grant Program FY2023	\$ 3,000,000
Bunker Hill Basin Regional Recycled Water Coalition Feasibility Study	USBR WaterSMART: Water Recycling and Desalination Planning	\$ 247,000
Santa Ana River Enhanced Stormwater Recharge Project, Phase 1B	EPA - Community Grant (Congressionally Mandated Projects)	\$ 2,500,000
Bunker Hill Conjunctive Use Wells and Water Conservation Projects	DWR: Urban Community Drought Relief Grant Program	\$ 5,724,550
<b>2023 GRANTS TOTAL</b>		<b>\$ 12,964,931</b>

#### **IX. Regional Recycled Water System**

The Regional Recycled Water System is nearing completion. Most recently, the final section of pipe was set in place along Greenspot Road near the 210 Freeway. East Valley Water District, who is administering the pipeline and Weaver Basins construction contract on our behalf, hosted an impromptu photo opportunity, where President Kielhold attended on the Agency's behalf. Final construction activities at the Weaver Basins include completing the perimeter fencing, parkway landscaping installation, and final basin improvements are underway. Once the construction and commissioning test is completed, our Agency will host a ceremonial ribbon cutting commemorating the completion of this significant investment.

#### **X. New Team Members**

Sayer Pinto joined our team on November 27, 2023, as our Principal Water Resources Analyst. She comes to us from Western Water where she worked as a Water Resources Analyst gaining experience with the Santa Ana River Watermaster, water right agreements, retail and wholesale water purchases and sales, writing grant applications, filing notices of exemption with CEQA and fulfilling regulatory and reporting requirements. Sayer holds an MBA with a concentration in GIS from the University of Redlands. She is also a Qualified Water Efficient Landscaper. She has a passion for spatial data and how story mapping can enhance decision-making.

**XI. CEO / General Manager Upcoming Speaking Engagements**

- January 3, 2024- Meeting with U.S. Rep. Obernolte which will also be attended by members of our Legislative Committee.
- January 31- Presentation at the California Society of Municipal Finance Officers conference with staff from the US EPA and San Francisco Public Utilities regarding the WIFIA Program.
- February 22- 70 Anniversary commemorative dinner.
- February 27- Legislative Office visits in Sacramento with members of the Legislative Committee.

**XII. Project Updates**

See attached.

**Staff Recommendation**

Receive and file.

**Agendas: 3 Month Look Ahead**

Item	Jan	Feb	March
70 <sup>th</sup> Anniversary Commemorative Dinner		x	
Agua Mansa Brine Lateral Project Status Update			x
Annual Audit Report for the Fiscal Year Ending June 30, 2023 Receive and File	x		
Basin Optimization Plan, Phase 1 Update		x	
BOD Handbook Review of Final Revisions		x	
Climate Adaptation and Resilience Plan Draft for review and feedback		x	
Cost of Service Study		x	
County Line Road Recharge Design			x
CSUSB Fellows Update		x	
EBX/ Central Feeder			x
Enterprise System Set-up			x
ESRI Enterprise Advantage Program Update	x		
Legislative Principles Draft for review and feedback	x		
Louis Rubidoux Parkland and Pecan Grove (LRPPG) Project Update			x
PERC Projects Update		x	
Property tax history overview; Description on the Property Tax bill; possibly change the description to something that indicates the State Water Project		x	
San Bernardino County Flood Control Recharge Agreement – Cactus Basins			x
San Bernardino Valley Foundations Summit			x
Seven Oaks Dam Lawsuit Settlement Update	x		
Southern California Edison Asset Purchase Agreement for the East-End Hydroelectric Facilities Divestiture Status Update (Closed session)	x		
State Water Project Supply Review		x	
Strategic Communications Plan for review and feedback			x
Sunrise Ranch Master Plan Status Update		x	
Upper SAR HCP Final Environmental Impact Report and Joint Powers Authority Agreement			x
Water Sales Agreement w/ SB County for Glen Helen area			x

**Project Status Updates**

<b>Item</b>	<b>Status</b>	<b>Estimated Next Board Update or Action</b>
70 <sup>th</sup> Anniversary Commemoration	Staff is coordinating details for the February 22 event, the speaker series, Foundations Summit Program, social media engagement, and promotional items.	February 2024
Agua Mansa Brine Lateral Project Status Update	Construction is underway by SAWPA. Long-lead time pipe is being manufactured. Estimated completion is April 2024. An update was last provided to the Board in October.	Upon completion
Basin Optimization Plan, WSC and Dopoudja & Wells	In progress. Workshops held with retail water agencies in August, October, and December. Interviews with retail water agencies were conducted in September-October. Phase 1 technical work is complete. A summary update will be presented to Board in Q1 2024.	April 2024
Bay-Delta Water Quality Control Plan Update	State Water Resources Control Board conducting hearings. Bob Tincher presented at the December 11, 2023 hearing in support of the Healthy Rivers and Landscapes Alternative (voluntary agreements).	Late 2024
Board Handbook	In progress. Initial review with Board; Workshop was held on Sept. 26. Final review of all changes to be considered by the Board in 2024.	2024
Bunker Hull Conjunctive Use Project Plan as part of the Three-Party Agreement between San Geronio Pass Water Agency, San Bernardino Valley, and Yucaipa Valley Water District, Geoscience, Inc. Modeling	In progress. Project partners and stakeholder coordination is ongoing. Stakeholder meeting with staff is scheduled for January 2024.	Mid- 2024

Bunker Hill Conjunctive Use Project, DWR Grant: \$7 million for 2022 Urban Community Drought Relief Grant (\$4 million for conjunctive use wells; \$3 million for water conservation programs)	Funding awarded. Grant agreement in progress.	Contractor considerations, pending grant agreement.
Climate Adaptation and Resilience Plan (CARP) with expanded stakeholder engagement, Rincon	In progress. Draft measures and actions have been prepared. Climate Resilience Committee meetings held on October 30 and November 20, 2023. Next committee meeting scheduled for January 8.	February 2024
City Creek Tunneling Feasibility Study for Foothill Pipeline Crossing Project, AECOM	In progress. Feasibility study completed in 2023 and design phase has started. Board consideration for construction bid award in Fall 2024.	Fall 2024
Cost of Service Study	Staff has identified consultant to assist with study which will be done in phases. Cost of Service committee will meet in January to review scope of service and strategy to complete study before bringing contract to full Board.	February 2024
County Line Road Basin Recharge Project	In progress. Project partners are coordinating the start of the pipeline construction contract award. Staff is seeking grant funding for the construction of the recharge basin.	Summer 2024
Delta Conveyance Project Final EIR	Complete	Update as needed
Delta Conveyance Proposed Amendment to State Water Project Contract	Draft agreement in February 2024. Final agreement to follow	February 2024
East Branch Extension and Central Feeder Intertie Project - Equipment Procurements	Materials procurement in progress.	Award for construction - early 2024
Enhanced Recharge 1b Project	In progress. Construction contract was awarded in March. Mobilization took place in April and groundbreaking ceremony was held in June. "B" Basins will be completed by February 2024 and all basins to be completed by December 2024. Project ahead of schedule by 9 months.	Update as needed

ESRI Enterprise Advantage Program	In progress. Anticipated action/update on program and if 3 <sup>rd</sup> year option is exercised.	January
Foothill Pump Station and Inland Feeder Intertie Project	Staff is finalizing the design and coordinating terms on a joint operational agreement with Metropolitan Water District staff. Metropolitan is working on options to mitigate for SBKR.	Summer 2024
Forecast-Informed Reservoir Operations (FIRO) at Seven Oaks Dam Preliminary Viability Assessment, UC San Diego & USACOE	In progress. The System Operations and Water Use Technical Workshop was held on November 1.	Summer 2024
Headwaters Resiliency Partnership	In progress. Staff coordinating with partners on partnership development, monitoring plans, and implementation of partner projects.	February 2024
Louis Rubidoux Parkland & Pecan Grove (LRPPG) Master Plan Development	In progress. Community meetings complete. Individual interviews planned. Planning by project partners is ongoing. This project led by IERCD.	December 2024
LRPPG Opportunities and Constraints Analysis	Contracting is underway.	December 2024
Native Fish Habitat Enhancement Structures in the Santa Ana River, Scheevel Engineering Design and Construction	Pilot projects have been constructed and results measured. Pilot structures are performing well; may not need larger structures.	When needed
Salt and Nutrient Management Plan for the Upper Santa Ana River Watershed Groundwater Basins	In progress. Multi-agency technical team coordination is ongoing.	Spring 2024
SB County Flood Control Recharge Agreement – Cactus Basins	In progress. On September 19, the Board directed staff to draft a letter in coordination with the Rialto Basin Groundwater Council (RBGC) to the County Board of Supervisors to request a meeting to discuss SWP recharge in the Cactus Basins. A meeting of RBGC and County elected officials is being scheduled for early 2024. Staff met with County staff representatives on December 11 to discuss a potential	March 2024

	technical path forward that would facilitate agreement for recharge.	
Santa Ana Low Turnout Upgrades	Environmental Complete. NOE filed with San Bernardino County Clerk December 5, 2022. Construction is underway with anticipated completion in February 2024.	Upon completion
Sites Reservoir Project Final EIR	Complete.	Update as needed
Sites Reservoir Project Governance Approach and Accompanying Agreements	Suggested approach presented at the October 10 Workshop. Final draft of agreements to be presented for consideration in first quarter 2024 in a joint workshop with SGPWA.	March 2024
Sites Reservoir Project no-cost contract extension to 2025	In process.	Q2 2024
Southern California Edison Asset Purchase Agreement for the East-End Hydroelectric Facilities Divestiture Status Update (Closed session)	Negotiations in progress.	January 2024
Sunrise Ranch Property Master Plan	In progress. Third public workshop will be held in March 2024. Master Plan team met with the Board regarding considerations for the architectural elements.	February 2024
Upper Santa Ana River Habitat Conservation Plan	Final EIR and NEPA in progress, currently under review by the US Fish and Wildlife Services. Anticipated Board action in March 2024.	March 2024





