



**REGULAR MEETING OF THE BOARD OF DIRECTORS  
2:00 pm Tuesday, September 5, 2023**

**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, September 4, 2023**. 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, September 5, 2023**

**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 Board of Directors' Workshop - Resources-Engineering August 8, 2023(2 min) - Page 3

[Staff Recommendation - Approve Minutes of the Board of Directors' Workshop - Resources/Engineering 080823](#)

2.2 Approve Minutes of the Regular Board of Directors' Meeting - August 15, 2023(2 min) - Page 8

[Staff Recommendation - Approve Minutes of the Regular Board of Directors Meeting - 081523](#)

**3) DISCUSSION AND POSSIBLE ACTION ITEMS**

3.1 Consider the Joint Funding Agreements for the Fiscal Year 2023-2024 Cooperative Program with the United States Geological Survey (USGS)(20 min) - Page 17

[Staff Memo - Consider the Joint Funding Agreements for the Fiscal Year 2023-2024 Cooperative Program with the United States Geological Survey \(USGS\)](#)

[Joint Funding Agreement for Hydrologic Data Collection Program, Agreement 24ZGJFA22000062](#)

[Joint Funding Agreement for Water Resources Investigations, Agreement 23ZGJFA21000080](#)

[Joint Funding Agreement with the USGS California Water Science Center, Agreement 23ZGJFA11000080](#)

[Technical Assistance Agreement with the USGS Western Ecological Research Center](#)

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

4.1 CEO/General Manager's Report (10 min) - Page 56

[CEO/General Manager's Report](#)

[3-Month Look Ahead Table](#)  
[Project Status Update](#)

4.2 Directors' Report of Activities and Travel Requests in accordance with Resolution 1100

4.3 General Counsel Report

4.4 SAWPA Meeting Report

**5) FUTURE BUSINESS**

**6) ANNOUNCEMENTS**

6.1 List of Announcements(2 min) - Page 66

[List of Announcements 090523](#)

**7) CLOSED SESSION**

7.1 Authorization to Negotiate Purchase of APN 0269-171-34

**8) ADJOURNMENT**

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

**August 8, 2023**

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

**Directors Absent.** Susan Longville

**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, 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  
 Anthony Flordelis – Business Systems Analyst  
 Chris Jones, MESM – Preserve System Program Manager  
 Kelly Malloy, MPA – Strategic Communications Manager  
 Matthew Olivo – Senior Accountant  
 Karen Resendez, MAOL – Human Resources & Risk Manager  
 Shavonne Turner, MPA – Water Conservation Program Manager

**Members of the Public in Attendance:**

James Morales, East Valley Water District

The Resources/Engineering Workshop of the Board of Directors was called to order by Chairperson June Hayes at 2:02 p.m. A quorum was noted present.

**Agenda Item 1. Introductions.** There were none.

**Agenda Item 2. Public Comment.**

Chair Hayes invited public comment. There was none.

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

**3.1) Consider Professional Services Agreement for Design and Environmental Review of the Foothill Pipeline Crossing at City Creek Project.** Assistant Chief Engineer Leo Ferrando described the location and District system crossing City Creek. He reminded the Board of discussion at the July 11, 2023, Board of Directors Workshop – Resources/Engineering meeting regarding the pipeline situation and repair efforts, presentation of the feasibility study, and the Board’s authorization to negotiate for design services.

A proposal from AECOM has been received, Mr. Ferrando continued. He reviewed the scope of work and advised the anticipated design and California Environmental Quality Act (CEQA) preparation schedule would be one year, from September 2023 to September 2024. The not-to-exceed project budget of \$908,035 includes cost sharing participation of the San Geronio Pass Water Agency (SGPWA) at 18.33 percent based on their ownership of capacity in the pipeline.

In response to President Kielhold, Mr. Ferrando said a better idea of the construction schedule would form once the final plans are in place; but it is currently anticipated to take about a year for completion.

Director Botello asked for further detail on the cost share. Assistant General Manager/Chief Operating Officer Wen Huang said it is based on a Proper Use Factor (PUF) and Chief Financial Officer/Deputy General Manager Cindy Saks added it is based on the capacity of the pipeline.

Director Botello pointed to costs related to work on cultural resources and noise / vibration. Since this is a not-to-exceed contract, Mr. Ferrando noted, the consultant’s hours will be monitored. President Kielhold indicated that the action related to the surveys will change based on what is found.

In response to Chair Hayes, Mr. Ferrando further detailed the scope of work for the design phase services. Once the design phase is complete, the project will go out to bid for construction. The bid came in within the expected range, Mr. Ferrando added.

The Board of Directors authorized the CEO/General Manager to execute an Engineering Services Agreement with AECOM for a not-to-exceed amount of \$908,035 to develop construction plans and specifications, prepare required CEQA documentation, and provide project management assistance for the Foothill Pipeline Crossing at City Creek Project by the following roll-call vote:

Moved: Botello	Second: Kielhold	APPROVED: 4-0
AYES:	Botello, Harrison, Hayes, Kielhold	
NOES:	None	
ABSTAIN:	None	

ABSENT:	Longville
---------	-----------

**3.2) Approval of Cost Share Agreement with Western Municipal Water District for Forecast Informed Reservoir Operations.** Chief of Planning and Watershed Resilience Greg Woodside provided background on the Forecast Informed Reservoir Operations (FIRO) program. The process begins with the formation of a steering committee, development of a work plan, and viability assessment. If the assessment is favorable, this would lead to the goal of updating of the Water Control Manual (WCM) to allow FIRO to be implemented, Mr. Woodside explained. He shared examples of other successful FIRO examples and detailed the functions of the FIRO Work Teams.

If the viability assessment demonstrates that FIRO results in better outcomes than existing operations, then the Steering Committee pursues implementation of FIRO through an update of the WCM by the U.S. Army Corps of Engineers (Corps), Mr. Woodside stated. It is difficult to estimate, but for Seven Oaks Dam, it is hoped that changes to the WCM can be completed in five to six years. An earlier deviation could be requested if the assessment appears promising, he noted.

Mr. Woodside shared atmospheric river activity and Santa Ana Basin precipitation forecast information from Dr. Marty Ralph of the Scripps Institute, indicating changes in historic, long-term weather patterns with increased rain coming from very large events and less from other moderate storms. The goal of FIRO at Seven Oaks is to capture more water and hold it longer / release it more slowly. This will benefit recharge and treatment plants that take the water, he said.

The total cost of the study with Scripps is \$703,513, with San Bernardino Valley's cost share totaling \$506,881 (72.05 percent), Mr. Woodside stated. In response to President Kielhold, Mr. Woodside clarified the product to be received from this agreement is the work plan and technical studies, but not the viability studies or any change in the WCM.

Another benefit of FIRO is the survival of fish, Director Harrison added.

Director Botello requested the staff recommendation always include the cost information. He acknowledged the prior work of other agencies and noted the Corps will be investing staff time. Mr. Woodside added the participation of the Corps is critical. Normally, the Corps would charge for their time; however, their time is being paid by the federal government, as Congress has supported this. Support was announced last year, Director Harrison added, and concurred that San Bernardino Valley is benefiting from the prior efforts of other agencies.

President Kielhold asked about amendment of the WCM and Mr. Woodside said it would be coordinated with Corps Division 2 under the ultimate signature of the Division Commander.

Chair Hayes acknowledged the dam was built to prevent flooding but is mostly a dry dam. She asked why a minor deviation could now not be obtained to make the highest use of the water behind the dam. Mr. Woodside indicated there must be technical work to

support and explain the water capture without impacting the dam's purpose of flood risk management, and to add water conservation as a purpose for the dam. Options will be brought to the Board in the fall, he said.

Chair Hayes urged staff to nudge the bureaucracy and look to the spirit of the law in this process. Director Harrison indicated the Corps' announcement last year and the FIRO study moving forward are pretty significant nudges, and it seems SB Valley has done what it can so far. Mr. Huang assured that staff is developing a strategy to determine the best way to move forward.

The Board of Directors approved the Cost Share Agreement with Western Municipal Water District for Forecast Informed Reservoir Operations (FIRO) at Seven Oaks Dam and authorized the CEO/General Manager and House Counsel to make any minor, technical, or non-substantive changes to the Agreement as appropriate by the following roll-call vote:

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

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

**Agenda Item 5. Adjournment**

The meeting was adjourned by Chair Hayes at 2:46 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  
REGULAR BOARD MEETING  
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT**

**August 15, 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  
 Anthony Flordelis – Business Systems Analyst  
 Matthew Flordelis – Lead Water Systems Operator  
 Chris Jones, MESM – Preserve System Program Manager  
 Kelly Malloy, MPA – Strategic Communications Manager  
 David McArthur – Water Operations Manager  
 Adekunle Ojo, MPA – Water Resources Manager  
 Matthew Olivo – Senior Accountant  
 Karen Resendez, MAOL – Human Resources & Risk Manager  
 Shavonne Turner, MPA – Water Conservation Program Manager

Isabelle Huang, SBVMWD Intern  
 Garrett Wojciechowski – SBVMWD Intern

Brad Neufeld, Varner & Brandt, District Legal Counsel

**Members of the Public in Attendance:**

Jennifer Ares, Yucaipa Valley Water District  
 John Longville, San Bernardino Valley Water Conservation District  
 Melody McDonald, San Bernardino Valley Water Conservation District  
 James Morales, East Valley Water District

Kevin Walton, San Geronio Pass Water Agency  
Ben Kelly, Western Heights Mutual Water Company

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**

President Kielhold stated that any member of the public wishing to make any comments to the Board regarding non-agenda items may do so. There were none.

### **Agenda Item 2. Consent Calendar**

#### **2.1) Approve Minutes of the Board of Directors Workshop - Policy/Administration - August 3, 2023.**

The Board of Directors approved the Meeting Minutes on the Consent Calendar by the following roll-call vote:

MOVED: Hayes	SECONDED: Botello	APPROVED: 4-0-1
AYES:	Botello, Hayes, Harrison, Kielhold	
NOES:	None	
ABSTAIN:	Longville	
ABSENT:	None	

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

**3.1) Consider Authorizing Procurement of Heavy Equipment.** Assistant Chief Engineer Leo Ferrando reminded the Board of discussion of this \$1.5 million procurement during the annual budget workshop on June 15, 2023. The equipment would be useful for facilities needs including required maintenance at District basins, and on Sunrise Ranch. Future use would include Weaver Basins and for potential operational agreements with neighboring agencies, he explained.

A cost benefit analysis showed the equipment investment would pay off in about four years, Mr. Ferrando continued. In addition, future required habitat restoration work at the Phase 1B Basins could realize \$1.5 to \$2 million in savings, he said. He reviewed the list of six items and assured the Board that the equipment would be securely stored:

- Trailer
- Water truck (3,000-gal capacity)
- Dump truck (10 CY capacity)

- Backhoe loader
- Skid Steer Loader w/ Attachments
- D4 Track Type Tractor

Competitive quotes were obtained, and price negotiations are underway, Mr. Ferrando reported.

Director Harrison asked if the D4 Caterpillar track type tractor would be large enough for the District's needs. Lead Water Systems Operator Matt Flordelis explained the specifications of the bulldozer and said it is the largest available without need for a larger trailer. The dump truck can pull the trailer (up to 42,000 lbs.) he noted.

Director Botello pointed to the suggested use of the equipment as a regional resource and stated he would be more comfortable if it was made available to all the District's retailers. Assistant General Manager/Chief Operating Officer Wen Huang noted the resource would not be limited to the agencies listed in the staff report.

Director Botello emphasized the need for protection of the investment.

Mr. Ferrando noted for Director Botello through the competitive quote process, the District obtains the best price, and not all vendors are local. All the equipment is Caterpillar, and the District has been working with Quinn, the Riverside vendor, through Sourcewell. He detailed some savings available via Sourcewell. Director Botello reminded that when spending the District's money, a vendor within the District's service area should be sought. Vice President Hayes concurred with the desire to support local vendors and suggested that staff reports include information on why a local provider was chosen or not. Director Botello leaned toward a local preference policy.

Director Harrison confirmed with Mr. Flordelis all items are being purchased through Quinn, the local area Caterpillar dealer.

Mr. Ferrando advised staff reached out to at least three contractors in the area and the District's insurance company regarding how to best manage and store equipment and found that most store these vehicles outside and there are no specific requirements.

In response to Vice President Hayes, Mr. Huang indicated there would be a broad operations agreement with agencies taking advantage of this regional resource to assure reimbursement of costs. CEO / General Manager Heather Dyer said the intent is not only to make the equipment available, but also to have licensed operators on San Bernardino Valley's staff and staff of other agencies to minimize costs and duplication. Vice President Hayes advised that maintenance costs should be part of the agreement to cover wear and tear and assure that San Bernardino Valley is not bearing the entire burden. She also pointed to the need for security of the equipment.

Director Longville stated it will be important for all local and regional agencies to have this type of equipment to deal with the impacts of climate whiplash and climate resilience.

President Kielhold asked if used equipment had been considered. Mr. Flordelis said yes and noted that used equipment is hard to find and there could be unknown issues. He pointed out the service response for new equipment.

Director Botello asked about needed staffing. Mr. Huang advised of an exercise over the winter to make determinations about staffing and noted that Mr. Flordelis is an experienced operator and is training others. There are no certifications, but staff must be proficient in order to run the equipment, Mr. Huang answered..

Mr. Ferrando advised there is a lengthy lead time to obtain the equipment: approximately 10 to 12 months.

The Board of Directors authorized the procurement of heavy equipment to maintain and operate various facilities for an estimated budgetary amount of \$1,285,000 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 4. Reports (Discussion and Possible Action Items).**

**4.1) State Water Project Report.** Chief of Statewide Water Initiatives/Deputy General Manager Bob Tincher provided highlights of the report:

- Current historic snowpack and ongoing precipitation index
- Statewide, reservoirs are currently almost full
- San Luis is expected to be full this year, which means no carryover
- More State Water Contract Article 21 water was delivered this year than in previous years
- Challenges include facility constraints, and late allocation of 100 percent
- Some water will be undelivered, but much will be in storage
- Higher initial 2024 allocation is expected.

**4.2) Presentation on the State Water Contractors.** Mr. Bob Tincher pointed out the mission and vision of the State Water Contractors (SWC) are aligned with San Bernardino Valley's. He provided a detailed overview of the SWC organization and its functions and

value to the District and highlighted some activities of the year and objectives for 2023-2024.

Mr. Tincher responded to questions from Director Harrison and President Kielhold related to power generation and licensing. He noted the SWP is the largest single generator of power in the State of California.

Director Botello asked about the relationship of Sites Reservoir project to the SWC. Mr. Tincher said it is not a part of the SWC but is headed by a local joint powers authority. Ms. Dyer added that it is anticipated to become a part of the State Water Project (SWP) at some point in the near future. Director Longville pointed out the local leadership was instrumental in obtaining Proposition 1 funds.

San Bernardino Valley's portion of the SWC \$9 million annual budget is about \$278,000 or 3 percent of the total, Mr. Tincher explained. The proportion is based on SWP allocation and actual SWP deliveries for the previous year. It would be impossible to replicate the value that San Bernardino Valley receives from the organization for this amount, he noted.

Director Harrison asked about the use of the SWP canal. Mr. Tincher indicated that fishing is permitted, but the water is deceptively fast moving.

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

Director Botello reported that he attended:

- August 3 – West Valley Water District Board meeting
- August 7 – Basin Technical Advisory Committee
- August 9 – East Valley Water District Board meeting
- August 11 – Building Industry Association Water Conference
- August 15 – ACWA Business Development Committee

Director Harrison reported that he attended:

- August 4 – CSDA Legislative Committee meeting
- August 11 – Building Industry Association Water Conference
- August 14 – Association of Special Districts Board meeting

Vice President Hayes reported that she attended:

- August 1-2 – Forecast Informed Reservoir Operations Workshop, Scripps, La Jolla
- August 3 – West Valley Water District meeting
- August 4 – Orange County Water Advisory Committee
- August 7 – Basin Technical Advisory Committee
- August 9 – San Bernardino County Water Conservation District
- August 11 – Building Industry Association Water Conference

Director Longville reported that she attended:

- August 11 – Building Industry Association Water Conference

Director Kielhold reported that he attended:

- August 1-2 – Forecast Informed Reservoir Operations Workshop, Scripps, La Jolla
- August 7 – Basin Technical Advisory Committee
- August 9 – East Valley Water District Board meeting
- August 9 – San Bernardino County Water Conservation District
- August 11 – Building Industry Association Water Conference

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

**4.5) SAWPA Meeting Report.** Director Harrison reported that the August 15, 2023, Commission Meeting was cancelled.

**4.6) Water Delivery Report.** Chief of Water Resources Michael Plinski gave a presentation on the 500-mile State Water Project. He reviewed the SWP imported water supply for 2023 totaling 118,132 acre feet.

San Bernardino Valley works with member agencies to determine annual water orders, Mr. Plinski continued. The original need totaled about 31,000 acre feet (af) for direct delivery plus recharge of 70,000 af (total demand on the system of 101,000). Mr. Plinski detailed some challenges in bringing that water down, and explained revised targets of 20,000 af and 45,000, respectively (total of 65,000 af). Additional water not brought down this year will carry over to the following year, he stated.

As of the end of July 2023, direct deliveries totaled 8,248 af; about 25 percent of the original target of 30,000 af over seven months, Mr. Plinski continued. Deliveries are not on pace to fulfill the targets, but when retailers call for additional water, it is made available to them. Water not called for is used for recharge, Mr. Plinski explained.

Director Botello acknowledged the challenge and asked about the reasons retailers are not taking the water. Continued close communication is critical, Mr. Plinski noted. He added the unknown allocation and late start had been a handicap to making full deliveries. There is also the competition of local groundwater and surface water, but agencies may be incentivized to take the imported water when it is available, Mr. Plinski said. He recommended development of opportunities to maximize direct deliveries but noted physical constraints.

In response to Vice President Hayes, Mr. Huang detailed Rialto's water supply and noted that Rialto's imported water is not tracked separately. Vice President Hayes noted that in this wet year, the Rialto-Colton Basin water level went down by a foot. Mr. Plinski explained that the number represents 2022 hydrology: a dry year. The hope is that benefits of the 2023 wet year will impact water levels later this year, he added.

Director Longville complimented the report and noted San Bernardino Valley has the tools to do better and to provide incentives; and noted the collaboration of the Program for the Expansion of Recharge Capacity PERC Committee to recharge more water when there are direct deliveries. To improve requires communication and collaboration, she noted.

Mr. Plinski reviewed the available recharge basins and noted deliveries through July totaling 11,125 af of the planned 63,000 af (less than 20 percent of the target). He shared the challenges encountered including late supply allocation, recharge of local surface water per the Integrated Regional Water Management Plan, construction activities, and SWP capacity constraints. If not all the water is taken this year, it moves to carryover where there is a possibility it will be lost, he cautioned. There has been no gap in service, he assured.

Vice President Hayes pointed out the lack of ability to recharge in the Cactus Basin. That will be a key facility on the west side, Mr. Plinski noted.

Mr. Plinski shared opportunities and emphasized collaboration to maximize imported water deliveries. He described additional recharge capacity in the future and potential for extending the recharge and delivery season by delaying planned maintenance activities. Mr. Plinski reviewed recharge facilities and noted that eventually there will need to be a pipeline project to extend the SWP to the Weaver Basins.

Ms. Dyer commended the staff of San Bernardino Valley and the Conservation District for working well together to accomplish a record year of recharge.

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

The Board approved the following expenses for the month of July 2023: State Water Contract Fund \$7,130,351.00 and General Fund \$5,463,098.13 by the following roll-call vote:

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

**Agenda Item 5. Future Business.** President Kielhold inquired about a workshop on Cactus Basins and a workshop on the Board Handbook. Chief of Staff/Clerk of the Board Jose Macedo advised that the Cactus Basins workshop is scheduled for October 3, and the special Board handbook workshop will be scheduled on September 26.

President Kielhold requested a construction report on the Weaver Pipeline project. Mr. Huang said this could probably be brought to the Board in September.

**Agenda Item 6. Announcements.**

**6.1) List of Announcements.** Chief of Staff/Clerk of the Board Jose Macedo pointed out the announcements and said he would reach out regarding scheduling the special meeting. Mr. Macedo confirmed for Director Longville that staff would be making a presentation to the City of San Bernardino City Council at their meeting on August 16.

**Agenda Item 7. Closed Session.** District Counsel Brad Neufeld introduced the Closed Session item. President Kielhold adjourned the meeting to Closed Session at 3:37 pm.

- 7.1) Conference with Legal Counsel - Anticipated Litigation**  
 Significant Exposure to Litigation  
 Pursuant to Paragraph (2) of Subdivision (d) of Section 45956.9  
 (One potential Case)

President Kielhold returned the meeting to Open Session at 3:37 p.m.

**Agenda Item 8. Discussion and Possible Action Items.**

**8.1) Potential Rejection of Tort Claim.** District Counsel Brad Neufeld announced the Board voted unanimously to reject the potential tort claim related to disability retirements with PERS.

**Agenda Item 9. Adjournment.** The meeting was adjourned by President Kielhold at 3:49 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

**DATE:** September 5, 2023

**TO:** Board of Directors

**FROM:** Michael Plinski, Chief of Water Resources  
Joanna Gibson, MS – Executive Director, Upper Santa Ana River HCP  
Adekunle Ojo, Manager of Water Resources

**SUBJECT:** Consider the Joint Funding Agreements for the Fiscal Year 2023-2024 Cooperative Program with the United States Geological Survey (USGS)

---

**Staff Recommendation**

Staff recommends the Board of Directors authorize the CEO/General Manager to execute Joint Funding Agreements in FY 2023-2024 with the USGS for the following aspects of the Cooperative Program:

1. Hydrologic Data Collection and Monitoring Program in the amount of \$1,031,870 (24ZGJFA22000062);
2. Water Resources Investigations in the amount of \$597,234 (23ZGJFA21000080);
3. Support services from the USGS California Water Science Center to conduct native fishes surveys and data analyses work in the amount of \$158,008 (23ZGJFA11000080); and
4. Technical Assistance Agreement for support services from the USGS Western Ecological Research Center to conduct terrestrial and aquatic biodiversity studies in the amount of \$107,077.

**Summary**

For decades, San Bernardino Valley and the USGS have cooperated on scientific investigations to support science-based decisions and proactive risk management of the water resources and environment within the San Bernardino Valley service area and Santa Ana River Watershed. Each year, staff from both agencies confer to identify pressing scientific inquiries for water and biological resources. All tasks are performed on an as-needed basis, as such, costs fluctuate from year-to-year.

San Bernardino Valley and the other Santa Ana River Watermaster entities have partnered with the USGS to monitor streamflows in the upper Santa Ana River Watershed along with precipitation levels and groundwater levels within the San Bernardino Valley service area for decades. Staff is recommending the Board approve the following:

a. Attachment 1, a Joint Funding Agreement (JFA) (24ZGJFA22000062) for the FY 2023-2024 Hydrologic Data Collection and Monitoring Program that supports the Western-San Bernardino Watermaster, Santa Ana River Watermaster, the Upper Santa Ana River Habitat Conservation Plan (HCP), the Yucaipa Sustainable Groundwater Management Agency, and the Basin Technical Advisory Committee at a total cost of \$1,190,870. This agreement will cover a water year period from October 1, 2023 through September 30, 2024. The USGS is contributing a total of \$159,000 leaving a remainder of \$1,031,870 to be paid by San Bernardino Valley and its Watermaster partners. San Bernardino Valley's net cost is \$761,616.

b. Attachment 2, JFA (23ZGJFA21000080) for Water Resources Investigations, which will cover a 9-month period from October 1, 2023 through June 30, 2024. The Water Resources Investigations, through its enhanced data collection and applied research, will focus on supporting optimal basin management activities in San Bernardino Valley in FY 20223-2024 by closing the knowledge gap on the effectiveness of artificial recharge. The total proposed program cost is \$700,169 with a USGS funding amount of \$102,935. A unique aspect of the proposed program is that San Bernardino Valley and San Gorgonio Pass Water Agency ("Pass Agency") will be sharing the costs related to the Yucaipa Basin, with the former contributing 84% and the latter 16%. After the USGS contribution and \$46,485 reimbursement from the Pass Agency, the net cost to San Bernardino Valley is \$550,749.

c. Attachments 3, JFA (23ZGJFA11000080) to fund the continuation of native fish studies and the development of a population viability analysis for native fishes in the Santa Ana River. Multiple academic publications have been produced from this work and it is an integral component to the conservation strategy of the Upper Santa Ana River Habitat Conservation Plan and its permit compliance requirements. The total cost of the program, as outlined in the JFA and accompanying scope of work is \$193,328, with the USGS contributing \$35,320 and San Bernardino Valley and its HCP partners contributing \$158,008. The net cost to San Bernardino Valley is \$63,203.

d. Attachment 4, Technical Assistance Agreement (TAA) with the USGS Western Ecological Resource Center proposes the funding of baseline biodiversity surveys across seven (7) properties of the HCP's Preserve System. This work includes surveys for western spadefoot toad and glossy snake among other species covered by the HCP. Total cost of the program, as outlined in the TAA and accompanying scope of work is \$107,077, which will be shared by San Bernardino Valley and its HCP partners. The net cost to San Bernardino Valley is \$42,831.

The forms of these agreements are essentially the same as previous versions, which were reviewed by House Counsel and approved as to form.

### **Background**

The Hydrologic Data Collection and Monitoring Program (24ZGJFA22000062), the foundational agreement for the Cooperative Program with the USGS, is specifically focused on the collection of hydrologic data, including surface flow and groundwater data, in support of the Western-San Bernardino Watermaster, Santa Ana River Watermaster, the HCP, the Yucaipa Sustainable Groundwater Management Agency, and the Basin Technical Advisory Committee. The Data Collection and Monitoring Program is managed by the USGS Redlands Field Office, where USGS staff monitor, collect, and maintain data in support of the Program.