---

**SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT  
TREASURER'S REPORT  
FOR THE MONTH OF NOVEMBER 2023**

RECOMMENDATION:

APPROVE THE EXPENSES FOR THE MONTH OF NOVEMBER 2023  
FOR THE FOLLOWING FUNDS:

STATE WATER CONTRACT FUND	\$	3,893,471.00
GENERAL FUND	\$	7,078,432.55

# STATE WATER CONTRACT FUND

## Profit & Loss

November 2023

---

	<u>Nov 23</u>
<b>Income</b>	
4920 · INVESTMENT INCOME	3,726,695.99
4966 · PROPERTY TAXES	9,621,937.99
	<hr/>
<b>Total Income</b>	13,348,633.98
<b>Expense</b>	
6280 · FIELD IMPROVEMENTS	8,685.00
6380 · AUDIT FEES	7,332.00
6610 · MINIMUM OMP&R TRANSPORTATION	1,795,405.00
6615 · MINIMUM OMP&R DELTA	453,745.00
6620 · VARIABLE	1,591,027.00
6630 · OFF AQUEDUCT VARIABLE	4,933.00
6635 · EAST BRANCH ENLARGEMENT	32,344.00
	<hr/>
<b>Total Expense</b>	3,893,471.00
	<hr/>
<b>Net Income</b>	<b>9,455,162.98</b>

**STATE WATER CONTRACT FUND**  
**Profit & Loss Budget vs. Actual**  
 July through November 2023

	Jul - Nov 23	Budget	\$ Over Budget	% of Budget
<b>Income</b>				
4920 · INVESTMENT INCOME	11,722,102.33	6,700,000.00	5,022,102.33	175.0%
4950 · RETURN OF RESERVES/BOND COV...	3,548,010.00	3,548,000.00	10.00	100.0%
4966 · PROPERTY TAXES	10,812,888.71	10,812,750.00	138.71	100.0%
<b>Total Income</b>	26,083,001.04	21,060,750.00	5,022,251.04	123.8%
<b>Expense</b>				
6280 · FIELD IMPROVEMENTS	239,191.48	239,250.00	(58.52)	100.0%
6380 · AUDIT FEES	32,994.00	33,000.00	(6.00)	100.0%
6410 · STATE WATER CONTRACTOR FEES	251,070.00	251,075.00	(5.00)	100.0%
6601 · CAPITAL COST DELTA	849,586.00	849,586.00	0.00	100.0%
6610 · MINIMUM OMP&R TRANSPORTATION	8,977,025.00	8,977,025.00	0.00	100.0%
6615 · MINIMUM OMP&R DELTA	2,268,725.00	2,268,725.00	0.00	100.0%
6620 · VARIABLE	10,869,627.07	10,869,750.00	(122.93)	100.0%
6625 · WATER SYSTEM REVENUE BOND	1,735,147.00	1,735,147.00	0.00	100.0%
6630 · OFF AQUEDUCT VARIABLE	24,669.00	24,669.00	0.00	100.0%
6635 · EAST BRANCH ENLARGEMENT	161,720.00	161,720.00	0.00	100.0%
6640 · EAST BRANCH EXTENSION	14,773,922.00	14,773,922.00	0.00	100.0%
6645 · TEHACHAPI 2ND AFTERBAY	130,570.00	130,570.00	0.00	100.0%
<b>Total Expense</b>	40,314,246.55	40,314,439.00	(192.45)	100.0%
<b>Net Income</b>	<b>(14,231,245.51)</b>	<b>(19,253,689.00)</b>	<b>5,022,443.49</b>	<b>73.9%</b>

**SAN BERNARDINO VALLEY MWD GENERAL FUND**

**Profit & Loss**

November 2023

---

	<u>Nov 23</u>
<b>Income</b>	
4900 · WATER SALES	977,657.66
4920 · INVESTMENT INCOME	544,337.51
4929 · BASELINE FEEDER CAP. CONTRIB.	22,580.80
4940 · SUCCESSOR AGENCY PASS THROUGH	13,197.69
4950 · OTHER INCOME	1,214,431.80
4966 · S.B. CO TAXES	2,362,481.81
<b>Total Income</b>	<u>5,134,687.27</u>
<b>Gross Profit</b>	5,134,687.27
<b>Expense</b>	
6100 · SALARIES	477,107.56
6110 · OVERTIME	17,074.56
6120 · DIRECTORS FEES	12,259.00
6130 · PERS RETIREMENT	85,524.28
6140 · PAYROLL TAXES	27,121.87
6150 · HEALTH INSURANCE	74,131.39
6160 · DENTAL INSURANCE	5,546.43
6170 · VISION, DISABILITY AND LIFE INS	4,171.94
6200 · HEALTH/DEPENDENT CARE PLAN	4,373.27
6250 · OFFICE EQUIPMENT	11,150.30
6280 · FIELD IMPROVEMENTS	5,174,187.04
6320 · HOUSE COUNSEL	17,703.41
6330 · SPECIAL COUNSEL	33,234.38
6360 · CONSULTANTS	347,150.46
6380 · DISTRICT AUDIT	19,190.00
6390 · SAWPA	144,427.76
6400 · VEHICLE EXPENSE	5,187.20
6410 · TRAVEL	1,844.10
6420 · MEALS & LODGING	2,991.55
6450 · WATERSTOCK ASSESSMENT	42.41
6460 · UTILITIES/COMMUNICATIONS	31,553.21
6470 · MAINTENANCE & REPAIRS	12,603.01
6480 · OFFICE EXPENSE	2,505.28
6490 · FIELD SUPPLIES	925.97
6500 · EDUCATION AND TRAINING	2,189.00
6570 · POSTAGE	246.08
6580 · DUES & SUBSCRIPTIONS	3,533.14
6610 · SPREADING GROUNDS MAINTENANCE	479,961.36
6642 · SPONSORSHIPS	10,000.00
6645 · EXTERNAL AFFAIRS/STRATEGIC COMM	12,341.59
6780 · ENVIRONMENTAL / HCP	19,020.44
<b>Total Expense</b>	<u>7,039,297.99</u>
<b>Net Income</b>	<u><u>-1,904,610.72</u></u>