The Water Resources Investigations (23ZGJFA21000080) builds upon the Hydrologic Data Collection and Monitoring Program to evaluate water management questions, identify and close data gaps by collecting and evaluating additional groundwater data, and document the knowledge and insights gained. Over the years, these USGS Water Resources Investigations have resulted in a wide range of work products and insights including groundwater flow models for the San Bernardino Basin, Yucaipa Basin, and the Rialto-Colton Basin; and, has provided valuable scientific data and analysis in support of the HCP.

Agreement (23ZGJFA11000080) with the USGS California Water Science Center will support a continuation of annual surveys and studies on native fishes in the Santa Ana River. The data collected and generated under this effort will help inform the HCP's conservation and management strategies for Santa Ana sucker and arroyo chub in the Santa Ana River.

The Technical Assistance Agreement with USGS Western Ecological Resource Center, based out of San Diego, will provide baseline biological resource data for seven properties within the HCP's Preserve System. Data collected under this effort will provide requisite baseline data for the HCP's alluvial fan preserve properties and will also help inform the conservation strategies and management actions in the long-term management plan for the HCP.

### **District Strategic Plan Application**

These projects are consistent with San Bernardino Valley's 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 and with the following strategies:

- Proactively manage a diverse and adaptable water supply portfolio to maximize the value of the region's water assets;

- Drive science-based decision making and proactive risk management; and
- Build trust by being a collaborative and resourceful partner through effective communication and engagement.

### **Fiscal Impact**

These items were anticipated and are included in the approved FY 2023-2024 General Fund Budget Line Item 6350 - United States Geological Survey. The amount San Bernardino Valley will pay for these agreements is \$1,894,189. After taking into consideration the USGS contribution and reimbursement from our partners, San Bernardino Valley's net cost for the Cooperative Program totals \$1,418,399 with the following breakdown:

- Total cost for the Hydrologic Data Collection and Monitoring Program is \$1,190,870. The USGS is contributing a total of \$159,000 leaving a remainder of \$1,031,870 to be paid by San Bernardino Valley and its Watermaster partners. San Bernardino Valley's net cost is \$761,616.
- The total cost for the Water Resources Investigations is \$700,169. The USGS is contributing \$102,935 leaving a remainder of \$597,234 to be paid by San Bernardino Valley and Pass Agency. Pass Agency will cover \$46,485, for 16% of the Yucaipa Basin's Costs (Tasks 1b, 4, 5 & 6). San Bernardino Valley's net cost is \$550,749.
- The total cost for support services from the USGS California Water Science Center is \$193,328. The USGS is contributing \$35,320 leaving a remainder of \$158,008 to be paid by San Bernardino Valley and the HCP partners. The HCP partners will cover \$94,805, representing 60% of the remaining costs. San Bernardino Valley's net cost is \$63,203.
- The total cost for support services from the USGS Western Ecological Resource Center is \$107,077. The HCP partners will cover \$64,246, representing 60% of the costs. San Bernardino Valley's net cost is \$42,831.

### **Attachments**

1. Joint Funding Agreement for Hydrologic Data Collection Program, Agreement 24ZGJFA22000062.
2. Joint Funding Agreement for Water Resources Investigations, Agreement 23ZGJFA21000080.
3. Joint Funding Agreement with the USGS California Water Science Center, Agreement 23ZGJFA11000080.
4. Technical Assistance Agreement with the USGS Western Ecological Research Center.



## United States Department of the Interior

U.S. GEOLOGICAL SURVEY  
California Water Science Center  
6000 J Street  
Sacramento, CA 95819

July 25, 2023

Mrs. Heather Dyer  
Chief Executive Officer/General Manager  
San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, CA 92408

Dear Mrs. Dyer:

Attached is the Joint Funding Agreement (JFA) 24ZGJFA22000062, signed by our agency, for your approval to enact the cost changes to the project(s) California Water Science Center Water Resources Investigations, during the period October 1, 2023 through September 30, 2024 in the amount of \$1,031,870 from your agency. U.S. Geological Survey contributions for this agreement are \$159,000 for a combined total of \$1,190,870. If you are in agreement with this proposed program, please return the fully executed signed copy to CAgageADMIN@usgs.gov (preferred) or send one fully executed paper copy to Cade Castro at the address in the letter head.

Federal law requires that we have a signed agreement before we start or continue work. Please return the signed agreement by **October 1, 2023**. If, for any reason, the agreement cannot be signed and returned by the date shown above, please contact Jonathan Newby by phone number (909) 798-3272 or email [jnewby@usgs.gov](mailto:jnewby@usgs.gov) to make alternative arrangements.

This is a fixed cost agreement to be billed quarterly via Down Payment Request (automated Form DI-1040). Please allow 30-days from the end of the billing period for issuance of the bill. If you experience any problems with your invoice(s), please contact Cade Castro at phone number (970) 462-2034 or email at [ccastro@usgs.gov](mailto:ccastro@usgs.gov).

The results of all work performed under this agreement will be available for publication by the U.S. Geological Survey. We look forward to continuing this and future cooperative efforts in these mutually beneficial water resources studies.

Sincerely,

ANKE MUELLER-  
SOLGER

Digitally signed by ANKE  
MUELLER-SOLGER  
Date: 2023.07.26  
18:00:22 -07'00'

Anke Mueller-Solger  
Director, USGS California Water Science Center

Enclosure  
Detailed Summary

Form 9-1366  
(May 2018)

U.S. Department of the Interior  
U.S. Geological Survey  
Joint Funding Agreement  
FOR  
Water Resource Investigations

Customer #: 600000809  
Agreement #: 24ZGJFA22000062  
Project #: ZG00GZV  
TIN #: 95-6005196

Fixed Cost Agreement YES[ X ] NO[ ]

THIS AGREEMENT is entered into as of the October 1, 2023, by the U.S. GEOLOGICAL SURVEY, California Water Science Center, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the San Bernardino Valley Municipal Water District party of the second part.

1. The parties hereto agree that subject to the availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation Water Resource Investigations (per attachment), herein called the program. The USGS legal authority is 43 USC 36C; 43 USC 50, and 43 USC 50b.

2. The following amounts shall be contributed to cover all of the cost of the necessary field and analytical work directly related to this program. 2(b) include In-Kind-Services in the amount of \$0.00

- (a) \$159,000 by the party of the first part during the period  
October 1, 2023 to September 30, 2024
- (b) \$1,031,870 by the party of the second part during the period  
October 1, 2023 to September 30, 2024
- (c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of: \$0

Description of the USGS regional/national program:

- (d) Additional or reduced amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.
- (e) The performance period may be changed by mutual agreement and set forth in an exchange of letters between the parties.

3. The costs of this program may be paid by either party in conformity with the laws and regulations respectively governing each party.

4. The field and analytical work pertaining to this program shall be under the direction of or subject to periodic review by an authorized representative of the party of the first part.

5. The areas to be included in the program shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods employed in the field and office shall be those adopted by the party of the first part to insure the required standards of accuracy subject to modification by mutual agreement.

6. During the course of this program, all field and analytical work of either party pertaining to this program shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner, either party may terminate this agreement upon 60 days written notice to the other party.

7. The original records resulting from this program will be deposited in the office of origin of those records. Upon request, copies of the original records will be provided to the office of the other party.

8. The maps, records or reports resulting from this program shall be made available to the public as promptly as possible. The maps, records or reports normally will be published by the party of the first part. However, the party of the second part reserves the right to publish the results of this program, and if already published by the party of the first part shall, upon request, be furnished by the party of the first part, at cost, impressions suitable for purposes of reproduction similar to that for which the original copy was prepared. The maps, records or reports published by either party shall contain a statement of the cooperative relations between the parties. The Parties acknowledge that scientific information and data developed as a result of the Scope of Work (SOW) are subject to applicable USGS review, approval, and release requirements, which are available on the USGS Fundamental Science Practices website (<https://www2.usgs.gov/fsp/>).



Form 9-1366  
(May 2018)

U.S. Department of the Interior  
U.S. Geological Survey  
Joint Funding Agreement  
FOR  
Water Resource Investigations

Customer #: 600000809  
Agreement #: 24ZGJFA22000062  
Project #: ZG00GZV  
TIN #: 95-6005196

9. Billing for this agreement will be rendered quarterly. Invoices not paid within 60 days from the billing date will bear Interest, Penalties, and Administrative cost at the annual rate pursuant the Debt Collection Act of 1982, (codified at 31 U.S.C. § 3717) established by the U.S. Treasury.

**USGS Technical Point of Contact**

Name: Jonathan Newby  
Supervisory Hydrologic Technician  
Address: 1653 Plum Lane  
Redlands, CA 92374  
Telephone: (909) 798-3272  
Fax: (909) 335-3407  
Email: jnewby@usgs.gov

**Customer Technical Point of Contact**

Name: Heather Dyer  
Chief Executive Officer/General  
Manager  
Address: 380 East Vanderbilt Way  
San Bernardino, CA 92408  
Telephone: (760) 397-7756  
Fax:  
Email: heatherd@sbvmwd.com

**USGS Billing Point of Contact**

Name: Cade Castro  
Budget Analyst  
Address: 6000 J Street Placer Hall  
Sacramento, CA 95819  
Telephone: 970-462-2034  
Fax:  
Email: ccastro@usgs.gov

**Customer Billing Point of Contact**

Name: Cindy Saks  
Chief Financial Officer  
Address: 380 East Vanderbilt Way  
San Bernardino, CA 92408  
Telephone: (909) 387-9224  
Fax: (909) 387-9247  
Email: cindys@sbvmwd.com

U.S. Geological Survey  
United States  
Department of Interior

San Bernardino Valley Municipal Water District

Signature

ANKE  
MUELLER-  
SOLGER  
Digitally signed by ANKE  
MUELLER-SOLGER  
Date: 2023.07.29 16:00:46  
-0700  
By \_\_\_\_\_ Date: \_\_\_\_\_  
Name: Anke Mueller-Solger  
Title: Director, USGS California Water Science  
Center

Signatures

By \_\_\_\_\_ Date: \_\_\_\_\_  
Name:  
Title:  
  
By \_\_\_\_\_ Date: \_\_\_\_\_  
Name:  
Title:  
  
By \_\_\_\_\_ Date: \_\_\_\_\_  
Name:  
Title:



**San Bernardino Valley Municipal Water District**  
Attachment for 24ZGJFA22000062  
2023-10-01 to 2024-09-30

**SURFACE WATER**

SITE NUMBER	DESCRIPTION	CODE	NO. UNITS	DIFF FACTOR	USGS FUNDS	CUST.OTHER CASH FUNDS	TOTAL COST
11051499	SANTA ANA R NR MENTONE (RIVER ONLY) CA Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870	\$25,200
				<b>SW Total:</b>			
11051502	SAR SUPP GAGE NR MENTONE CA Partial range streamflow O&M	QPART	1	1	\$4,750	\$10,370	\$15,120
				<b>SW Total:</b>			
11055000	MILL C NR MENTONE CA Discharge, Measurement	QMEAS	1	1		\$12,720	\$12,720
				<b>SW Total:</b>			
11055500	PLUNGE C NR EAST HIGHLANDS CA Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870	\$25,200
				<b>SW Total:</b>			
11055700	CITY C WATER CO CN NR HIGHLAND CA Partial range streamflow O&M	QPART	1	1	\$4,750	\$10,370	\$15,120
				<b>SW Total:</b>			
11055800	CITY C NR HIGHLAND CA Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870	\$25,200
				<b>SW Total:</b>			
11058500	E TWIN C NR ARROWHEAD SPRINGS CA Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870	\$25,200
				<b>SW Total:</b>			
11058600	WATERMAN CANYON CREEK NR ARROWHEAD SPRINGS CA Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870	\$25,200
				<b>SW Total:</b>			
11060400	WARM C NR SAN BERNARDINO CA Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870	\$25,200
				<b>SW Total:</b>			
11061000	FONTANA WATER CO INFILTRATION LINE NR FONTANA CA Discharge, Measurement	QMEAS	1	1	\$1,850	\$4,340	\$6,190
				<b>SW Total:</b>			
11062399	FONTANA WATER CO SURFACE DIV WEIR 2 NR FONTANA CA Partial range streamflow O&M	QPART	1	1		\$9,620	\$9,620
				<b>SW Total:</b>			
11062400	FONTANA WATER CO SURFACE DIV NR FONTANA CA Partial range streamflow O&M	QPART	1	1		\$9,620	\$9,620
				<b>SW Total:</b>			
11062450	FONTANA PH FOREBAY SPILLWAY NR FONTANA CA Partial range streamflow O&M	QPART	1	1		\$15,800	\$15,800
				<b>SW Total:</b>			
11062700	LYTLE C DIV TO FONTANA PH AVM NR FONTANA CA AVM quality assurance check-review	QFURN-AVM	1	1		\$1,500	\$1,500
				<b>SW Total:</b>			
11062800	FONTANA WATER CO SPILL CH FROM AFTERBAY NR FONTANA Partial range streamflow O&M	QPART	1	1		\$15,800	\$15,800
				<b>SW Total:</b>			
11063510	CAJON C BL LONE PINE C NR KEENBROOK CA Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870	\$25,200
				<b>SW Total:</b>			
11063680	DEVIL CYN C NR SAN BERNARDINO CA Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870	\$25,200
				<b>SW Total:</b>			