**SAN BERNARDINO VALLEY MWD GENERAL FUND**

**Profit & Loss Budget vs. Actual**

July through November 2023

	Jul - Nov 23	Budget	\$ Over Budget	% of Budget
<b>Income</b>				
4900 · WATER SALES	7,358,137.65	7,358,000.00	137.65	100.0%
4920 · INVESTMENT INCOME	1,860,583.96	1,000,000.00	860,583.96	186.1%
4925 · GRANT INCOME	31,025.68	31,000.00	25.68	100.1%
4929 · BASELINE FEEDER CAP. CONTRIB.	93,323.20	93,200.00	123.20	100.1%
4940 · SUCCESSOR AGENCY PASS THROU...	13,197.69	13,000.00	197.69	101.5%
4950 · OTHER INCOME	5,260,745.12	5,260,500.00	245.12	100.0%
4954 · GAIN (LOSS) ON SALE OF ASSETS	3,465.00	0.00	3,465.00	100.0%
4966 · S.B. CO TAXES	2,554,637.13	2,554,500.00	137.13	100.0%
4977 · RIVERSIDE CO TAXES	11,230.31	11,000.00	230.31	102.1%
<b>Total Income</b>	<b>17,186,345.74</b>	<b>16,321,200.00</b>	<b>865,145.74</b>	<b>105.3%</b>
<b>Gross Profit</b>	<b>17,186,345.74</b>	<b>16,321,200.00</b>	<b>865,145.74</b>	<b>105.3%</b>
<b>Expense</b>				
6100 · SALARIES	2,393,843.03	2,394,000.00	(156.97)	100.0%
6110 · OVERTIME	82,635.01	82,750.00	(114.99)	99.9%
6120 · DIRECTORS FEES	67,873.00	68,000.00	(127.00)	99.8%
6130 · PERS RETIREMENT	742,441.28	742,500.00	(58.72)	100.0%
6137 · DEFERRED COMPENSATION EXPEN...	20,500.00	20,500.00	0.00	100.0%
6140 · PAYROLL TAXES	158,560.26	158,750.00	(189.74)	99.9%
6150 · HEALTH INSURANCE	376,655.83	376,750.00	(94.17)	100.0%
6160 · DENTAL INSURANCE	28,394.16	28,500.00	(105.84)	99.6%
6170 · VISION, DISABILITY AND LIFE INS	21,013.72	21,150.00	(136.28)	99.4%
6180 · WORKERS COMP INS	30,222.83	30,250.00	(27.17)	99.9%
6200 · HEALTH/DEPENDENT CARE PLAN	34,721.62	34,750.00	(28.38)	99.9%
6240 · PIPELINE CONTROL SYSTEM	3,980.00	4,000.00	(20.00)	99.5%
6250 · OFFICE EQUIPMENT	122,876.75	123,000.00	(123.25)	99.9%
6260 · VEHICLE REPLACEMENT	436,639.58	436,750.00	(110.42)	100.0%
6280 · FIELD IMPROVEMENTS	22,000,380.99	22,000,500.00	(119.01)	100.0%
6295 · PURCHASED WATER	506,546.23	506,550.00	(3.77)	100.0%
6320 · HOUSE COUNSEL	126,138.41	126,250.00	(111.59)	99.9%
6330 · SPECIAL COUNSEL	162,939.39	163,000.00	(60.61)	100.0%
6340 · WATERMASTER	9,936.00	10,000.00	(64.00)	99.4%
6350 · USGS DATA	689,661.00	689,750.00	(89.00)	100.0%
6360 · CONSULTANTS	2,860,360.16	2,860,500.00	(139.84)	100.0%
6380 · DISTRICT AUDIT	23,450.00	23,500.00	(50.00)	99.8%
6390 · SAWPA	1,220,022.71	1,220,250.00	(227.29)	100.0%
6400 · VEHICLE EXPENSE	45,040.83	45,250.00	(209.17)	99.5%
6410 · TRAVEL	9,803.20	10,000.00	(196.80)	98.0%
6420 · MEALS & LODGING	19,941.05	20,000.00	(58.95)	99.7%
6430 · LIABILITY INS	220,672.60	200,000.00	20,672.60	110.3%
6450 · WATERSTOCK ASSESSMENT	222.18	250.00	(27.82)	88.9%
6460 · UTILITIES/COMMUNICATIONS	575,309.31	575,500.00	(190.69)	100.0%
6470 · MAINTENANCE & REPAIRS	264,212.24	264,250.00	(37.76)	100.0%
6480 · OFFICE EXPENSE	18,405.57	18,500.00	(94.43)	99.5%
6490 · FIELD SUPPLIES	16,466.85	16,500.00	(33.15)	99.8%
6495 · SAFETY TRAINING AND EQUIPMENT	7,039.80	7,250.00	(210.20)	97.1%
6500 · EDUCATION AND TRAINING	24,825.50	25,000.00	(174.50)	99.3%
6530 · BANK CHARGES-TRUSTEE FEES	6,653.81	6,750.00	(96.19)	98.6%
6560 · LIBRARY	14,390.76	12,325.00	2,065.76	116.8%
6570 · POSTAGE	1,089.39	1,100.00	(10.61)	99.0%
6580 · DUES & SUBSCRIPTIONS	162,726.90	162,750.00	(23.10)	100.0%
6600 · TAXES & LICENSES	81,598.36	81,600.00	(1.64)	100.0%
6610 · SPREADING GROUNDS MAINTENAN...	481,235.36	481,250.00	(14.64)	100.0%
6640 · WATER CONSERVATION & EDUCATI...	901,474.65	901,500.00	(25.35)	100.0%
6642 · SPONSORSHIPS	134,250.00	134,250.00	0.00	100.0%
6645 · EXTERNAL AFFAIRS/STRATEGIC CO...	66,509.29	66,750.00	(240.71)	99.6%
6780 · ENVIRONMENTAL / HCP	256,872.91	257,000.00	(127.09)	100.0%
6785 · HEADWATER RESILIENCE PROGRAM	367.58	500.00	(132.42)	73.5%
6800 · LAFCO ANNUAL FUNDING SHARE	30,000.00	30,000.00	0.00	100.0%
<b>Total Expense</b>	<b>35,458,900.10</b>	<b>35,440,225.00</b>	<b>18,675.10</b>	<b>100.1%</b>
<b>Net Income</b>	<b>(18,272,554.36)</b>	<b>(19,119,025.00)</b>	<b>846,470.64</b>	<b>95.6%</b>

**SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT  
INVESTMENT SUMMARY  
NOVEMBER 30, 2023**

INVESTMENT DESCRIPTION	INSTITUTION	MATURITY DATE	PAR VALUE	SETTLEMENT DATE	PURCHASE PRICE	BOOK YIELD RATE	CUSIP
<b>STATE WATER CONTRACT FUND</b>							
CERTIFICATE OF DEPOSIT	BNY MELLON	08/16/2024	2,175,000.00	08/19/2022	2,175,000.00	4.100%	22536AZR8
CERTIFICATE OF DEPOSIT	BNY MELLON	10/27/2025	2,850,000.00	10/31/2022	2,850,000.00	5.600%	89115B6K1
CERTIFICATE OF DEPOSIT	BNY MELLON	11/03/2025	2,850,000.00	11/03/2022	2,850,000.00	5.530%	65558UYF3
CERTIFICATE OF DEPOSIT	BNY MELLON	07/17/2026	2,200,000.00	07/20/2023	2,200,000.00	5.080%	21684LGS5
CERTIFICATE OF DEPOSIT	BNY MELLON	09/18/2026	2,200,000.00	09/20/2023	2,200,000.00	5.610%	63873QP65
CORPORATE NOTE	BNY MELLON	01/17/2024	480,000.00	03/04/2021	479,659.20	0.475%	24422EVN6
CORPORATE NOTE	BNY MELLON	02/08/2024	555,000.00	02/08/2021	554,617.05	0.373%	63743HEU2
CORPORATE NOTE	BNY MELLON	03/03/2024	300,000.00	01/25/2021	330,642.00	0.671%	38141GVM3
CORPORATE NOTE	BNY MELLON	03/18/2024	795,000.00	03/18/2021	794,602.50	0.767%	808513BN4
CORPORATE NOTE	BNY MELLON	05/24/2024	2,145,000.00	05/24/2022	2,144,914.20	3.752%	40428HTA0
CORPORATE NOTE	BNY MELLON	05/28/2024	450,000.00	05/28/2021	449,959.50	0.703%	04636NAC7