11065000	LYTLE C A COLTON CA							
	Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870		
					<b>SW Total:</b>			<b>\$25,200</b>
11066320	RIX OUTFLOW A SANTA ANA R NR GRAND TERRACE CA							
	Stage, Continuous	STGCONT	1	1		\$9,200		
					<b>SW Total:</b>			<b>\$9,200</b>
11066460	SANTA ANA R A MWD CROSSING CA							
	Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870		
	Discharge, Measurement	QMEAS	1	1	\$2,590	\$10,130		
					<b>SW Total:</b>			<b>\$37,920</b>
11071900	TEMESCAL C A CORONA LK NR CORONA CA							
	Discharge, Measurement	QMEAS	1	1		\$15,800		
					<b>SW Total:</b>			<b>\$15,800</b>
11072100	TEMESCAL C AB MAIN ST A CORONA CA							
	Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870		
					<b>SW Total:</b>			<b>\$25,200</b>
11073360	CHINO C A SCHAEFER AVENUE NR CHINO CA							
	Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870		
					<b>SW Total:</b>			<b>\$25,200</b>
11073495	CUCAMONGA C NR MIRA LOMA CA							
	Full Range Streamflow Station	QCONT	1	1	\$7,330	\$17,870		
					<b>SW Total:</b>			<b>\$25,200</b>
					<b>SW Grand Total:</b>		<b>\$109,230</b>	<b>\$357,580</b>
								<b>\$466,810</b>

**SEDIMENT**

SITE NUMBER	DESCRIPTION	CODE	NO. UNITS	DIFF FACTOR	USGS FUNDS	CUST. CASH FUNDS	OTHER FUNDS	TOTAL COST
11059300	SANTA ANA R A E ST NR SAN BERNARDINO CA Sedimentation Measurement	SEDMEAS	1	1		\$17,970		
<b>SED Total:</b>								<b>\$17,970</b>
<b>SED Grand Total:</b>						<b>\$17,970</b>		<b>\$17,970</b>

**WATER QUALITY**

SITE NUMBER	DESCRIPTION	CODE	NO. UNITS	DIFF FACTOR	USGS FUNDS	CUST. CASH FUNDS	OTHER FUNDS	TOTAL COST
11066460	SANTA ANA R A MWD CROSSING CA Water Quality, Measurement	WQMEAS	1	1	\$4,410	\$11,670		
					<b>WQ Total:</b>			<b>\$16,080</b>
					<b>WQ Grand Total:</b>			<b>\$16,080</b>

**CLIMATE**

SITE NUMBER	DESCRIPTION	CODE	NO. UNITS	DIFF FACTOR	USGS FUNDS	CUST. OTHER CASH FUNDS	TOTAL COST
340014117040901	WEATHER STATION A W COUNTY LINE RD A CALIMESA CA Precipitation, Continuous	PRECIPCONT	1	1		\$9,800	
							<b>CLIM Total: \$9,800</b>
340312116592701	WEATHER STATION A OAK GLEN RD NR YUCAIPA CA Precipitation, Continuous	PRECIPCONT	1	1		\$9,800	
							<b>CLIM Total: \$9,800</b>
340526116561301	MILL C PRECIP NR FOREST FALLS CA Precipitation, Continuous	PRECIPCONT	1	1		\$9,800	
							<b>CLIM Total: \$9,800</b>
340742117161701	GILBERT ST PRECIP GAGE A SAN BERNARDINO CA Precipitation, Continuous	PRECIPCONT	1	1		\$9,800	
							<b>CLIM Total: \$9,800</b>
341429116583101	BIG BEAR LK PRECIP NR BIG BEAR CA Precipitation, Continuous	PRECIPCONT	1	1		\$9,800	
							<b>CLIM Total: \$9,800</b>
341509117312601	MF LYTLE C PRECIP GAGE NR LYTLE CREEK CA Precipitation, Continuous	PRECIPCONT	1	1		\$9,800	
							<b>CLIM Total: \$9,800</b>
							<b>CLIM Grand Total: \$58,800</b>

**GROUND WATER**

SITE NUMBER	DESCRIPTION	CODE	NO. UNITS	DIFF FACTOR	USGS FUNDS	CUST. OTHER CASH FUNDS	TOTAL COST
340046117020801	002S002W12H001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	\$9,200
				<b>GW Total:</b>			<b>\$9,200</b>
340046117020802	002S002W12H002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>
340046117020803	002S002W12H003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>
340046117020804	002S002W12H004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>
340130117054901	002S002W04L002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	\$9,200
				<b>GW Total:</b>			<b>\$9,200</b>
340130117054902	002S002W04L003S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	\$1,690
				<b>GW Total:</b>			<b>\$1,690</b>
340130117054903	002S002W04L004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>
340130117054904	002S002W04L005S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>
340130117054905	002S002W04L006S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>
340136117033901	002S002W02F002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	\$9,200
				<b>GW Total:</b>			<b>\$9,200</b>
340136117033902	002S002W02F003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>
340136117033903	002S002W02F004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>
340136117033904	002S002W02F005S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>
340136117033905	002S002W02F006S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>
340248117020901	001S002W36A002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	\$9,200
				<b>GW Total:</b>			<b>\$9,200</b>
340248117020902	001S002W36A003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>
340248117020903	001S002W36A004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>
340248117020904	001S002W36A005S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	\$2,830
				<b>GW Total:</b>			<b>\$2,830</b>

					<b>GW Total:</b>		<b>\$2,830</b>
340316117174101	001S004W27M001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340316117174102	001S004W27M002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340316117174103	001S004W27M003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340317117190401	001S004W29K001S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340317117190402	001S004W29K002S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340317117190403	001S004W29K003S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340317117190404	001S004W29K004S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340317117190405	001S004W29K005S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340321117153801	001S004W25E005S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340321117153802	001S004W25E006S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340321117153803	001S004W25E007S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340326117185301	001S004W29H004S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340326117185302	001S004W29H005S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340326117185303	001S004W29H006S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340326117185304	001S004W29H007S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340326117185305	001S004W29H008S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340408117165301	001S004W22J001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340408117165302	001S004W22J002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340408117165303	001S004W22J003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340408117165304	001S004W22J004S						

	Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340414117190201	001S004W20H001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340414117190202	001S004W20H002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340414117190203	001S004W20H003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340414117190204	001S004W20H004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340414117190205	001S004W20H005S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340433117171201	001S004W22B009S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340433117171202	001S004W22B010S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340433117171203	001S004W22B011S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340439117173902	001S004W22D002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340439117173904	001S004W22D004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340439117173905	001S004W22D005S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340439117173906	001S004W22D006S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340439117173907	001S004W22D007S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340503117104101	001S003W15K001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340503117104102	001S003W15K002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340503117104103	001S003W15K003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340503117104104	001S003W15K004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340503117104105	001S003W15K005S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340508117163301	001S004W14E008S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	



					<b>GW Total:</b>		<b>\$9,200</b>
340508117163302	001S004W14E009S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340508117163303	001S004W14E010S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340508117163304	001S004W14E011S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340508117163305	001S004W14E012S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340508117163306	001S004W14E013S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340509117172401	001S004W15F006S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340509117172402	001S004W15F007S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340509117172403	001S004W15F008S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340521117212001	001S005W13B001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340521117212002	001S005W13B002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340521117212003	001S005W13B003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340521117212004	001S005W13B004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340521117212005	001S005W13B005S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340524117182801	001S004W16C005S Groundwater level, Continuous	GWCONT	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340524117182802	001S004W16C006S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340524117182803	001S004W16C007S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340538117171401	001S004W10K001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340538117171402	001S004W10K002S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340538117171403	001S004W10K003S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340541117074401	001S002W07Q001S						

	Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340541117074402	001S002W07Q002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340541117074403	001S002W07Q003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340541117074404	001S002W07Q004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340541117074405	001S002W07Q005S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340541117074406	001S002W07Q006S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340546117182901	001S004W09L002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340546117182902	001S004W09L003S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340546117182903	001S004W09L004S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340546117182904	001S004W09L005S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340555117161201	001S004W11K002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340555117161202	001S004W11K003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340555117161203	001S004W11K004S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340555117161204	001S004W11K005S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340555117161205	001S004W11K006S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340555117161206	001S004W11K007S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340555117161207	001S004W11K008S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340559117194501	001S004W08E001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340559117194502	001S004W08E002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340559117194503	001S004W08E003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>

340559117194504	001S004W08E004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340606117223801	001S005W11F001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	<b>\$9,200</b>
				<b>GW Total:</b>			
340606117223802	001S005W11F002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340606117223803	001S005W11F003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340606117223804	001S005W11F004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340615117170902	001S004W10B002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	<b>\$9,200</b>
				<b>GW Total:</b>			
340615117170903	001S004W10B003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340615117170904	001S004W10B004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340632117170501	001S004W03Q001S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	<b>\$3,390</b>
				<b>GW Total:</b>			
340633117174001	001S004W03N002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	<b>\$9,200</b>
				<b>GW Total:</b>			
340633117174002	001S004W03N001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340633117174003	001S004W03N003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340633117174004	001S004W03N004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340633117174005	001S004W03N005S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340633117174006	001S004W03N006S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	<b>\$1,690</b>
				<b>GW Total:</b>			
340655117184004	001S004W04E004S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	<b>\$1,690</b>
				<b>GW Total:</b>			
340655117184005	001S004W04E005S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	<b>\$1,690</b>
				<b>GW Total:</b>			
340655117184006	001S004W04E006S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	<b>\$9,200</b>
				<b>GW Total:</b>			
340707117162706	001S004W02D006S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	<b>\$9,200</b>
				<b>GW Total:</b>			
340707117162707	001S004W02D007S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			

340707117162708	001S004W02D008S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340716117230601	001S005W03A003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	<b>\$9,200</b>
				<b>GW Total:</b>			
340716117230602	001S005W03A004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340716117230603	001S005W03A005S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340716117230604	001S005W03A006S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340716117230605	001S005W03A007S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340716117230606	001S005W03A008S Groundwater level, Continuous	GWCONT	1	1	\$280	\$1,410	<b>\$1,690</b>
				<b>GW Total:</b>			
340800117235901	001N005W34D001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	<b>\$9,200</b>
				<b>GW Total:</b>			
340800117235902	001N005W34D002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340800117235903	001N005W34D003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340800117235904	001N005W34D004S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	<b>\$1,690</b>
				<b>GW Total:</b>			
340804117221601	001N005W35B001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	<b>\$9,200</b>
				<b>GW Total:</b>			
340804117221602	001N005W35B002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340804117221603	001N005W35B003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340804117221604	001N005W35B004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340814117253501	001N005W29Q001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	<b>\$9,200</b>
				<b>GW Total:</b>			
340814117253502	001N005W29Q002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340814117253503	001N005W29Q003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	<b>\$2,830</b>
				<b>GW Total:</b>			
340814117253504	001N005W29Q004S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	<b>\$1,690</b>
				<b>GW Total:</b>			
340814117253505	001N005W29Q005S						

	Groundwater level, Continuous	GWCONT	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340826117224201	001N005W26L001S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340828117240102	001N005W28J002S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340828117240103	001N005W28J003S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340829117284301	001N006W26K002S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340829117284302	001N006W26K003S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340851117281901	001N006W26A001S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340851117281902	001N006W26A002S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340851117281903	001N006W26A003S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340854117235102	001N005W27D002S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340854117235104	001N005W27D004S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$3,110	
				<b>GW Total:</b>			<b>\$3,390</b>
340914117234901	001N005W22N001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340914117234902	001N005W22N002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340914117234903	001N005W22N003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340914117234904	001N005W22N004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340914117234905	001N005W22N005S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340914117234906	001N005W22N006S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410	
				<b>GW Total:</b>			<b>\$1,690</b>
340927117242201	001N005W21K001S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920	
				<b>GW Total:</b>			<b>\$9,200</b>
340927117242202	001N005W21K002S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>
340927117242203	001N005W21K003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550	
				<b>GW Total:</b>			<b>\$2,830</b>

340927117242204	001N005W21K004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550		
				<b>GW Total:</b>			<b>\$2,830</b>	
341013117253901	001N005W17L001S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410		
				<b>GW Total:</b>			<b>\$1,690</b>	
341013117253902	001N005W17L002S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410		
				<b>GW Total:</b>			<b>\$1,690</b>	
341013117253903	001N005W17L003S Groundwater level, Continuous	GWCONT	1	1	\$280	\$8,920		
				<b>GW Total:</b>			<b>\$9,200</b>	
341013117253904	001N005W17L004S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550		
				<b>GW Total:</b>			<b>\$2,830</b>	
341013117253905	001N005W17L005S Groundwater level, Continuous	GWCONT	1	1	\$280	\$2,550		
				<b>GW Total:</b>			<b>\$2,830</b>	
341013117253906	001N005W17L006S Groundwater Level, Measurement	GWMEAS	1	1	\$280	\$1,410		
				<b>GW Total:</b>			<b>\$1,690</b>	
					<b>GW Grand Total:</b>	<b>\$45,360</b>	<b>\$585,850</b>	<b>\$631,210</b>

SUMMARY FOR				
TYPE	USGS FUNDS	CUST. CASH	OTHER FUNDS	TOTAL COST
SURFACE WATER (SW)	\$109,230	\$357,580		\$466,810
SEDIMENT (SED)		\$17,970		\$17,970
WATER QUALITY (WQ)	\$4,410	\$11,670		\$16,080
CLIMATE (CLIM)		\$58,800		\$58,800
GROUND WATER (GW)	\$45,360	\$585,850		\$631,210
<b>GRAND TOTAL</b>				<b>\$1,190,870</b>



## United States Department of the Interior

U.S. GEOLOGICAL SURVEY  
California Water Science Center  
6000 J Street, Placer Hall  
California State University  
Sacramento, California 95819-6129  
Phone: (916) 278-3000 Fax: (916) 278-3070  
<https://www.usgs.gov/centers/ca-water/>

August 21, 2023

Ms. Heather Dyer, CEO/General Manager  
San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, California 92408

Subject: Proposed USGS program for October 1, 2023 – June 30, 2024

Dear Ms. Dyer,

This letter confirms discussions between our respective staffs describing proposed work for the October 1, 2023, through June 30, 2024 agreement period, as part of our cooperative water-resources program between the San Bernardino Valley Municipal Water District (SBVMWD) and the United States Geological Survey (USGS). This 9-month agreement period spans parts of Federal Fiscal Years 2023 and 2024 and is aligned with SBVMWD fiscal years ending June 30.

The cooperative program outlined in this agreement focuses on optimal water management of the Upper Santa Ana Valley Groundwater Basins (USAVGB, namely the San Bernardino Basin Area, Rialto-Colton Basin Area, and the Riverside-Arlington Basin Area), with specific tasks for the Yucaipa Basin to support the Basin's Groundwater Sustainability Plan. Six topical tasks are included: Technical outreach and planning (Task 1); Data collection and maintenance in the USAVGB (Task 2); Evaluation of artificial recharge activities in the USAVGB (Task 3); Data collection in the Yucaipa Basin (Task 4); Fate and transport of artificial recharge water in the Yucaipa Basin (Task 5); New U.S. Geological Survey monitoring-well site in the Yucaipa Basin (Task 6); and Products (Task 7).

This letter provides details of the work that are proposed for each of the 7 tasks during the 9-month agreement period. Proposed funding for each task and subtask is summarized in the attached table. Program accomplishments for the previous agreement are documented in a separate letter. This letter, however, does provide brief descriptions of how the proposed work fits within the long-term study plan for each component of the program.

### **1. Technical outreach and planning**

In the 2023–24 program year, technical outreach will be provided, as requested by SBVMWD, to SBVMWD and partner agencies in the USAVGB (subtask 1a) and the Yucaipa Basin (subtask 1b).

#### ***1a. Technical outreach and planning for the USAVGB***

Technical outreach will be provided as requested by SBVMWD, to SBVMWD, water agencies in the USAVGB, and the general public. The USGS will provide technical guidance and support to help identify optimal water-management objectives and technical issues in achieving optimal management. This technical outreach is expected to include attendance at up to six workshops and (or) technical



**Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District**

meetings, giving presentations, individual briefings of agencies, technical review of proposed plans, and maintenance and updating the Bunker Hill project web page (<http://ca.water.usgs.gov/sanbern>).

**Deliverables:** Written summary of technical outreach provided each quarter; and a preliminary workplan for optimal water management in the USAVGB.

***1b. Technical outreach and planning for the Yucaipa Basin***

Technical outreach will be provided as requested by SBVMWD, to SBVMWD, the Yucaipa groundwater sustainability agency (GSA), its member agencies, and the general public. The USGS will provide the necessary technical guidance and support to help ensure success as the GSA continues to learn about the hydrogeology of the basin and develops and implements sustainable water management plans. This technical outreach may include attendance at meetings, giving presentations, individual briefings of agencies, completing publication of information products, maintenance and updating the project web page, technical review of proposed plans, and technical support for the USGS Yucaipa Integrated Hydrologic Model (YIHM).

**Deliverables:** Written summary of technical outreach provided each quarter.

**2. Data collection and maintenance in the USAVGB**

In the 2023–24 program year, the USGS will validate existing USGS surface-water monitoring equipment and surface-water data, validate USGS multiple-depth, monitoring-well sites and groundwater data, identify locations for new surface water and groundwater monitoring sites, and collect new water-quality data. The USGS surface water and groundwater monitoring sites provide valuable data that are used to better understand and to manage the USAVGB, including changes in water levels and water quality; calculations of changes in basin storage; estimates of runoff and recharge; and interaction of surface water and groundwater. These data also are used to calibrate the various groundwater-flow and solute-transport models and are used in multiple studies and by multiple water agencies. Specific subtasks include: assessment of surface-water monitoring sites and data (subtask 2a); assessment of groundwater monitoring sites and data (subtask 2b); and collection of new water quality data (subtask 2c). Work to be performed for each subtask is described below. Funds for all subtasks are included as a single amount in the attached table.

***2a. Assessment of surface-water monitoring sites and data***

An assessment of the quality of 31 surface-water monitoring sites within, and upstream of, the USAVGB and their records, will be conducted in order to evaluate the quality of USGS surface-water data. Surface-water data from all USGS surface-water monitoring sites will be used to evaluate and characterize historical changes in surface-water flow within watersheds that transect the USAVGB, and may be used to identify potential issues with monitoring equipment. The potential for two new instantaneous surface-water monitoring sites will be evaluated: the two potential sites are along Mill Creek and along the Santa Ana River downstream of the RIX facility. The work described above will be conducted in coordination with staff at the USGS Redlands Field Office.

**Deliverables:** Written summary of work performed each quarter. Written summary of historical surface-water flow within watersheds that transect the USAVGB. Written summary and scope of work for the installation and monitoring of two new instantaneous surface-water monitoring sites along Mill Creek and the Santa Ana River. Cost estimates for any potential repairs to monitoring equipment will be provided.

***2b. Assessment of groundwater monitoring sites and data***

An assessment of the quality of selected multiple-depth, monitoring-well sites in the Bunker Hill and Rialto-Colton basins, and their records, will be conducted. The well sites will be rehabilitated, as



**Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District**

needed. This assessment and rehabilitation of USGS multiple-depth, monitoring-well sites is a continuation of work from the 2022–23 program year. Six well sites are in the Bunker Hill basin (SBSH, SBEP, SBMP, SBCC, SBRV, and SBCM; <https://ca.water.usgs.gov/sanbern>) and 18 well sites are in the Rialto-Colton basin (El Verde Reservoir, Linden Ponds, Apple St, Cedar Ave, Vineyard Ave, Fontana Landfill, Airport, Easton Reservoir, RCNE, RCSW, Rialto Ave, Cesar Chavez Park, Fogg 1, Fogg 2, CRCR, Lilac Park, RHSW, and RCZ6). The assessment will include written descriptions and photographs of each site documenting the physical condition of the site infrastructure. Documentation of the physical condition of each site will be used to evaluate whether any of the sites should be rehabilitated in future program years.

Groundwater-level data from all USGS multiple-depth, monitoring-well sites will be used to evaluate and characterize historical changes in groundwater levels within and between basins that comprise the USAVGB. Potential locations for up to two new multiple-depth, monitoring-well sites in the USAVGB will be evaluated.

**Deliverables:** Written summary of work performed each quarter. Written inventory, assessment, and description of suggested repairs or rehabilitation for multiple-depth, monitoring-well sites in the Bunker Hill and Rialto-Colton basins. Written summary of historical changes in groundwater-levels for the groundwater basins that comprise the USAVGB. Written summary and scope of work for the location, drilling, and construction of up to two new multiple-depth, monitoring-well sites in the USAVGB.

***2c. Collection of new water-quality data***

New water quality data will be collected from selected surface-water monitoring sites and selected multiple-depth, monitoring-well sites in the USAVGB. New water-quality data are necessary to evaluate present conditions of the hydrologic system in order to evaluate the effects of anthropogenic changes on the surface-water and groundwater system, such as an increase or decrease in pumping and changes to the rate and location of artificial aquifer recharge, interaction of surface water and groundwater, and the presence of emerging contaminants. Water-quality sites will be selected in coordination with SBVMWD. Surface-water monitoring sites will be chosen to target the presence of emerging contaminants; multiple-depth, monitoring-well sites will be chosen to refine the hydrogeologic understanding of existing and potential areas for artificial aquifer recharge, to extend long-term records of chemical data, and to better understand vertical groundwater flow in selected areas.

Water samples will be collected from up to six surface-water monitoring sites and up to 18 total wells from 4 multiple-depth, monitoring-well sites in the USAVGB. Laboratory analyses will be performed to measure major and minor ions, trace elements, nutrients, stable isotopes of oxygen and hydrogen, tritium, and carbon-14. The surface water samples will also be analyzed for the presence and concentration of per- and polyfluoroalkyl substances (PFAS). The analytical results will be archived in the USGS National Water Information Systems (NWIS) database, which is a publicly available, permanent archive; and a summary of the results will be presented to SBVMWD at the end of the program year.

**Deliverables:** Written summary of work performed each quarter. Analytical results for all samples will be archived in the NWIS database, and a written summary of water quality results will be provided to SBVMWD.

**3. Evaluation of artificial recharge activities in the USAVGB**

The purpose of this task is to improve the regional hydrogeologic understanding to support existing and potential artificial recharge activities in the USAVGB and provide additional information on which to base

**Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District**

optimal water management decisions. Specific subtasks include: analysis of the distribution of hydrogeologic facies (subtask 3a); evaluation of vertical groundwater flow (subtask 3b); and evaluation of horizontal groundwater flow (subtask 3c). Results from the three subtasks can be used independently, and collectively to refine the regional hydrogeologic characterization and support the application of artificial recharge water at existing and future locations. Work to be performed for each subtask is described below. Funds for all subtasks are included as a single amount in the attached table.

***3a. Analysis of the distribution of hydrogeologic facies***

Interferometric synthetic aperture radar (InSAR) analyses will be used in conjunction with borehole lithology data to determine the type and distribution of near-surface hydrogeologic facies in the USAVGB. This information can be used to determine preferred locations for artificial aquifer recharge. InSAR analyses are used to identify deformation of the land surface, and the location of faults that restrict groundwater flow, the location of recharge, and suggests the aerial distribution of fine-grained materials. Hydrogeologic facies interpretations of previous InSAR analyses (Lu and Danskin, 2001; Brandt and others, 2022) will be verified with borehole lithology data compiled from publicly available datasets, and correlated with analyses of groundwater hydrographs and artificial recharge locations.

**Deliverables:** Written summary of work performed each quarter. Preliminary map of the distribution of near-surface hydrogeologic facies in the USAVGB and the location of existing and proposed artificial recharge locations

***3b. Evaluation of vertical groundwater flow***

The subsurface hydrogeology and hydraulic pressures determine vertical groundwater-flow gradients in the aquifer. Groundwater may flow up to shallow parts of the aquifer from deeper down, or vice versa. The vertical direction of groundwater flow may vary in different parts of a groundwater basin, and the vertical gradient may change over time due to anthropogenic influences (such as pumping or artificial aquifer recharge). Hydrographs from USGS multiple-depth, monitoring-well sites will be used to characterize vertical groundwater-flow gradients in the USAVGB and help identify potential areas for artificial aquifer recharge.

**Deliverables:** Written summary of work performed each quarter. Written summary of vertical groundwater flow from USGS multiple-depth, monitoring-well sites in the USAVGB with respect to the location of existing and proposed artificial recharge locations.

***3c. Evaluation of horizontal groundwater flow***

Analyses of the rate and direction of horizontal groundwater flow can be used to evaluate the presence of geologic structures (such as faults and folds) that may inhibit groundwater flow, evaluate surface water and groundwater interactions along stream channels, and evaluate anthropogenic effects on the groundwater system such as pumping and artificial aquifer recharge. In this subtask, contour maps of groundwater-level elevations will be constructed for the shallow and deep aquifer system to determine the direction of groundwater-flow within and across groundwater basins that comprise the USAVGB. The contour maps will also be used to estimate gaining and losing reaches of the Santa Ana River and to identify depressions from groundwater pumping and the effects of existing artificial recharge locations.

**Deliverables:** Written summary of work performed each quarter. Preliminary contour map of present-day groundwater-level elevations in the USAVGB. Written summary of horizontal groundwater flow with respect to areas of natural recharge, existing and proposed artificial recharge, groundwater pumping, gaining and losing reaches of the Santa Ana River.



**Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District**

#### **4. Water-quality data collection in the Yucaipa Basin**

New water-quality data will be collected from selected wells in the Yucaipa Basin. This data will be used to support the interpretive work in Task 5 to provide better estimates of groundwater flow paths and travel time of groundwater recharge in different parts of the basin. Water-quality samples will be collected from the 4 USGS monitoring-well sites in the Yucaipa Basin (YVWC, YVDA, YVEP, and YV6E) and 13 selected production wells. The USGS monitoring-well sites and the 13 production wells have historical water-quality data with the most recent samples collected in the 2010s. The new samples collected at these wells will extend the time-series of data and provide a present-day snapshot of water quality in the Yucaipa Basin. The water-quality data from these wells with historical data will be used in an interpretive report evaluating the flow rate and direction of artificially recharged water in the Yucaipa Basin, and sources and timing of local groundwater recharge (Task 5).

Laboratory analyses will be performed to measure major and minor ions, trace elements, nutrients, stable isotopes of nitrogen, oxygen and hydrogen, tritium, and carbon-14. The analytical results will be archived in the USGS National Water Information Systems (NWIS) database (<https://waterdata.usgs.gov/nwis/>), which is a publicly available, permanent archive; and a summary of the results will be presented to SBVMWD at the end of the program year.

**Deliverables:** Written summary of work performed each quarter. Analytical results for all samples will be archived in the NWIS database. A summary presentation will be given summarizing the analytical results.

#### **5. Evaluate the fate and transport of artificial recharge water and local sources of groundwater recharge in the Yucaipa Basin**

The purpose of this task is to better understand the groundwater chemistry and the hydrogeology of the Yucaipa Basin by investigating groundwater chemical signatures from USGS monitoring-well sites and selected production wells with historical water-quality data and new water-quality data collected as part of Task 2. The work in this task will provide better estimates of groundwater flow paths and travel time of groundwater recharge in different parts of the basin, especially the fate and transport of artificial groundwater recharge at the Wilson Creek and Oak Glen Creek spreading basins. The work will also help to better understand the sources of groundwater recharge in the Yucaipa Basin, to and to better understand historical changes in groundwater chemistry with respect to nitrate contamination and local sources of groundwater recharge that may have contributed to increased nitrate concentrations in the basin. The results from this task will improve the conceptual and quantitative understanding of groundwater flow in the Yucaipa Basin and can be used to improve numerical simulations of groundwater flow in the YIHM. This work will include an evaluation of the groundwater flow paths of artificial recharge water at the Wilson Creek and Oak Glen Creek spreading basins from 2014 through present-day; part of which was originally prepared as a separate report, but is better suited as an addition to this product because of the addition of new water-quality data. The deliverable for this task is a scientific journal article. In the 2023–24 program year, a draft of the scientific journal article will be provided to SBVMWD for review. Final publication of the journal article is anticipated to occur during the 2024 25–program year (funds for the 2024 25–program year are not included in the attached table).

**Deliverables:** Written summary of work performed each quarter. Draft scientific journal article for SBVMWD review.

#### **6. New U.S. Geological Survey monitoring-well site in the Yucaipa Basin**

Artificial recharge at the potential County Line Road recharge sites is designed to support sustainable groundwater management in the Yucaipa Basin. Effective monitoring of groundwater levels and water quality in wells near the recharge sites is important to track the fate and transport of the water within the

**Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District**

groundwater system. A new USGS monitoring-well site, YVCL (Yucaipa Valley County Line), at the potential recharge sites will offer an opportunity to monitor groundwater-levels in real-time, collect regular water-quality samples, and track the flow of artificially recharged water at discrete depths below land surface. YVCL would be constructed and monitored in a fashion similar to the other four USGS monitoring-well sites in the Yucaipa Basin. YVCL would likely have a shallow piezometer at the water table, a deep piezometer below the pumping zone, and at least two piezometers at selected depths in between. Each piezometer will be equipped to transmit groundwater-level readings in real time to the USGS NWIS database. A formal proposal for USGS monitoring-well site, YVCL, will be prepared. The proposal will include the location, scope, and costs for drilling, construction and development of up to five piezometers, and initial water-quality sampling.

**Deliverables:** Written summary of work performed each quarter. Written proposal for drilling, construction, development, and water-quality sampling of a new USGS monitoring-well site, YVCL.

## **7. Products**

This task summarizes the anticipated deliverables for the 2023–24 program year; no additional funds are requested for this task. Preliminary summary results for each task and subtask will be presented to SBVMWD at the end of the 2023–24 program year. Written quarterly updates of work performed on each task and subtask will be presented to SBVMWD throughout the program year. Funds for the preparation and publication of interpretive USGS report(s) will be considered in following program years in consultation with SBVMWD. Anticipated deliverables for each task and subtask for the 2023–24 program year are described in each section of work and are summarized below. Included in the deliverables, but not on the list below, is the final publication of two scientific journal articles, one describing the effects of future climate scenarios on estimated groundwater recharge using the YIHM, and one describing the hydrogeology of the USAVGB; these articles were submitted for review during the 2022–2023 program year and final publication is expected this year. No additional funds were requested for completion of these articles.

**Task 1:** Summary of technical assistance activities for subtasks 1a and 1b, and workplan for optimal water management for the USAVGB.

**Task 2:** Presentation of preliminary findings on surface water and groundwater data.

*Subtask 2a:* Summary analysis of proposed surface-water monitoring stations and surface-water flow data for the USAVGB.

*Subtask 2b:* Summary analysis of multiple-depth, monitoring-well sites and groundwater data for the USAVGB and proposed groundwater subbasins.

*Subtask 2c:* Surface-water and groundwater quality results archived in the USGS NWIS database, and a summary analysis of results, including surface-water quality from the Santa Ana River and selected tributaries for emerging contaminants.

**Task 3:** Presentation of preliminary findings on the effectiveness of artificial recharge activities.

*Subtask 3a:* Preliminary map and summary analysis of the distribution of hydrogeologic facies.

*Subtask 3b:* Summary analysis of vertical groundwater-flow gradients.

**Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District**

*Subtask 3c:* Preliminary contour map and summary analysis of groundwater-level elevations.

**Task 4:** Summary analysis of groundwater quality results; all groundwater quality results archived in the USGS NWIS database.

**Task 5:** Presentation of preliminary findings and draft of a scientific journal article.

**Task 6:** Written proposal for drilling, construction, development, and water-quality sampling of a new USGS monitoring-well site, YVCL.



Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District

The proposed program for the October 1, 2023 – June 30, 2024, agreement period, including the 7 tasks and associated subtasks and costs, are as follows:

Task	Funding		
	SBVMWD	USGS	Total
<b>1. Technical outreach and planning</b>			
a. Technical outreach and planning for the USAVGB	\$ 41,698	\$ 10,178	\$ 51,876
b. Technical outreach and planning for the Yucaipa Basin	\$ 10,779	\$ 2,695	\$ 13,474
<i>Subtotal</i>	\$ 52,477	\$ 12,873	\$ 65,350
<b>2. Data collection and maintenance in the USAVGB</b>	\$ 169,362	\$ 26,679	\$ 196,041
<b>3. Evaluation of artificial recharge activities in the USAVGB</b>	\$ 95,646	\$ 23,912	\$ 119,558
<b>4. Water-quality data collection in the Yucaipa Basin</b>	\$ 228,960	\$ 26,773	\$ 255,733
<b>5. Evaluate the fate and transport of artificial recharge water and local sources of groundwater recharge in the Yucaipa Basin</b>	\$ 44,851	\$ 11,213	\$ 56,064
<b>6. New U.S. Geological Survey monitoring-well site in the Yucaipa Basin</b>	\$ 5,938	\$ 1,485	\$ 7,423
<b>7. Products</b>	–	–	–
<b>TOTAL (Tasks 1-7)</b>	\$ 597,234	\$ 102,935	\$ 700,169

Total cost for the proposed investigations program is **\$700,169**. Cost to SBVMWD is **\$597,234**. Subject to the availability of cooperative matching funds, the USGS will provide **\$102,935**. Total cost is for the agreement period October 1, 2023, through June 30, 2024.

Enclosed is a digital version of Joint Funding Agreement’s (JFA’s) 23ZGJFA21000080 for your approval. If you are in agreement with this proposed program, please return a fully executed JFA to our office via email address [iaros@usgs.gov](mailto:iaros@usgs.gov). Work performed with funds from this JFA will be conducted on a fixed-price basis. Billing for the agreement will be rendered on a quarterly basis.

Thank you for your long-standing support of our collective efforts to better understand the water resources of the San Bernardino Valley.

Sincerely,

ANKE MUELLER-  
SOLGER

Digitally signed by ANKE  
MUELLER-SOLGER  
Date: 2023.08.21  
15:16:06 -07'00'

Anke Mueller-Solger  
Director, USGS California Water Science Center

cc: Claudia C. Faunt, Supervisory Hydrologist, Groundwater Availability and Use Program  
Wesley Danskin, Research Hydrologist  
Geoff Cromwell, Geologist

Form 9-1366  
(May 2018)

**U.S. DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY**

**JOINT FUNDING AGREEMENT**

Customer #: 600000809  
 Agreement #: 23ZGJFA21000080  
 Project #: ZG00A4X  
 TIN #: 95-6005196  
 Fixed Cost Agreement YES

FOR

WATER RESOURCES INVESTIGATIONS

**THIS AGREEMENT is entered into as of the, 1ST day of OCTOBER, 2023 by the U.S. GEOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the San Bernardino Valley Municipal Water District, party of the second part.**

1. The parties hereto agree that subject to availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation for cooperative water resources investigation in the San Bernardino Valley Water District as outlined in the USGS program letter dated August 21, 2023 herein called the program. The USGS legal authority is 43 USC 36C; 43 USC 50; and 43 USC 50b.
  
2. The following amounts shall be contributed to cover all of the cost of the necessary field and analytical work directly related to this program. 2(b) includes In-Kind Services in the amount of \$0.00
 

(a) by the party of the first part during the period	Amount	Date	to	Date
	\$102,935.00	October 1, 2023		June 30, 2024
(b) by the party of the second part during the period	Amount	Date	to	Date
	\$597,234.00	October 1, 2023		June 30, 2024

USGS DUNS is 1761-38857

(c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of: \$0.00

Description of the USGS regional/national program:  
not applicable

(d) Additional or reduced amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.

(e) The performance period may be changed by mutual agreement and set forth in an exchange of letters between the parties.
  
3. The costs of this program may be paid by either party in conformity with the laws and regulations respectively governing each party.
  
4. The field and analytical work pertaining to this program shall be under the direction of or subject to periodic review by an authorized representative of the party of the first part.
  
5. The areas to be included in the program shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods employed in the field and office shall be those adopted by the party of the first part to insure the required standards of accuracy subject to modification by mutual agreement.
  
6. During the course of this program, all field and analytical work of either party pertaining to this program shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner, either party may terminate this agreement upon 60 days written notice to the other party.

**9-1366 (Continuation)**      Customer #: 600000809      Agreement #: 23ZGJFA21000080

7. The original records resulting from this program will be deposited in the office of origin of those records. Upon request, copies of the original records will be provided to the office of the other party.
8. The maps, records or reports resulting from this program shall be made available to the public as promptly as possible. The maps, records or reports normally will be published by the party of the first part. However, the party of the second part reserves the right to publish the results of this program, and if already published by the party of the first part shall, upon request, be furnished by the party of the first part, at cost, impressions suitable for purposes of reproduction similar to that for which the original copy was prepared. The maps, records or reports published by either party shall contain a statement of the cooperative relations between the parties.  
 The Parties acknowledge that scientific information and data developed as a result of the Scope of Work (SOW) are subject to applicable USGS review, approval, and release requirements, which are available on the USGS Fundamental Science Practices website (<https://www2.usgs.gov/fsp/>).
9. Billing for this agreement will be rendered.  
 QUARTERLY  
 Invoices not paid within 60 days from the billing date will bear Interest, Penalties, and Administrative cost at the annual rate pursuant the Debt Collection Act of 1982, (codified at 31 U.S.C. § 3717) established by the U.S. Treasury.

<b>U.S. Geological Survey</b> <b>United States</b> <b>Department of the Interior</b> <u>USGS Point of Contact</u>	San Bernardino Valley Municipal Water District  <u>Customer Point of Contact</u>
Name: Irene Rios, Budget Analyst Address: 4165 Spruance Rd., Suite 200 San Diego, CA 92101  Telephone: 619-225-6156 Email: iaros@usgs.gov	Name: Heather Dyer, CEO/General Manager Address: 380 East Vanderbilt Way San Bernardino, California 92408  Telephone: 909-387-9256 Email: heatherd@sbvmwd.com

**Signatures and Date**

Signature: ANKE MUELLER-SOLGER <small>Digitally signed by ANKE MUELLER-SOLGER                  Date: 2023.08.21 15:16:48 -07'00'</small>	Date:	Signature: _____ Date: _____
Name: Anke Mueller-Solger Title: Director, USGS CA Water Science Center	Name: Heather Dyer Title: CEO/General Manager	





## United States Department of the Interior

U.S. GEOLOGICAL SURVEY  
California Water Science Center  
6000 J Street, Placer Hall  
California State University  
Sacramento, California 95819-6129  
Phone: (916) 278-3000 Fax: (916) 278-3070  
<https://www.usgs.gov/centers/ca-water/>

July 17, 2023

Ms. Heather Dyer, CEO/General Manager  
San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, California 92408

Subject: Proposed USGS program for August 1, 2023 – June 30, 2024

Dear Ms. Dyer,

This letter confirms discussions between our respective staffs describing proposed work for the August 1, 2023 – June 30, 2024 agreement period, as part of our cooperative water-resources program between the San Bernardino Valley Municipal Water District (SBVMWD) and the United States Geological Survey (USGS). This 11-month agreement period spans parts of Federal Fiscal Years 2023 and 2024 and is aligned with SBVMWD fiscal years ending June 2024.