CORPORATE NOTE	BNY MELLON	06/07/2024	420,000.00	06/10/2021	419,475.00	0.492%	24422EVQ9
CORPORATE NOTE	BNY MELLON	06/18/2024	750,000.00	06/18/2021	749,107.50	0.540%	89236TJH9
CORPORATE NOTE	BNY MELLON	07/30/2024	1,200,000.00	11/23/2021	1,242,960.00	1.099%	025816CG2
CORPORATE NOTE	BNY MELLON	08/09/2024	710,000.00	08/09/2021	709,616.60	0.518%	69371RR40
CORPORATE NOTE	BNY MELLON	08/09/2024	400,000.00	09/09/2021	399,736.00	0.773%	02665WDY4
CORPORATE NOTE	BNY MELLON	08/12/2024	600,000.00	08/12/2021	599,946.00	0.753%	05565EBU8
CORPORATE NOTE	BNY MELLON	08/12/2024	470,000.00	08/12/2021	470,000.00	0.626%	904764BN6
CORPORATE NOTE	BNY MELLON	08/22/2024	885,000.00	08/22/2022	884,592.90	3.899%	21688AAU6
CORPORATE NOTE	BNY MELLON	09/10/2024	285,000.00	09/10/2021	284,814.75	0.647%	24422EVU0
CORPORATE NOTE	BNY MELLON	09/14/2024	2,145,000.00	09/14/2021	2,145,000.00	0.606%	641062AU8
CORPORATE NOTE	BNY MELLON	10/25/2024	670,000.00	10/25/2021	669,564.50	0.872%	06406RAX5
CORPORATE NOTE	BNY MELLON	10/30/2024	1,000,000.00	10/30/2020	1,000,000.00	6.130%	172967MT5
CORPORATE NOTE	BNY MELLON	11/01/2024	1,265,000.00	11/02/2022	1,264,784.95	4.859%	438516CH7
CORPORATE NOTE	BNY MELLON	11/18/2024	310,000.00	11/18/2022	309,860.50	4.724%	882508BR4
CORPORATE NOTE	BNY MELLON	01/10/2025	480,000.00	01/10/2022	479,774.40	1.266%	24422EVY2
CORPORATE NOTE	BNY MELLON	01/10/2025	1,855,000.00	01/10/2023	1,855,000.00	5.079%	20271RAQ3
CORPORATE NOTE	BNY MELLON	01/13/2025	1,000,000.00	01/13/2022	999,210.00	1.527%	02665WEA5
CORPORATE NOTE	BNY MELLON	01/24/2025	1,050,000.00	01/24/2022	1,050,000.00	1.758%	38141GZH0
CORPORATE NOTE	BNY MELLON	02/04/2025	900,000.00	02/04/2022	900,000.00	1.844%	06051GKG3
CORPORATE NOTE	BNY MELLON	02/07/2025	405,000.00	02/07/2022	404,987.85	1.876%	63743HFC1
CORPORATE NOTE	BNY MELLON	02/10/2025	590,000.00	03/10/2021	628,468.00	0.937%	58933YAR6
CORPORATE NOTE	BNY MELLON	02/16/2025	405,000.00	02/16/2021	405,000.00	0.563%	46647PB1
CORPORATE NOTE	BNY MELLON	03/04/2025	350,000.00	03/04/2022	349,646.50	2.285%	025816CQ0
CORPORATE NOTE	BNY MELLON	03/04/2025	500,000.00	03/04/2022	498,315.00	2.367%	025816CQ0
CORPORATE NOTE	BNY MELLON	03/07/2025	160,000.00	03/07/2022	159,931.20	2.140%	24422EWB1
CORPORATE NOTE	BNY MELLON	03/10/2025	2,260,000.00	03/10/2022	2,260,000.00	2.132%	771196BT8
CORPORATE NOTE	BNY MELLON	03/10/2025	1,000,000.00	03/10/2023	999,790.00	5.411%	14913R3C9
CORPORATE NOTE	BNY MELLON	04/01/2025	710,000.00	04/01/2022	709,332.60	3.283%	05565EBZ7
CORPORATE NOTE	BNY MELLON	04/07/2025	1,100,000.00	04/07/2022	1,099,714.00	2.859%	69371RR73
CORPORATE NOTE	BNY MELLON	04/13/2025	1,300,000.00	04/13/2022	1,297,933.00	3.056%	023135CE4
CORPORATE NOTE	BNY MELLON	04/15/2025	225,000.00	03/28/2022	224,606.25	2.760%	437076CM2
CORPORATE NOTE	BNY MELLON	04/17/2025	850,000.00	04/20/2022	850,000.00	3.623%	61747YEQ4
CORPORATE NOTE	BNY MELLON	04/24/2025	675,000.00	03/08/2021	694,210.50	0.882%	06406RAN7
CORPORATE NOTE	BNY MELLON	05/01/2025	460,000.00	05/04/2021	460,000.00	0.981%	172967MX6
CORPORATE NOTE	BNY MELLON	05/01/2025	625,000.00	05/03/2022	624,862.50	3.458%	17252MAP5
CORPORATE NOTE	BNY MELLON	05/01/2025	1,155,000.00	05/26/2022	1,151,223.15	3.494%	90327QD89
CORPORATE NOTE	BNY MELLON	05/13/2025	655,000.00	05/13/2022	654,168.15	3.445%	14913R2V8
CORPORATE NOTE	BNY MELLON	06/01/2025	605,000.00	06/01/2021	605,000.00	0.824%	46647PCH7
CORPORATE NOTE	BNY MELLON	06/15/2025	255,000.00	05/04/2022	254,931.15	3.458%	63743HFE7
CORPORATE NOTE	BNY MELLON	06/23/2025	1,250,000.00	06/23/2021	1,250,000.00	0.969%	46647PCK0
CORPORATE NOTE	BNY MELLON	07/17/2025	1,175,000.00	01/09/2023	1,140,208.25	4.759%	713448CY2
CORPORATE NOTE	BNY MELLON	07/27/2025	2,130,000.00	07/27/2022	2,130,000.00	4.000%	459200KS9
CORPORATE NOTE	BNY MELLON	07/29/2025	1,250,000.00	01/26/2023	1,223,625.00	4.600%	458140AS9
CORPORATE NOTE	BNY MELLON	08/11/2025	1,100,000.00	08/11/2022	1,099,219.00	3.575%	69371RR99
CORPORATE NOTE	BNY MELLON	08/11/2025	1,455,000.00	08/11/2023	1,454,912.70	5.303%	05565EC7
CORPORATE NOTE	BNY MELLON	08/15/2025	470,000.00	08/09/2022	469,567.60	3.132%	194162AM5
CORPORATE NOTE	BNY MELLON	09/09/2025	1,125,000.00	09/09/2022	1,124,212.50	3.925%	931142EW9
CORPORATE NOTE	BNY MELLON	09/15/2025	305,000.00	09/19/2022	304,890.20	4.013%	437076CR1
CORPORATE NOTE	BNY MELLON	09/29/2025	765,000.00	09/29/2023	765,000.00	5.864%	17325FBA5
CORPORATE NOTE	BNY MELLON	10/03/2025	750,000.00	10/04/2023	749,302.50	5.850%	02665WEQ0
CORPORATE NOTE	BNY MELLON	10/15/2025	475,000.00	10/24/2022	473,646.25	5.055%	539830BU2
CORPORATE NOTE	BNY MELLON	10/15/2025	325,000.00	10/28/2022	324,970.75	5.154%	91324PEN8
CORPORATE NOTE	BNY MELLON	10/28/2025	950,000.00	10/28/2022	950,000.00	5.677%	693475BH7
CORPORATE NOTE	BNY MELLON	10/30/2025	270,000.00	10/31/2022	269,638.20	5.499%	63743HFF4
CORPORATE NOTE	BNY MELLON	11/03/2025	445,000.00	11/03/2021	445,000.00	1.281%	172967ND9
CORPORATE NOTE	BNY MELLON	11/07/2025	290,000.00	11/07/2022	289,921.70	5.260%	20030NDZ1
CORPORATE NOTE	BNY MELLON	12/05/2025	2,125,000.00	12/05/2022	2,122,705.00	4.739%	53522KAB9
CORPORATE NOTE	BNY MELLON	12/06/2025	1,250,000.00	12/06/2021	1,250,000.00	1.530%	06051GKE8
CORPORATE NOTE	BNY MELLON	12/08/2025	1,215,000.00	12/08/2022	1,215,000.00	5.088%	05254JAA8
CORPORATE NOTE	BNY MELLON	01/26/2026	210,000.00	01/26/2023	210,000.00	4.862%	857477BZ5

**SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT  
INVESTMENT SUMMARY  
NOVEMBER 30, 2023**

INVESTMENT DESCRIPTION	INSTITUTION	MATURITY DATE	PAR VALUE	SETTLEMENT DATE	PURCHASE PRICE	BOOK YIELD RATE	CUSIP
CORPORATE NOTE	BNY MELLON	02/06/2026	595,000.00	02/07/2022	595,000.00	1.746%	857477BR3
CORPORATE NOTE	BNY MELLON	02/13/2026	990,000.00	02/15/2023	989,425.80	4.571%	713448FQ6
CORPORATE NOTE	BNY MELLON	02/18/2026	1,365,000.00	02/18/2022	1,365,000.00	2.631%	61747YEM3
CORPORATE NOTE	BNY MELLON	02/27/2026	615,000.00	02/27/2023	613,985.25	5.060%	532457CE6
CORPORATE NOTE	BNY MELLON	03/01/2026	2,100,000.00	02/01/2023	2,020,368.00	4.370%	30231GAT9
CORPORATE NOTE	BNY MELLON	03/02/2026	755,000.00	03/01/2023	754,124.20	4.842%	194162AQ6
CORPORATE NOTE	BNY MELLON	03/13/2026	195,000.00	02/09/2023	194,861.55	4.473%	63743HFH0
CORPORATE NOTE	BNY MELLON	03/13/2026	1,425,000.00	03/13/2023	1,425,000.00	5.316%	20271RAR1
CORPORATE NOTE	BNY MELLON	03/30/2026	1,000,000.00	02/22/2022	1,020,130.00	2.226%	857477BM4
CORPORATE NOTE	BNY MELLON	04/15/2026	425,000.00	04/18/2023	424,813.00	4.016%	931142FA6
CORPORATE NOTE	BNY MELLON	04/22/2026	1,400,000.00	03/30/2023	1,317,120.00	5.113%	949746RW3
CORPORATE NOTE	BNY MELLON	04/26/2026	600,000.00	04/26/2022	600,000.00	4.083%	46647PCZ7
CORPORATE NOTE	BNY MELLON	05/18/2026	1,245,000.00	05/18/2023	1,244,277.90	4.471%	89236TKT1
CORPORATE NOTE	BNY MELLON	06/08/2026	730,000.00	06/08/2023	729,576.60	4.771%	24422EWX3
CORPORATE NOTE	BNY MELLON	07/07/2026	590,000.00	07/07/2023	589,274.30	5.295%	02665WEK3
CORPORATE NOTE	BNY MELLON	07/28/2026	935,000.00	07/28/2022	935,000.00	4.263%	89788MAH5
CORPORATE NOTE	BNY MELLON	08/03/2026	830,000.00	08/03/2023	830,000.00	5.272%	857477CD3
CORPORATE NOTE	BNY MELLON	08/07/2026	850,000.00	08/09/2023	849,260.50	5.482%	94988J6D4
CORPORATE NOTE	BNY MELLON	08/18/2026	1,250,000.00	08/18/2023	1,250,000.00	5.526%	06428CAA2
CORPORATE NOTE	BNY MELLON	09/08/2026	850,000.00	09/08/2023	849,396.50	5.176%	24422EXD6
CORPORATE NOTE	BNY MELLON	09/30/2026	595,000.00	12/04/2023	593,696.95	5.037%	437076CV2
CORPORATE NOTE	BNY MELLON	10/28/2026	1,000,000.00	10/28/2022	1,000,000.00	5.905%	89788MAJ1
CORPORATE NOTE	BNY MELLON	11/04/2026	415,000.00	11/04/2022	415,000.00	5.756%	857477BX0
CORPORATE NOTE	BNY MELLON	11/13/2026	385,000.00	11/02/2023	384,865.25	5.612%	63743HFK3
CORPORATE NOTE	BNY MELLON	11/13/2026	1,655,000.00	11/13/2023	1,655,000.00	5.265%	771196CE0
CORPORATE NOTE	BNY MELLON	11/16/2026	1,000,000.00	11/13/2023	935,210.00	5.881%	38145GAH3
CORPORATE NOTE	BNY MELLON	11/20/2026	1,000,000.00	11/20/2023	999,100.00	5.433%	89236TLD5
CORPORATE NOTE	BNY MELLON	12/04/2026	575,000.00	12/04/2023	575,000.00	5.488%	17325FBC1
CORPORATE NOTE	BNY MELLON	01/26/2027	175,000.00	01/24/2023	175,000.00	4.761%	693475BL8
CORPORATE NOTE	BNY MELLON	10/22/2027	605,000.00	10/23/2023	605,000.00	6.075%	46647PDW3
CORPORATE NOTE	BNY MELLON	01/10/2025	1,250,000.00	01/12/2022	1,246,175.00	1.480%	21688AAS1
CORPORATE NOTE	BNY MELLON	06/09/2025	1,555,000.00	06/09/2022	1,555,000.00	3.500%	63254ABD9
CORPORATE NOTE	BNY MELLON	01/12/2026	1,520,000.00	01/12/2023	1,520,000.00	4.966%	63253QAA2
MUNICIPAL BOND / NOTE	BNY MELLON	01/01/2025	520,000.00	02/04/2021	520,000.00	0.897%	646140DN0
MUNICIPAL BOND / NOTE	BNY MELLON	01/15/2025	1,565,000.00	08/30/2022	1,565,000.00	3.661%	576004GY5
MUNICIPAL BOND / NOTE	BNY MELLON	07/01/2025	630,000.00	09/16/2020	630,000.00	1.258%	341271AD6
US TREASURY NOTES	BNY MELLON	09/15/2024	1,175,000.00	10/06/2021	1,170,364.26	0.510%	91282CCX7
US TREASURY NOTES	BNY MELLON	10/15/2024	3,000,000.00	11/04/2021	2,985,234.38	0.794%	91282CDBA
US TREASURY NOTES	BNY MELLON	10/31/2024	2,750,000.00	05/06/2021	2,850,009.77	0.447%	912828YM6
US TREASURY NOTES	BNY MELLON	11/15/2024	3,000,000.00	12/10/2021	2,982,070.31	0.957%	91282CDH1
US TREASURY NOTES	BNY MELLON	11/15/2024	6,000,000.00	12/07/2021	5,972,109.38	0.911%	91282CDH1
US TREASURY NOTES	BNY MELLON	11/30/2024	2,625,000.00	06/07/2021	2,722,207.03	0.427%	912828YV6
US TREASURY NOTES	BNY MELLON	11/30/2024	2,750,000.00	06/08/2021	2,848,720.70	0.458%	912828YV6
US TREASURY NOTES	BNY MELLON	11/30/2024	5,000,000.00	06/15/2021	5,182,226.56	0.437%	912828YV6
US TREASURY NOTES	BNY MELLON	11/30/2024	3,100,000.00	12/28/2022	3,105,933.59	4.393%	91282CFX4
US TREASURY NOTES	BNY MELLON	12/15/2024	2,000,000.00	12/23/2021	2,002,812.50	0.952%	91282CDN8
US TREASURY NOTES	BNY MELLON	12/15/2024	3,000,000.00	12/29/2021	3,002,578.13	0.970%	91282CDN8
US TREASURY NOTES	BNY MELLON	12/15/2024	2,950,000.00	01/06/2022	2,947,810.55	1.026%	91282CDN8
US TREASURY NOTES	BNY MELLON	02/15/2025	2,950,000.00	02/15/2022	2,922,343.75	1.823%	91282CDZ1
US TREASURY NOTES	BNY MELLON	03/15/2025	3,000,000.00	04/06/2022	2,926,523.44	2.621%	91282CED9
US TREASURY NOTES	BNY MELLON	03/31/2025	1,800,000.00	05/17/2023	1,793,460.94	4.076%	91282CGU9
US TREASURY NOTES	BNY MELLON	04/30/2025	4,750,000.00	05/05/2022	4,733,115.23	3.000%	9128284M9
US TREASURY NOTES	BNY MELLON	04/30/2025	1,450,000.00	05/05/2022	1,445,525.39	2.984%	9128284M9
US TREASURY NOTES	BNY MELLON	05/15/2025	8,750,000.00	06/06/2022	8,723,339.84	2.858%	91282CEQ0
US TREASURY NOTES	BNY MELLON	05/31/2025	2,625,000.00	06/13/2023	2,607,773.44	4.602%	91282CHD6
US TREASURY NOTES	BNY MELLON	05/31/2025	3,000,000.00	06/26/2023	2,970,820.31	4.782%	91282CHD6
US TREASURY NOTES	BNY MELLON	05/31/2025	1,000,000.00	06/27/2023	990,742.19	4.757%	91282CHD6
US TREASURY NOTES	BNY MELLON	06/15/2025	2,900,000.00	07/11/2022	2,896,261.72	2.921%	91282CEU1
US TREASURY NOTES	BNY MELLON	07/15/2025	3,000,000.00	08/08/2022	2,994,960.94	3.060%	91282CEY3
US TREASURY NOTES	BNY MELLON	07/15/2025	6,000,000.00	08/09/2022	6,007,265.63	2.956%	91282CEY3
US TREASURY NOTES	BNY MELLON	07/15/2025	5,100,000.00	08/09/2022	5,078,882.81	3.148%	91282CEY3
US TREASURY NOTES	BNY MELLON	08/15/2025	5,850,000.00	09/07/2022	5,782,130.86	3.544%	91282CFE6
US TREASURY NOTES	BNY MELLON	09/15/2025	4,250,000.00	10/12/2022	4,162,675.78	4.254%	91282CFK2
US TREASURY NOTES	BNY MELLON	11/15/2025	2,850,000.00	12/08/2022	2,878,166.02	4.138%	91282CFW6
US TREASURY NOTES	BNY MELLON	11/15/2025	2,900,000.00	12/13/2022	2,935,457.03	4.051%	91282CFW6
US TREASURY NOTES	BNY MELLON	12/15/2025	4,000,000.00	12/28/2022	3,980,781.25	4.174%	91282CGA3
US TREASURY NOTES	BNY MELLON	01/15/2026	3,000,000.00	02/02/2023	2,996,484.38	3.917%	91282CGE5
US TREASURY NOTES	BNY MELLON	01/15/2026	5,500,000.00	02/09/2023	5,467,773.44	4.088%	91282CGE5
US TREASURY NOTES	BNY MELLON	02/15/2026	5,000,000.00	03/07/2023	4,912,695.31	4.640%	91282CGL9
US TREASURY NOTES	BNY MELLON	02/15/2026	3,300,000.00	03/31/2023	3,306,316.41	3.928%	91282CGL9
US TREASURY NOTES	BNY MELLON	02/15/2026	5,800,000.00	05/23/2023	5,792,523.44	4.048%	91282CGL9
US TREASURY NOTES	BNY MELLON	02/28/2026	9,100,000.00	05/03/2023	8,769,414.06	3.868%	9128286F2
US TREASURY NOTES	BNY MELLON	04/15/2026	840,000.00	04/24/2023	837,309.38	3.865%	91282CGV7

**SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT  
INVESTMENT SUMMARY  
NOVEMBER 30, 2023**

INVESTMENT DESCRIPTION	INSTITUTION	MATURITY DATE	PAR VALUE	SETTLEMENT DATE	PURCHASE PRICE	BOOK YIELD RATE	CUSIP
US TREASURY NOTES	BNY MELLON	04/15/2026	350,000.00	05/02/2023	349,453.13	3.806%	91282CGV7
US TREASURY NOTES	BNY MELLON	04/15/2026	5,150,000.00	05/11/2023	5,151,408.20	3.739%	91282CGV7
US TREASURY NOTES	BNY MELLON	04/15/2026	3,000,000.00	05/18/2023	2,997,421.88	3.781%	91282CGV7
US TREASURY NOTES	BNY MELLON	04/15/2026	1,750,000.00	06/13/2023	1,725,458.98	4.278%	91282CGV7
US TREASURY NOTES	BNY MELLON	05/15/2026	7,275,000.00	06/05/2023	7,202,818.36	3.985%	91282CHB0
US TREASURY NOTES	BNY MELLON	05/15/2026	3,125,000.00	06/14/2023	3,071,166.99	4.258%	91282CHB0
US TREASURY NOTES	BNY MELLON	05/15/2026	750,000.00	06/28/2023	733,974.61	4.422%	91282CHB0
US TREASURY NOTES	BNY MELLON	06/15/2026	2,400,000.00	06/30/2023	2,383,500.00	4.375%	91282CHH7
US TREASURY NOTES	BNY MELLON	07/15/2026	5,750,000.00	08/03/2023	5,739,218.75	4.568%	91282CHM6
US TREASURY NOTES	BNY MELLON	07/15/2026	3,500,000.00	08/04/2023	3,492,753.91	4.575%	91282CHM6
US TREASURY NOTES	BNY MELLON	08/15/2026	1,700,000.00	09/11/2023	1,683,531.25	4.732%	91282CHU8
US TREASURY NOTES	BNY MELLON	08/15/2026	4,000,000.00	09/12/2023	3,964,218.75	4.705%	91282CHU8
US TREASURY NOTES	BNY MELLON	08/15/2026	4,000,000.00	09/15/2023	3,962,343.75	4.723%	91282CHU8
US TREASURY NOTES	BNY MELLON	08/15/2026	4,000,000.00	09/19/2023	3,963,593.75	4.712%	91282CHU8
US TREASURY NOTES	BNY MELLON	09/15/2026	4,000,000.00	10/04/2023	3,971,406.25	4.887%	91282CHY0
US TREASURY NOTES	BNY MELLON	10/15/2026	1,150,000.00	10/25/2023	1,141,330.08	4.900%	91282CJC6
US TREASURY NOTES	BNY MELLON	10/15/2026	3,000,000.00	11/10/2023	2,991,562.50	4.728%	91282CJC6
US TREASURY NOTES	BNY MELLON	10/15/2026	4,000,000.00	11/14/2023	3,979,687.50	4.812%	91282CJC6
US TREASURY NOTES	BNY MELLON	11/15/2026	4,000,000.00	11/15/2023	3,975,625.00	4.846%	91282CJK8
US TREASURY NOTES	BNY MELLON	11/15/2026	2,850,000.00	11/21/2023	2,849,220.70	4.635%	91282CJK8
FIDELITY GOVERNMENT	BNY MELLON		416,837.66		416,837.66	0.050%	
LOCAL AGENCY INVESTMENT FUND	LAIF	DAILY	73,277,219.98		73,277,219.98	3.843%	AT 11/30/23
CAMP	CAMP	DAILY	140,823,998.34		140,823,998.34	5.580%	AT 11/30/23
			<u>516,533,055.98</u>		<u>515,560,008.32</u>		