This letter provides details of the work that are proposed for two separate tasks to be accomplished during the 11-month agreement period. Proposed funding for each task is summarized in the attached table.

### **Task 1. Santa Ana Native Fish Study**

In the 2023–24 program year, work on the Santa Ana native fish study will include estimation of population and habitat features for native fish species in the Santa Ana River. This effort will include sampling areas where the Santa Ana Sucker was observed during previous surveys, which spanned from the Van Buren Bridge to the Rialto Channel. The Santa Ana Sucker (*Catostomus santaanae*) is listed as a threatened species under federal legislation and is considered a species of special concern in California by the California Department of Fish and Wildlife (Moyle, 2002). The Arroyo Chub (*Gila orcutti*) is considered a species of special concern in California by the California Department of Fish and Wildlife (Moyle, 2002). Both species are present in the Santa Ana River watershed in the area being evaluated for establishment of the upper Santa Ana River Habitat Conservation Plan (HCP).

Developing an HCP requires sufficient knowledge of the populations of interest to develop plans for their protection and management. The ability to monitor population abundance and habitat availability with some level of confidence is important when developing such plans. Initial assessment of the available data within the HCP suggested to the concerned parties that additional data that extends spatially and temporally are needed on population density and availability of suitable habitat to support development of the HCP. The overall objective of this proposed work is to address those needs.

In the 2023–24 program year, a full population survey for native fishes of the Santa Ana River will be conducted in order to continue documenting the baseline condition of the Santa Ana Sucker and the Arroyo Chub within the mainstem. The survey will be completed in September 2023 and plans are to sample between the Rialto Channel and the Van Buren Bridge, where the presence of native fishes was confirmed during previous year's surveys. The survey will use the sampling methods developed in 2015 and 2016, which have been refined and updated based on river conditions. Results of the survey will be used to

**Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District**

estimate the total population of the Santa Ana Sucker and the Arroyo Chub within the study area along with estimates of non-native predator fish. The data also will be used to refine understanding of habitat suitability for native fishes and proposed habitat improvement projects. Lastly, this data will be incorporated into the continued development of a population viability analysis (refer Task 2).

**Task 2. Develop a Population Viability Analysis (PVA) for Native Fishes in the Santa Ana River**

Population viability analysis (PVA) is a powerful tool used by conservation biologists to evaluate extirpation risk for species. The development of a PVA has been highlighted as a priority action needed by the Santa Ana Sucker Recovery Plan (USFWS, 2017). To help achieve this goal, multiple data sets collected within the Santa Ana River specific to fish surveys were compiled, and a rough draft of a PVA for the Santa Ana Sucker was developed.

In the 2023–24 program year, work will include continued refinement of the PVA and manuscript preparation. Use of the PVA will be expanded to assess different management scenarios planned to assess risks to native fish persistence in the Santa Ana River. Results from this task will be valuable for decision making and prioritizing threats to target for remediation. If requested by SBVMWD, the USGS will participate in workshops and symposia to support monitoring and management of the Santa Ana River fishes.

**Deliverables:** Written summary of work performed each quarter to support this subtask. Results of the population estimate survey, population dynamics modeling, and the PVA analysis will be presented annually, or more frequently by request, to the SBVMWD as well as to other interested parties. The USGS will continue to refine and develop draft manuscripts describing the results of the population abundance, habitat use, and population dynamic results collected to date with the goal of having one or more draft manuscripts submitted to a journal by the winter/spring of 2023–24.

**Ms. Heather Dyer, CEO/General Manager, San Bernardino Valley Municipal Water District**

The proposed program for the August 1, 2023 – June 30, 2024 agreement period, including the two tasks and costs are as follows:

Basin and Task	Funding		
	SBVMWD	USGS	Total
<b>Santa Ana Native Fish Study</b>			
1. Develop a population estimate for native and non-native fish species			
2. Continue Development of a Population Viability Analysis for native fishes in the Santa Ana River	\$158,008	\$35,320	\$193,328

Total cost for the proposed investigations program is \$193,328. Cost to SBVMWD is \$158,008. Subject to the availability of cooperative matching funds, the USGS will provide \$35,320. Total cost is for the agreement period August 1, 2023 through June 30, 2024.

Enclosed is a digital version of Joint Funding Agreement's (JFA) 23ZGJFA11000080 for your approval. If you are in agreement with this proposed program, please return a fully executed JFA to our office via email address [cdiaz-pensler@usgs.gov](mailto:cdiaz-pensler@usgs.gov). Work performed with funds from this JFA will be conducted on a fixed-price basis. Billing for the agreement will be rendered on a quarterly basis.

Thank you for your long-standing support of our collective efforts to better understand the water resources of the San Bernardino Valley.

Sincerely,

**ANKE MUELLER-  
SOLGER**

Digitally signed by ANKE  
MUELLER-SOLGER  
Date: 2023.07.31 08:54:26 -07'00'

Anke Mueller-Solger, Director USGS CA WSC

**U.S. DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY**

Customer #: 600000809  
Agreement #: 23ZGJFA11000080  
Project #:  
TIN #: 95-6005196  
Fixed Cost  
Agreement

**JOINT FUNDING AGREEMENT**

FOR  
WATER RESOURCES INVESTIGATIONS

**THIS AGREEMENT is entered into as of the, 1 day of August , 2023 by the U.S. GEOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the San Bernardino Valley Municipal Water District , party of the second part.**

1. The parties hereto agree that subject to availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation for cooperative water resources investigations in the San Bernardino Valley Municipal Water District as outlined in the USGS program letter dated July 17,2023 (Scope of Work) herein called the program. The USGS legal authority is 43 USC 36C; 43 USC 50; and 43 USC 50b.
  
2. The following amounts shall be contributed to cover all of the cost of the necessary field and analytical work directly related to this program. 2(b) includes In-Kind Services in the amount of \$0.00
  - (a) by the party of the first part during the period
 

Amount	Date	to	Date
\$35,320.00	August 1, 2023		June 30, 2024
  
  - (b) by the party of the second part during the period
 

Amount	Date	to	Date
\$158,008.00	August 1, 2023		June 30, 2024
  
  - (c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of: \$0.00  
  
Description of the USGS regional/national program:  
not applicable
  
  - (d) Additional or reduced amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.
  
  - (e) The performance period may be changed by mutual agreement and set forth in an exchange of letters between the parties.
  
3. The costs of this program may be paid by either party in conformity with the laws and regulations respectively governing each party.
  
4. The field and analytical work pertaining to this program shall be under the direction of or subject to periodic review by an authorized representative of the party of the first part.

5. The areas to be included in the program shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods employed in the field and office shall be those adopted by the party of the first part to insure the required standards of accuracy subject to modification by mutual agreement.
6. During the course of this program, all field and analytical work of either party pertaining to this program shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner, either party may terminate this agreement upon 60 days written notice to the other party.

- 7. The original records resulting from this program will be deposited in the office of origin of those records. Upon request, copies of the original records will be provided to the office of the other party.
- 8. The maps, records or reports resulting from this program shall be made available to the public as promptly as possible. The maps, records or reports normally will be published by the party of the first part. However, the party of the second part reserves the right to publish the results of this program, and if already published by the party of the first part shall, upon request, be furnished by the party of the first part, at cost, impressions suitable for purposes of reproduction similar to that for which the original copy was prepared. The maps, records or reports published by either party shall contain a statement of the cooperative relations between the parties.  
The Parties acknowledge that scientific information and data developed as a result of the Scope of Work (SOW) are subject to applicable USGS review, approval, and release requirements, which are available on the USGS Fundamental Science Practices website (<https://www2.usgs.gov/fsp/>).
- 9. Billing for this agreement will be rendered.  
Quarterly  
Invoices not paid within 60 days from the billing date will bear Interest, Penalties, and Administrative cost at the annual rate pursuant the Debt Collection Act of 1982, (codified at 31 U.S.C. § 3717) established by the U.S. Treasury.

**U.S. Geological Survey  
United States  
Department of the Interior  
USGS Point of Contact**

San Bernardino Valley Municipal Water District

Name: Carmen Diaz-Pensler  
Address: Placer Hall, Sacramento, CA 95819  
Telephone: 571-545-1998  
Email: cdiaz-pensler@usgs.gov

**Customer Point of Contact**

Name: Kal Palenscar  
Address: 380 East Vanderbilt Way, San Bernardino, CA 92408  
Telephone: 909-387-9258  
Email: kaip@sbyvmwd.com

**Signatures and Date**

Signature: ANKE MUELLER-SOLGER  
Digitally signed by ANKE MUELLER-SOLGER  
Date: 2023.07.31 08:55:34 -07'00'

Date: Signature: Date:

Name: Anke Mueller-Solger  
Title: Director USGS CA WSC

Name: Heather Dyer  
Title: CEO/General Manager



**PROPOSAL: BASELINE BIODIVERSITY SURVEYS WITHIN THE UPPER SANTA ANA RIVER HABITAT CONSERVATION PLAN AREAS, 2024**

**AUTHORS:**

Elizabeth Gallegos, Adam Backlin, Cynthia Hitchcock, and Robert N. Fisher, U.S. Geological Survey, Western Ecological Research Center, San Diego Field Station, 4165 Spruance Road, Suite 200, San Diego CA 92101

**BACKGROUND AND JUSTIFICATION:**

The U.S. Geological Survey (USGS) has been collecting data on baseline biodiversity across southern California for the last two decades. Our baseline surveys target focal areas in partnership with the landowners, to identify core conservation values of these landscapes, and highlight specific conservation targets. Data collected are aimed at identifying critical occurrences of threatened and endangered species and understanding processes such as landscape connectivity, for both terrestrial and aquatic species. We propose to conduct biodiversity surveys on newly acquired lands as part of the Upper Santa Ana River Habitat Conservation Plan. We plan to prioritize the biodiversity surveys on the lands within the upper Santa Ana River wash for the San Bernardino Valley Municipal Water District (SBVMWD).

**OBJECTIVES:**

We plan to conduct surveys targeting multiple taxa using various survey techniques across seven locations at Frisbie Wash, Mill Creek, Upper Santa Ana River, Santa Ana River Plateau, Morton Canyon, Redlands Airport parcels, and the Santa Ana River Refugia. Passive and active survey techniques will be used to survey for different genera. The passive techniques include, 1) camera stations used for inventory of small mammals, herpetofauna, and large mammals, 2) bait stations for the detection of Argentine ants, and 3) coverboards for herpetofauna. Active survey techniques to be used, may include, 1) vernal pool surveys targeting western spadefoot and fairy shrimp, and 2) transect surveys for reptiles, targeting glossy snakes. Initial site assessments will determine definitively which techniques, if not all, will be used across all sites.

**PRODUCTS:**

The results of this work will be included in a USGS Data Summary, including:

- A species list for all survey locations.
- Detailed maps of site locations and species detections.
- Locations, dates, and numbers of species observed, captured, and released.

This USGS Data Summary will be completed by December 31, 2024.

**BUDGET:**

<b>FY24</b>		<b>USGS BUDGET</b>	
<b>Field</b>			
	Ants	\$	1,418.16
	Cameras	\$	16,734.75
	Herpetofauna	\$	29,967.40
	Vehicles	\$	3,600.00
	Field equipment	\$	3,870.80
<b>Lab/Office</b>			
	Coordination/study design/data management	\$	4,746.74
<b>Report/Deliverables</b>			
	Report writing	\$	10,967.25
<b>Subtotal</b>		\$	<b>71,305.10</b>
	*Overhead	\$	35,771.63
<b>TOTAL</b>		\$	<b>107,076.73</b>

\*The indirect rate is subject to change annually per agency authority in alignment with the federal fiscal year.

Unanticipated changes to the bureau overhead rate will not affect the overall value of the agreement.

Bureau approved NICRA documentation will be submitted to document any fluctuation.





A REGIONAL WATER AGENCY  
SINCE 1954

---

**DATE:** September 5, 2023  
**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. JPIA Wellness Grant**
- V. Western-San Bernardino Watermaster Report**
- VI. Staff Updates**
- VII. New Team Members**
- VIII. Project Updates/ Agendas for the next 90 days**

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:

- July 12- ESRI Special Achievement in GIS (SAG) Award Recipient
- July/August- Demand Management Incentive Check Presentations
- July 28- Partnering for Impact Conference Session on Leadership
- August 11- Southern California Water Conference Session with Western Water on Water Supply Planning and Collaboration
- August 16- Inland Empire Caucus Presentation regarding the WIFIA program and opportunities for additional State infrastructure funding
- August 21- Association for San Bernardino County Special District- Event host and joint presentation with the U.S. Forest Service on the Headwaters Resiliency Partnership
- August 30- IE WateReuse Enhanced Recharge our and Session Presenter on the FIRO at Seven Oaks Dam and the SARER 1b

## **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 Bogh 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, biomonitoring, and installing SBKR fencing to comply with environmental permitting. The project is approximately 20% complete and is currently within budget. The substantial completion date is projected to be June 2024. A more detailed project status update will be presented during the upcoming Board of Directors Engineering Workshop on October 10, 2023.