**GENERAL FUND**

AGENCY BONDS - FNMA NOTES	BNY MELLON	08/01/2025	650,000.00	08/05/2022	650,000.00	3.600%	3134GXM35
CERTIFICATE OF DEPOSIT	BNY MELLON	06/21/2024	925,000.00	06/26/2023	925,000.00	5.970%	06742T5X0
CERTIFICATE OF DEPOSIT	BNY MELLON	07/05/2024	1,000,000.00	07/10/2023	1,000,000.00	6.030%	89115BRL6
CERTIFICATE OF DEPOSIT	BNY MELLON	08/16/2024	925,000.00	08/18/2023	925,000.00	5.970%	06367DC60
CERTIFICATE OF DEPOSIT	BNY MELLON	10/02/2024	1,000,000.00	10/04/2023	1,000,000.00	5.960%	06417M4M4
CERTIFICATE OF DEPOSIT	BNY MELLON	10/04/2024	750,000.00	10/10/2023	750,000.00	6.000%	40435RSC6
CERTIFICATE OF DEPOSIT	BNY MELLON	07/17/2026	250,000.00	07/20/2023	250,000.00	5.080%	21684LGS5
CORPORATE NOTE	BNY MELLON	03/08/2024	465,000.00	03/10/2022	465,000.00	1.882%	771196BU5
CORPORATE NOTE	BNY MELLON	03/18/2024	360,000.00	03/18/2021	359,820.00	0.767%	808513BN4
CORPORATE NOTE	BNY MELLON	05/15/2024	275,000.00	05/19/2021	274,714.00	0.585%	91324PEB4
CORPORATE NOTE	BNY MELLON	05/24/2024	490,000.00	05/24/2022	489,980.40	3.752%	40428HTA0
CORPORATE NOTE	BNY MELLON	05/28/2024	550,000.00	05/28/2021	549,950.50	0.703%	04636NAC7
CORPORATE NOTE	BNY MELLON	08/09/2024	210,000.00	08/09/2021	209,886.60	0.518%	69371RR40
CORPORATE NOTE	BNY MELLON	08/09/2024	385,000.00	09/09/2021	384,745.90	0.773%	02665WDY4
CORPORATE NOTE	BNY MELLON	08/12/2024	240,000.00	08/12/2021	239,978.40	0.753%	05565EBU8
CORPORATE NOTE	BNY MELLON	09/10/2024	80,000.00	09/10/2021	79,948.00	0.647%	24422EVU0
CORPORATE NOTE	BNY MELLON	09/14/2024	850,000.00	09/14/2021	850,000.00	0.606%	641062AU8
CORPORATE NOTE	BNY MELLON	10/25/2024	310,000.00	10/25/2021	309,798.50	0.872%	06406RAX5
CORPORATE NOTE	BNY MELLON	10/30/2024	250,000.00	10/30/2020	250,000.00	6.129%	172967MT5
CORPORATE NOTE	BNY MELLON	01/10/2025	80,000.00	01/10/2022	79,962.40	1.266%	24422EVY2
CORPORATE NOTE	BNY MELLON	01/10/2025	370,000.00	01/10/2023	370,000.00	5.079%	20271RAQ3
CORPORATE NOTE	BNY MELLON	01/10/2025	175,000.00	01/12/2023	174,924.75	4.823%	89236TKN4
CORPORATE NOTE	BNY MELLON	01/13/2025	250,000.00	01/13/2022	249,802.50	1.527%	02665WEA5
CORPORATE NOTE	BNY MELLON	02/10/2025	220,000.00	03/10/2021	234,344.00	0.937%	58933YAR6
CORPORATE NOTE	BNY MELLON	02/16/2025	120,000.00	02/16/2021	120,000.00	0.563%	46647PBY1
CORPORATE NOTE	BNY MELLON	03/04/2025	140,000.00	03/04/2022	139,858.60	2.285%	025816CC0
CORPORATE NOTE	BNY MELLON	04/01/2025	120,000.00	04/01/2022	119,887.20	3.283%	05565EBZ7
CORPORATE NOTE	BNY MELLON	04/15/2025	50,000.00	03/28/2022	49,912.50	2.760%	437076CM2
CORPORATE NOTE	BNY MELLON	04/24/2025	325,000.00	03/08/2021	334,249.50	0.882%	06406RAN7
CORPORATE NOTE	BNY MELLON	05/01/2025	310,000.00	05/04/2021	310,000.00	0.981%	172967MX6
CORPORATE NOTE	BNY MELLON	06/01/2025	340,000.00	06/01/2021	340,000.00	0.824%	46647PCH7
CORPORATE NOTE	BNY MELLON	06/06/2025	175,000.00	06/08/2023	174,902.00	4.980%	24422EWW5
CORPORATE NOTE	BNY MELLON	07/27/2025	485,000.00	07/27/2022	485,000.00	4.000%	459200KS9
CORPORATE NOTE	BNY MELLON	08/01/2025	250,000.00	08/23/2023	249,297.50	5.528%	58769JAJ6
CORPORATE NOTE	BNY MELLON	08/11/2025	230,000.00	08/11/2023	229,986.20	5.303%	05565ECC7
CORPORATE NOTE	BNY MELLON	08/15/2025	70,000.00	08/09/2022	69,935.60	3.132%	194162AM5
CORPORATE NOTE	BNY MELLON	08/18/2025	250,000.00	08/18/2023	250,000.00	5.650%	06428CAC8
CORPORATE NOTE	BNY MELLON	09/12/2025	250,000.00	09/12/2023	250,000.00	5.499%	20271RAS9
CORPORATE NOTE	BNY MELLON	11/03/2025	205,000.00	11/03/2021	205,000.00	1.281%	172967ND9
CORPORATE NOTE	BNY MELLON	12/05/2025	340,000.00	12/05/2022	339,632.80	4.739%	53522KAB9
CORPORATE NOTE	BNY MELLON	01/26/2026	35,000.00	01/26/2023	35,000.00	4.862%	857477BZ5
CORPORATE NOTE	BNY MELLON	02/06/2026	75,000.00	02/07/2022	75,000.00	1.746%	857477BR3
CORPORATE NOTE	BNY MELLON	02/13/2026	200,000.00	02/15/2023	199,884.00	4.571%	713448FQ6
CORPORATE NOTE	BNY MELLON	02/27/2026	155,000.00	02/27/2023	154,744.25	5.060%	532457CE6
CORPORATE NOTE	BNY MELLON	03/02/2026	165,000.00	03/01/2023	164,808.60	4.842%	194162AQ6



**SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT  
INVESTMENT SUMMARY  
NOVEMBER 30, 2023**

INVESTMENT DESCRIPTION	INSTITUTION	MATURITY DATE	PAR VALUE	SETTLEMENT DATE	PURCHASE PRICE	BOOK YIELD RATE	CUSIP
CORPORATE NOTE	BNY MELLON	03/13/2026	60,000.00	02/09/2023	59,957.40	4.473%	63743HFH0
CORPORATE NOTE	BNY MELLON	03/30/2026	200,000.00	02/22/2022	204,026.00	2.226%	857477BM4
CORPORATE NOTE	BNY MELLON	04/15/2026	75,000.00	04/18/2023	74,967.00	4.016%	931142FA6
CORPORATE NOTE	BNY MELLON	04/22/2026	200,000.00	03/30/2023	188,160.00	5.113%	949746RW3
CORPORATE NOTE	BNY MELLON	05/15/2026	350,000.00	05/15/2023	349,835.50	4.367%	14913UAA8
CORPORATE NOTE	BNY MELLON	05/18/2026	155,000.00	05/18/2023	154,910.10	4.471%	89236TKT1
CORPORATE NOTE	BNY MELLON	06/08/2026	110,000.00	06/08/2023	109,936.20	4.771%	24422EWX3
CORPORATE NOTE	BNY MELLON	07/28/2026	140,000.00	07/28/2022	140,000.00	4.263%	89788MAH5
CORPORATE NOTE	BNY MELLON	08/03/2026	135,000.00	08/03/2023	135,000.00	5.272%	857477CD3
CORPORATE NOTE	BNY MELLON	08/10/2026	350,000.00	08/10/2023	349,825.00	5.068%	69371RS56
CORPORATE NOTE	BNY MELLON	09/30/2026	100,000.00	12/04/2023	99,781.00	5.037%	437076CV2
CORPORATE NOTE	BNY MELLON	11/13/2026	85,000.00	11/02/2023	84,970.25	5.612%	63743HFK3
CORPORATE NOTE	BNY MELLON	11/13/2026	230,000.00	11/13/2023	230,000.00	5.265%	771196CE0
CORPORATE NOTE	BNY MELLON	01/26/2027	25,000.00	01/24/2023	25,000.00	4.761%	693475BL8
CORPORATE NOTE	BNY MELLON	01/19/2024	1,450,000.00	04/26/2023	1,393,653.00	5.396%	62479LAK1
CORPORATE NOTE	BNY MELLON	02/09/2024	1,000,000.00	05/17/2023	961,288.89	5.374%	13607EB99
CORPORATE NOTE	BNY MELLON	03/01/2024	725,000.00	06/08/2023	695,318.50	5.716%	17327AC13
CORPORATE NOTE	BNY MELLON	03/05/2024	1,450,000.00	06/09/2023	1,390,513.75	5.664%	22533TC53
CORPORATE NOTE	BNY MELLON	04/29/2024	950,000.00	08/04/2023	910,212.28	5.809%	09659BDV9
CORPORATE NOTE	BNY MELLON	08/02/2024	1,400,000.00	11/07/2023	1,341,940.83	5.749%	63873JH29
CORPORATE NOTE	BNY MELLON	08/02/2024	650,000.00	11/09/2023	623,389.00	5.716%	78015CH21
CORPORATE NOTE	BNY MELLON	01/10/2025	375,000.00	01/12/2022	373,852.50	1.480%	21688AAS1
CORPORATE NOTE	BNY MELLON	01/12/2026	435,000.00	01/12/2023	435,000.00	4.966%	63253QAA2
MUNICIPAL BOND / NOTE	BNY MELLON	01/01/2025	240,000.00	02/04/2021	240,000.00	0.897%	646140DN0
MUNICIPAL BOND / NOTE	BNY MELLON	07/01/2025	295,000.00	09/16/2020	295,000.00	1.258%	341271AD6
US TREASURY NOTES	BNY MELLON	11/15/2024	900,000.00	12/10/2021	894,621.09	0.957%	91282CDH1
US TREASURY NOTES	BNY MELLON	11/15/2024	250,000.00	12/07/2021	248,837.89	0.911%	91282CDH1
US TREASURY NOTES	BNY MELLON	11/30/2024	1,125,000.00	06/07/2021	1,166,660.16	0.427%	912828YV6
US TREASURY NOTES	BNY MELLON	11/30/2024	1,200,000.00	06/08/2021	1,243,078.13	0.458%	912828YV6
US TREASURY NOTES	BNY MELLON	12/15/2024	1,225,000.00	12/23/2021	1,226,722.66	0.952%	91282CDN8
US TREASURY NOTES	BNY MELLON	12/15/2024	875,000.00	01/06/2022	874,350.59	1.026%	91282CDN8
US TREASURY NOTES	BNY MELLON	12/31/2024	4,350,000.00	02/09/2023	4,331,308.59	4.487%	91282CGD7
US TREASURY NOTES	BNY MELLON	02/15/2025	1,000,000.00	03/31/2023	951,093.75	4.235%	91282CDZ1
US TREASURY NOTES	BNY MELLON	05/15/2025	500,000.00	05/30/2023	482,558.59	4.632%	91282CEQ0
US TREASURY NOTES	BNY MELLON	05/31/2025	1,900,000.00	06/13/2023	1,887,531.25	4.602%	91282CHD6
US TREASURY NOTES	BNY MELLON	05/31/2025	700,000.00	06/30/2023	692,699.22	4.824%	91282CHD6
US TREASURY NOTES	BNY MELLON	11/15/2025	425,000.00	12/13/2022	430,196.29	4.051%	91282CFW6
US TREASURY NOTES	BNY MELLON	01/15/2026	475,000.00	02/02/2023	474,443.36	3.917%	91282CGE5
US TREASURY NOTES	BNY MELLON	02/15/2026	475,000.00	05/23/2023	474,387.70	4.048%	91282CGL9
US TREASURY NOTES	BNY MELLON	04/15/2026	475,000.00	05/19/2023	473,960.94	3.829%	91282CGV7
US TREASURY NOTES	BNY MELLON	04/15/2026	250,000.00	05/30/2023	246,367.19	4.291%	91282CGV7
US TREASURY NOTES	BNY MELLON	05/15/2026	500,000.00	06/05/2023	495,039.06	3.985%	91282CHB0
US TREASURY NOTES	BNY MELLON	06/15/2026	700,000.00	06/30/2023	695,187.50	4.375%	91282CHH7
US TREASURY NOTES	BNY MELLON	07/15/2026	925,000.00	08/03/2023	923,265.63	4.568%	91282CHM6
US TREASURY NOTES	BNY MELLON	08/15/2026	400,000.00	09/11/2023	396,125.00	4.732%	91282CHU8
US TREASURY NOTES	BNY MELLON	08/15/2026	475,000.00	09/19/2023	470,676.76	4.712%	91282CHU8
US TREASURY NOTES	BNY MELLON	08/15/2026	375,000.00	09/25/2023	369,975.59	4.876%	91282CHU8
US TREASURY NOTES	BNY MELLON	09/15/2026	1,050,000.00	10/10/2023	1,041,427.73	4.926%	91282CHY0
US TREASURY NOTES	BNY MELLON	10/15/2026	125,000.00	10/19/2023	123,759.77	4.986%	91282CJC6
US TREASURY NOTES	BNY MELLON	10/15/2026	500,000.00	10/25/2023	496,230.47	4.900%	91282CJC6
US TREASURY NOTES	BNY MELLON	11/15/2026	750,000.00	11/15/2023	745,429.69	4.846%	91282CJK8
FIDELITY GOVERNMENT	BNY MELLON		119,774.68		119,774.68	0.050%	
LOCAL AGENCY INVESTMENT FUND	LAIF	DAILY	1,367,826.15		1,367,826.15	3.843%	AT 11/30/23
CAMP	CAMP	DAILY	11,585,922.82		11,585,922.82	5.580%	AT 11/30/23
CAMP - 2023A PROJECT FUND	CAMP	DAILY	24,323,908.60		24,323,908.60	5.580%	AT 11/30/23
			<u>85,857,432.25</u>		<u>85,489,858.75</u>		

ALL INVESTMENTS LISTED ON THIS MONTHLY INVESTMENT SUMMARY AND HELD BY SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT ARE IN COMPLIANCE WITH THE DISTRICT'S INVESTMENT POLICY.

THE DISTRICT CAN MEET ITS EXPENDITURE REQUIREMENTS FOR THE NEXT SIX MONTHS.

*Cindy Saks*  
CFO / DEPUTY GENERAL MANAGER

**SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT  
 RECAP OF DIRECTORS FEES AND EXPENSE REIMBURSEMENT  
 PAID IN THE MONTH OF NOVEMBER 2023**

	GIL BOTELLO	MILFORD HARRISON	JUNE HAYES	PAUL KIELHOLD	SUSAN LONGVILLE
<b>DIRECTOR COMPENSATION - OCTOBER MEETINGS</b>	2,990.00	2,990.00	2,990.00	1,196.00	2,093.00
<b>EXPENDITURES / REIMBURSEMENTS</b>					
<b>EDUCATION</b>					
ASSOCIATION OF S.B. COUNTY SPECIAL DISTRICT ASSN - 11/20/23	35.00	35.00	35.00	35.00	
ORANGE COUNTY WATER SUMMIT			175.00		
<b>TRAVEL</b>					
MILEAGE REIMBURSEMENT - MEETINGS OUTSIDE DISTRICT SERVICE AREA					
MILEAGE REIMBURSEMENT - MEETINGS WITHIN DISTRICT SERVICE AREA					
AIRFARE - NATIONAL HCP CONFERENCE - WEST VIRGINIA					457.80
<b>MEALS</b>					
<b>LODGING</b>					
<b>MISCELLANEOUS</b>					
<p><i>THIS REPORT IS PROVIDED IN ACCORDANCE TO RESOLUTION 1100</i></p> <p><i>EACH BOARD MEMBER SHALL BE PROVIDED WITH A MONTHLY REPORT SHOWING THE AMOUNT OF COMPENSATION OR REIMBURSEMENT REQUESTED BY EACH BOARD MEMBER.</i></p>					



## Director's Activity Report

Director's Name Gil J. Botello

Month Reporting Activity November 2023

	Date	Meeting/Activity Description	Explanation <small>Provide description of the meeting or activity and brief explanation on the benefits to the District and work of the Board by your attendance. (Not required for Valley District meetings)</small>	Max 10/month	Travel Cost Estimate <i>(Staff)</i>
1	11/01/2023	Other	Navigating Extremes - Challenges & opportunities for California Water Policy and Management	\$299	
2	11/02/2023	Workshop - Policy	Valley District	\$299	
3	11/07/2023	Valley District Board Mtg 1	Valley District	\$299	
4	11/13/2023	Other	Lessons Learned in Stormwater Capture & Groundwater Recharge	\$299	
5	11/14/2023	Workshop - Resources	Valley District	\$299	
6	11/15/2023	Other	SB City Council Meeting w/ Council member Figueroa	\$299	
7	11/17/2023	Other	Sites Reservoir Committee & Authority Board Meeting	\$299	
8	11/20/2023	CSDA Mtg	Association of Special Districts Dinner	\$299	
9	11/21/2023	Retail Agency Board Meeting	Yucaipa Valley Water District board Meeting	\$299	
10	11/30/2023	Other	SCMF - 30th Anniversary	\$299	
11		Select from List		Per diem?	
12		Select from List		Per diem?	
13		Select from List		Per diem?	
14		Select from List		Per diem?	
15		Select from List		Per diem?	
<b>Total Requested Compensation</b>				<b>\$ 2,990.00</b>	