## **III. Forecast Informed Reservoir Operations (FIRO) at Seven Oaks Dam**

San Bernardino Valley staff participated in the second meeting of the Steering Committee for FIRO at Seven Oaks Dam on August 21. Heather Dyer sits on the Steering Committee, along with Marty Ralph (Scripps/CW3E) and Cary Talbot (US Army Corps of Engineers). Leo Ferrando, Wen Huang, Chris Jones and Greg Woodside also participated. At the meeting, the group reviewed and discussed the Terms of Reference for the Steering

Committee, which serve as the Steering Committee's guiding principles. Time was also spent reviewing the outline of the Work Plan being prepared to review the ongoing atmospheric science studies of the Santa Ana Watershed being conducted by CWE. There will be two upcoming workshops to be held with a range of participants that will cover environmental topics and reservoir management/hydrology topics.

#### **IV. JPIA Wellness Grant**

As we drive toward providing the best-in-class organizational experience to support employee satisfaction, loyalty and retention, San Bernardino Valley recognizes that wellness programs are an important component. We applied for and received a \$1,400 wellness grant from the ACWA JPIA and will be rolling out new wellness initiatives in the coming weeks using this grant.

#### **V. Western-San Bernardino Watermaster Report**

Each year, the Western-San Bernardino Watermaster submits an annual report to the Superior Court of Riverside County for the previous calendar year in compliance with the 1969 Western Judgment. The 2023 Report was submitted to the Court on July 31 and presents the findings of the Watermaster for calendar year 2022 and the summary of the five-year period spanning 2018 through 2022. In 2022 and in the five-year period, Plaintiffs did not exceed the allowable extractions in the San Bernardino Basin Area and Non-Plaintiffs extractions were also in compliance with the Judgment. However, the average water levels in the key wells in the Colton and Riverside North Basin Areas were below the Judgment threshold from 2018 through 2022; the Judgment requires San Bernardino Valley to maintain the water levels. As such, San Bernardino Valley staff is working with Western Municipal Water District to develop a comprehensive and adaptive Response Plan over the next year to increase water levels and ensure long-term sustainable management of the Colton and Riverside North Basin Areas.

#### **VI. Staff Updates**

Our culture supports professional and personal growth, and we encourage a growth mindset and continuous learning. Several team members who have demonstrated their commitment to personal and professional growth were promoted within their job series effective July 1, 2023:

- a. **Aaron Jones** – Aaron was promoted from Associate Engineer to Senior Engineer.  
Congratulations Aaron!

- b. **Mark Mayer** – Mark was promoted from Water Systems Operator I to Water Systems Operator II. Congratulations Mark!
- c. **Ben Williams** – Ben was promoted from Water Systems Operator I to Water Systems Operator II. Congratulations Ben!

**VII. New Team Members:**

Danny Hernandez joined our Operations team in mid-June as a Water Systems Operator I. Danny joined us from the City of San Bernardino Municipal Water Department. He holds several professional water certifications. When he isn't working, he loves being with family and friends, and being outside and he is a self-proclaimed coffee connoisseur.

Welcome to the team Danny!

**VIII. Project Updates**

See attached.

**Staff Recommendation**

Receive and file.

**Agendas: 3 Month Look Ahead**

Item	Sept	Oct	Nov
USGS Cooperative Program Agreements	x		
USGS Cooperative Agreement for Hydrogeological Studies	x		
State Legislative Update	x		
Consider Approval Purchase of Office Furniture	x		
ACWA Committee Appointment for 2024-'25 Term	x		
Consider Professional Services Agreement and Cost Share Agreement for the Bunker Hill Regional Recycled Water Salinity Management Feasibility Study	x		
Sunrise Ranch Property Master Plan Update	x		
RRWS Project Status Update	x		
Consider Asset Purchase Agreement for the East-End Hydroelectric Facilities Divestiture by Southern California Edison (Closed session)	x		
Upper SAR HCP Final Environmental Impact Report and Joint Powers Authority Agreement	x		
Board Handbook Reformatting and Review	x		
Discuss Roles of Board Committees	x		
Review the District Policy -Spokesperson of the District; allowing the President to appoint an alternate appointee	x		
Tributaries Restoration Purple Pipe Project: CEQA/NEPA and Permitting Consultant Contract and Cost-Share Agreement with RPU for Consideration	x		
Leadership Training Program	x		
Description on the Property Tax bill; possibly change the name to something that indicates the State Water Project		x	
Review Investment Policy		x	
Cactus Basin- Overview and Path to Recharge		x	
70 <sup>th</sup> Anniversary Celebration update		x	
Federal Legislative Update		x	
Program for the Expansion of Recharge Capacity (PERC) / Recharge SoCal – Rebrand Presentation of both Items		x	
Water Sales Agreement w/ SB County for Glen Helen area		x	
Proposed Governance Approach for the Sites Reservoir Project		x	
Louis Rubidoux Parkland and Pecan Grove (LRPPG) Project Update		x	
Section 6 Grant Agreement with CDFW and Resolution for Consideration (Upper SAR HCP		x	



**Project Status Updates**

Item	Status	Estimated Next Board Update or Action
AECOM Tunneling Feasibility Study for Foothill Pipeline Crossing at City Creek Project	In progress. Recently completed feasibility study and design phase has started. Will go to the Board for Construction bid and award in the summer of 2024.	Summer 2024
County Line Road Basin Recharge Project	In progress. Project partners are coordinating the start of the construction contract award.	Summer 2024
East Branch Extension Intertie Project - Equipment Procurements for the Central Feeder	Materials procurement in progress.	Upon completion
ESRI Enterprise Advantage Program	In progress.	Activities are ongoing. Anticipated action/update in October at completion of program and if 3 <sup>rd</sup> year option is exercised.
Geoscience, Inc. modeling Conjunctive Use Project Plan as part of the Three-Party Agreement between San Gorgonio Pass Water Agency, Valley District, and YVWD	In progress. Project partners and stakeholders coordination is ongoing.	December
Grant application to DWR, \$7 million for 2022 Urban Community Drought Relief Grant (\$4 mil for conjunctive use wells; \$3 mil for water conservation programs)	Funding awarded. Grant agreement in progress.	Contractor considerations, pending grant agreement.
Master Plan Development for the Louis Rubidoux Parkland & Pecan Grove	In progress. Community meetings complete. Individual interviews being planned. Planning by project partners is ongoing.	October
Opportunities and Constraints Analysis at LRPPG	Contracting is underway.	October
Purchase new Core Switches	In procurement.	None. Complete
Regional Recycled Water System Construction, Weaver Basins and Regional Pipeline	Construction in progress. Contract amendment 4 approved Feb 23.	September

	Projected completion on or about Nov 2023.	
Replacement of Two Air Conditioning Units at Greenspot and Crafton Hills Pump Stations	In procurement; anticipated to be installed and completed in May 2023.	Done
Rincon Climate Adaptation and Resilience Plan (CARP) with expanded stakeholder engagement	In progress. Draft GHG Inventory and Forecast have been prepared. Climate Resilience Committee meeting held on August 31	November
Salt and Nutrient Management Plan for the Upper Santa Ana River Watershed Groundwater Basins	In progress. Multi-agency technical team coordination and modeling is ongoing.	December
Santa Ana Low Turnout Upgrades	Environmental Complete. NOE filed with San Bernardino County Clerk December 5, 2022	Upon completion
SARER 1A Lining Rehabilitation Project	Project is complete. Project close out in progress.	None. Complete
SB County Flood Control Recharge Master Agreement	In negotiation. One final point for resolution is ongoing. District staff and legal counsel have been meeting regularly with County staff and legal counsel regarding perceived risk to water quality from recharge at Cactus Basins.	None. Complete
SB County Flood Control Recharge Agreement – Cactus Basins	District staff met with Rialto Basin GC members on August 30. GC recommended a joint letter with SB Valley be prepared to County Supervisors to express critical need to recharge in Cactus Basins and requesting meeting with Supervisors.	Ongoing. October
Scheevel Engineering Design and Construction of Native Fish Habitat Enhancement Structures in the Santa Ana River	Pilot projects have been constructed and results measured. Pilot structures are performing well; may not need larger structures.	When needed
UC San Diego, USACOE Forecast-Informed Reservoir Operations at Seven Oaks Dam Preliminary Viability Assessment	In progress. Second Steering committee meeting held in August; preparation of Work Plan is underway. Environmental Workshop is scheduled for October	In 2024.



Upper Santa Ana River Habitat Conservation Plan	Final EIR and NEPA in progress.	Update provided in April. Anticipated Board action in October.
USGS Cooperative Study Program (Watershed/Hydrology Studies)	In progress.	September
USGS Data Collection Program (Water/Well Data)	In progress.	September
USGS Technical Assistance Agreement Western Ecological Research Center (Biological Studies)	In progress.	September
WIFIA	Master loan agreement and term sheet in preparation with WIFIA team and EPA. First quarterly report submitted July 31, 2023.	None. Complete
Waterman Basins Maintenance (Environmental Permits)	Extensions to 401 and 404 submitted January 2023. 401 received February 2023, 404 received August 2023. SBCFCD encroachment permit extended through September 3, 2028.	None. Complete
Yucaipa Sustainable Groundwater Management Agency, Dudek preparation of the Water Year 2022 Annual Report	Complete	None. Complete
Enhanced Recharge 1b	In progress. Construction contract was awarded in March. Mobilization in April, and groundbreaking ceremony in June. Clearing and grubbing in B Basin area complete. Precise grading and construction of drop structures underway. New channel between existing Basin 13 and Cone Camp Basins under construction.	October
Greenspot Pipeline @ Mill Creek emergency	Complete post project reporting	None. Complete
Basin Optimization Plan, WSC and Dopoudja & Wells	In progress. Workshop #1 held with retail water agencies on August 29. Interviews with retail water agencies to be conducted in September-October.	In 2024
Regional Salt Mitigation Feasibility Study, Rincon	In progress. Regional Recycled Water Ad-Hoc Committee is being coordinated for September/October timeframe.	October
Sunrise Ranch Property Master Plan	In progress. First public outreach held in June. Second Workshop is coming in October 18.	September

<p>Foothill Pump Station and Inland Feeder Intertie Project</p>	<p>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.</p>	<p>Summer 2024</p>
<p>Headwaters Resiliency Partnership</p>	<p>In progress. Staff coordinating with partners on partnership development, monitoring plans, and implementation of partner projects.</p>	<p>October</p>
<p>Board Handbook</p>	<p>In progress. Initial review with Board; Workshop upcoming on Sept. 26; Spreadsheet of all changes in progress</p>	<p>September</p>
<p>Sites Reservoir Project Operations Agreements with Sites JPA and DWR</p>	<p>Present approach at October 2023 meeting. Final draft of agreements in first quarter 2024</p>	<p>October</p>
<p>State Water Project Contract Amendment for Delta Conveyance Project</p>	<p>Draft agreement in February 2024. Final agreement to follow</p>	<p>February 2024</p>

**DATE:** September 5, 2023

**TO:** Board of Directors

**SUBJECT:** List of Announcements

---

- A. September 5, 2023, 5:00 p.m. – Demand Management Incentive Check Presentation (Redlands)
- B. September 6, 2023, 8:30 a.m. – Upper SAR WIFA In-Person (Cancelled)
- C. September 7, 2023, 2:00 p.m. – Board Workshop – Policy/Administration by Teleconference or In-Person
- D. September 11, 2023, 1:30 p.m. – Groundwater Council Meeting (Cancelled)
- E. September 12, 2023, 2:00 p.m. – Board Workshop – Resources/Engineering by Teleconference or In-Person
- F. September 13, 2023, 1:30 p.m. – SBVW Conservation District Board Meeting
- G. September 18, 2023, 6:00 p.m. – ASBCSD meeting (Courtyard by Marriott Hesperia)
- H. September 19, 2023, 9:30 a.m. – SAWPA Commission Meeting by Teleconference or In-Person
- I. September 19, 2023, 4:00 p.m. – Demand Management Incentive Check Presentation (Yucaipa)
- J. September 19, 2023, 6:00 p.m. – Demand Management Incentive Check Presentation (Colton)

- K. September 19, 2023, 2:00 p.m. – Regular Board Meeting by Teleconference or In-Person
- L. September 26, 2023, 9:30 a.m. – Board Workshop – Board of Directors Handbook – In-Person
- M. September 27, 2023, 4:30 p.m. – State of the County - San Bernardino (Ontario Convention Center)
- N. September 28, 2023, 8:00 a.m. – Division III Water Forum (Bear Springs Hotel (27959 Highland Ave, Highland, CA 92346)