**The undersigned certifies that the claims hereby stated are for authorized activities as described in the District's approved Resolution establishing rules and procedures for compensation of Directors.**

Signed: \_\_\_\_\_

Date: 11/30/2023



## Director Request for Compensation & Public Disclosure Form

Director's Name T. Milford Harrison

Month Reporting Activity NOVEMBER

	Date	Meeting/Activity Description	Explanation <small>Provide description of the meeting or activity and brief explanation on the benefits to the District and work of the Board by your attendance. (Not required for Valley District meetings)</small>	Max 10/month	Travel Cost Estimate <small>(Staff)</small>
1	11/06/2023	Assigned Committee Mtg	TRAVEL TO WEST VIRGINIA TO ATTEND THE NATIONAL HABITAT PLAN COALITION CONFERENCE	\$299	
2	11/07/2023	Assigned Committee Mtg	NATIONAL HCP CONFERENCE	\$299	
3	11/08/2023	Assigned Committee Mtg	NATIONAL HCP CONFERENCE	\$299	
4	11/09/2023	Assigned Committee Mtg	NATIONAL HCP CONFERENCE	\$299	
5	11/13/2023	CSDA Mtg	ASBCSD BOARD MEETING	\$299	
6	11/14/2023	Workshop - Engineering	PUBLISHED AGENDA	\$299	
7	11/16/2023	Assigned Committee Mtg	TRAVEL TO SITES BOARD MEETING	\$299	
8	11/17/2023	Assigned Committee Mtg	SITES BOARD MEETING AND RETURN TRAVEL	\$299	
9	11/20/2023	CSDA Mtg	ASBCSD MONTHLY DINNER MEETING	\$299	
10	11/21/2023	Valley District Board Mtg 2	PUBLISHED AGENDA	\$299	
11	11/22/2023	Assigned Committee Mtg	NHCO BOARD MONTHLY MEETING	Per diem?	
12	11/27/2023	ACWA Mtg	TRAVEL TO ACWA FALL CONFERENCE	Per diem?	
13	11/28/2023	ACWAMtg	ACWA FALL CONFERENCE/LOCAL GOVERNMENT COMMITTEE	Per diem?	
14	11/29/2023	ACWA Mtg	ACWA FALL CONFERENCE/REGION 9 COMMITTEE REPORT	Per diem?	
15		Select from List		Per diem?	
<b>Total Requested Compensation</b>				<b>\$ 2,990.00</b>	<b>\$ 0.00</b>

**The undersigned certifies that the claims hereby stated are for authorized activities as described in the District's approved Resolution establishing rules and procedures for compensation of Directors.**

Signed: T. MILFORD HARRISON Digitally signed by T. MILFORD HARRISON  
Date: 2023.12.06 23:44:46 -08'00'

Date: 12/06/2023

## Director's Activity Report

Director's Name **June Hayes**

Month Reporting Activity **November 2023**

	Date	Meeting/Activity Description	Explanation <small>Provide description of the meeting or activity and brief explanation on the benefits to the District and work of the Board by your attendance. (Not required for Valley District meetings)</small>	Max 10/month	Travel Cost Estimate <small>(Staff)</small>
1	11/03/2023	WACO		\$299	
2	11/04/2023	Other	Save the forest celebration	\$299	
3	11/07/2023	SB Valley Board Mtg 1		\$299	
4	11/08/2023	Other	Meeting with Paul Hernandez from WELL	\$299	
5	11/02/2023	Workshop - Policy/Admin		\$299	
6	11/02/2023	So. Cal. Water Coalition Mtg		\$0	
7	11/14/2023	Workshop - Resources/Eng		\$299	
8	11/16/2023	Other	Tres Lagos Meeting	\$299	
9	11/17/2023	Other	Sites Board meeting	\$299	
10	11/20/2023	ASBCSD Dinner		\$299	
11	11/27/2023	JPIA		\$299	
12	11/28/2023	JPIA		\$0	
13		Select from List		Per diem?	
14		Select from List		Per diem?	
15		Select from List		Per diem?	
<b>Total Requested Compensation</b>				<b>\$ 2,990.00</b>	

***The undersigned certifies that the claims hereby stated are for authorized activities as described in the District's approved Resolution establishing rules and procedures for compensation of Directors.***

Signed: June D Hayes Digitally signed by June D Hayes  
Date: 2023.12.05 09:25:19 -08'00'

Date: 12/05/2023



## Director's Activity Report

Director's Name Paul Kielhold

Month Reporting Activity November 2023

	Date	Meeting/Activity Description	Explanation <small>Provide description of the meeting or activity and brief explanation on the benefits to the District and work of the Board-by your attendance. (Not required for Valley District meetings)</small>	Max 10/month	Travel Cost Estimate <i>(Staff)</i>
1	11/2/23	Workshop - Policy		\$299	
2	11/7/23	Valley District Board Mtg 1		\$299	
3	11/7/23	Retail Agency Board Meeting	YVWD	\$0	
4	11/8/23	SBV Water Conservation District Mtg		\$299	
5	11/8/23	Retail Agency Board Meeting	EVWD	\$0	
6	11/13/23	Other	Remote mtg re Sunrise Ranch MP	\$299	
7	11/14/23	Workshop - Engineering		\$299	
8	11/16/23	Other	Tres Lagos MWC	\$299	
9	11/20/23	CSDA Mtg		\$299	
10				\$0	
11				\$0	
12				\$0	
13				\$0	
14				\$0	
15				\$0	
<b>Total Requested Compensation</b>				<b>\$2,093.00</b>	<b>\$ 0.00</b>

**The undersigned certifies that the claims hereby stated are for authorized activities as described in the District's approved Resolution establishing rules and procedures for compensation of Directors.**

Signed: Paul Kielhold

Date: December 1, 2023



## Director's Activity Report

Director's Name Susan Longville

Month Reporting Activity 11/30/23

#	Date	Meeting/Activity Description	Explanation <small>Provide description of the meeting or activity and brief explanation on the benefits to the District and work of the Board by your attendance. (Not required for Valley District meetings)</small>	Max 10/month	Travel Cost Estimate (Staff)
1	11/02/2023	Workshop - Policy/Admin		\$299	
2	11/07/2023	Other	Annual National HCP Coalition Meeting, Shepherdstown WV	\$299	
3	11/08/2023	Other	Annual National HCP Coalition Meeting, Shepherdstown WV	\$299	
4	11/09/2023	Other	Annual National HCP Coalition Meeting, Shepherdstown WV	\$299	
5	11/13/2023	Presentation	OCWD Zoom presentation on "Lessons Learned in Stormwater Capture and Groundwater Recharge in 2022-2023"	\$299	
6	11/14/2023	Assigned Committee Mtg	PERC Meeting at SBVWCD Offices	\$0	
7	11/14/2023	Workshop - Resources/Eng		\$299	
8	11/15/2023	Presentation	UCR School of Public Policy Water Seminar Series: Economic Choices for the Colorado and Its Reservoirs by D.James Booker on Zoom	\$299	
9	11/16/2023	Presentation	California Water Data Consortium State Agency Discussion: Open Data for Water Resilience by Zoom	\$0	
10	11/20/2023	CSDA Mtg	ASBSCD dinner at YVWD Crystal Creek Facility	\$299	
11	11/28/2023	Presentation	California Resources Agency Zoom presentation on "Restoring Rivers in a Changing Climate: Update on Efforts to Improve Conditions in the Sacramento and San Joaquin Rivers and the Bay Delta"	\$299	
12	11/29/2023	ACWA Mtg	One day registration at Fall ACWA Conference, Renaissance Esmeralda Resort, Indian Wells Ca 92210	\$299	
13		Select from List		Per diem?	
14		Select from List		Per diem?	
15		Select from List		Per diem?	
<b>Total Requested Compensation</b>				<b>\$ 2,990.00</b>	<b>\$ 0.00</b>

*The undersigned certifies that the claims hereby stated are for authorized activities as described in the District's approved Resolution establishing rules and procedures for compensation of Directors.*

Signed: \_\_\_\_\_

*Susan Longville*

Date: \_\_\_\_\_

*12-4-23*



**DATE:** January 2, 2024

**TO:** Board of Directors

**SUBJECT:** List of Announcements

---

- A. January 4, 2024, 2 p.m. – Board Workshop – Policy/Administration by  
Teleconference or In-Person
- B. January 9, 2024, 2 p.m. – Board Workshop – Resources/Engineering by  
Teleconference or In-Person
- C. January 10, 2024, 8:30 a.m. – Upper SAR WIFA Technical Advisory Committee by  
Teleconference
- D. January 10, 2024 – SBVW Conservation District Board Meeting
- E. January 15, 2024 – Agency Closed for Federal Holiday, Martin Luther King, Jr. Day
- F. January 16, 2024, 9:30 a.m. – SAWPA Commission Meeting (OCWD GM, Mike  
Markus Retirement Farewell)
- G. January 16, 2024, 2 p.m. – Regular Board Meeting by Teleconference or In-Person
- H. January 17, 2024, 8:30 a.m. – Upper SAR WIFA by Teleconference (Cancelled)
- I. January 22, 2024, 6 p.m. – ASBCSD dinner (Five Star Catering & Event Center,  
10013 8th St., Suite F, Rancho Cucamonga)
- J. January 24, 2024, 8:30 a.m. – Upper SAR WIFA Technical Advisory Committee by  
Teleconference
- K. February 1, 2024, 2 p.m. – Board Workshop – Policy/Administration by  
Teleconference or In-Person