



**SPECIAL NOTICE REGARDING  
CORONAVIRUS DISEASE 2019 (COVID-19)  
AND PARTICIPATION IN PUBLIC MEETINGS**

On March 4, 2020, Governor Newsom declared a State of Emergency resulting from the threat of COVID-19. Governor Newsom issued Executive Order N-25-20 (3-12-20) and Executive Order N-29-20 (3-17-20) which temporarily suspend portions of the Brown Act relative to conducting public meetings. Subsequent thereto, Governor Newsom issued Executive Order N-33-20 (3-19-20) ordering all individuals to stay at home or at their place of residence. Accordingly, it has been determined that all Board and Workshop meetings of the San Bernardino Valley Municipal Water District will be held pursuant to the Brown Act and will be conducted via teleconference. There will be no public access to the meeting venue.

**BOARD OF DIRECTORS WORKSHOP - RESOURCES  
THURSDAY, MAY 7, 2020 – 2:00 P.M.**

**PUBLIC PARTICIPATION**

Public participation is welcome and encouraged. You may participate in the May 7, 2020, meeting of the San Bernardino Valley Municipal Water District online and by telephone as follows:

**Dial-in Info: 877 853 5247 US Toll-free  
Meeting ID: 979 215 700**

**<https://us02web.zoom.us/j/979215700>**

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@sبvmwd.com](mailto:comments@sبvmwd.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 Wednesday, May 6, 2020. All public comments will be provided to the Chair and may be read into the record or compiled as part of the record.

**IMPORTANT PRIVACY NOTE: Participation in the meeting via the Zoom app is strongly encouraged. 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. Participation in the meeting via the Zoom app is strongly encouraged; there is no way to protect your privacy if you elect to call in to the meeting. The Zoom app is a free download.**



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

**BOARD OF DIRECTORS WORKSHOP - RESOURCES**

**AGENDA**

**2:00 PM Thursday, May 7, 2020**

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**CALL TO ORDER** -

*Chairperson: Director Hayes*

*Vice-Chair: Director Harrison*

**1. INTRODUCTIONS**

**2. PUBLIC COMMENT** - *Any person may address the Board on matters within its jurisdiction.*

**3. SUMMARY OF PREVIOUS MEETING**

3.1. April 16, 2020, Meeting (Page 3)

[Summary Notes BOD Workshop - Resources 041620](#)

**4. DISCUSSION ITEMS**

4.1. Summary of Santa Ana River Watermaster Annual Report for Water Year 2018-19 (Page 6)

[Staff Memo - Santa Ana River Watermaster Report WY 2018-2019](#)

[Santa Ana River Watershed Map](#)

4.2. Presentation of the Results from 2019 Change in Groundwater Storage Calculation (Page 9)

[Staff Memo - Change in Groundwater Storage in 2019](#)

[Excerpt from 2020 Change in Groundwater Storage Report](#)

4.3. Consider Terms for an Agreement with West Valley Water District for the the Cactus Basin #2 Project (Page 31)

[Staff Memo - Consider Terms for an Agreement with West Valley Water District for the the Cactus Basin #2 Project](#)

[Cactus Basin Term Sheet](#)

[Cactus Basins Layout](#)

**5. DIRECTOR REQUESTS FOR CONSIDERATION**

5.1. Requests for Consideration (Page 41)

[Staff Memo - Director Requests for Consideration by the Board](#)

[Director Request for Consideration Form April 2020 Susan Longville](#)

**6. ADJOURNMENT**

PLEASE NOTE:

Materials related to an item on this Agenda submitted to the Board after distribution of the agenda packet are available for public inspection in the District's office located at 380 E. Vanderbilt Way, San Bernardino, during normal business hours. Also, such documents are available on the District's website at [www.sbvmd.com](http://www.sbvmd.com) subject to staff's ability to post the documents before the meeting. The District recognizes its obligation to provide equal access to those individuals with disabilities. Please contact Lillian Hernandez at (909) 387-9214 two working days prior to the meeting with any special requests for reasonable accommodation.



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**DATE:** May 7, 2020

**TO:** Board of Directors' Workshop - Resources

**FROM:** Staff

**SUBJECT:** Summary of April 16, 2020 Board of Directors Workshop – Resources

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The Resources Workshop convened on April 16, 2020, via Zoom teleconference. Director Hayes chaired the meeting; President Harrison and Directors Kielhold, Longville and Navarro participated in the Workshop. Heather Dyer, Cindy Saks, Bob Tincher, Wen Huang, Kristeen Farlow, and Melissa Zoba, of staff, participated in the workshop.

### **3. Summary of Previous Meeting**

The meeting notes from the March 5, 2020, Board of Directors Workshop – Resources were reviewed. There were no additions or changes to the meeting minutes.

#### **4.1 Discuss Water Use Efficiency and Education Update**

Staff provided the Directors with an update on Water Use Efficiency and Education programs. Due to the COVID-19 pandemic, the District and the Inland Empire Resource Conservation District (IERCD) had to stop holding landscape workshops in-person and making classroom presentations. Additionally, the teacher workshop that was scheduled for May 2020 had to be canceled. However, many of these programs were able to transition to online.

The total water conservation rebate reimbursements to date are \$615,871. This leaves a balance of \$134,129 available for these programs through the end of the fiscal year. It is anticipated that the District will receive a number of reimbursement requests from agencies

who tend to submit their requests all at once, and not throughout the year. Vice President Kielhold asked for clarification on what is included in the description of “devices rebated.” Staff clarified that “devices” include high efficiency clothes washers, high efficiency toilets, low flow showerheads and sprinklers nozzles.

Through the work of the IERCD, 97 classroom presentations were made, reaching approximately 3,400 students. As noted, IERCD prepared a number of resources for students, parents, and teachers and they are now on the District website for water education to continue while students are doing their lessons at home. Director Hayes recommended the IERCD consider developing modules for use on Google Classroom; staff will discuss this opportunity with IERCD.

Director Longville inquired about the status of the Water Use Efficiency Assessment. Staff advised that the Request for Proposal for the Assessment was due back on April 22, 2020, and interviews of the consultants would occur in May. It is anticipated that this project will kick off in June 2020 and take approximately 12 weeks to complete. Director Navarro requested additional details about how the selected consultant will work with the retailers during the course of the project.

**Action Item(s):** This item was before the Board of Directors to receive and file.

#### **4.2 Announcement of Successful State Wildlife Grant Application Funding CDFW Fish Biologist Position**

Staff informed the Board that the State Wildlife Grant application was recently approved for funding by the CDFW review committee. In December 2019, the Valley District Board agreed to fund the Western Ecological Research Center, the biological studies branch of the USGS in southern California, for a total cost of \$279,670 and also authorized staff to commit the USGS funding as non-federal matching funds in a California Department of Fish and Wildlife (CDFW) grant application. The application was successful and the CDFW State Wildlife Grant will provide two years of funding for a CDFW native fish staff member for San Bernardino and Riverside counties. This will be a valuable addition to the Valley District and USGS biologists that are currently working on behalf of the HCP in the Santa Ana River.

**Action Item(s):** A grant agreement will be brought to the Board at a future meeting for consideration.

#### **4.3 Consider Accepting the U.S. Fish and Wildlife Service Recommended Award for a 2019 Section 6 Habitat Conservation Planning Grant**

Staff presented a planning grant Valley District submitted on behalf of the Upper Santa Ana River Habitat Conservation Plan (HCP) that has been chosen to be funded by the US Fish and Wildlife Service. This type of grant (non-traditional section 6) provides funding through the State of California (California Department of Fish and Wildlife) to support conservation-related projects.

This grant will support 50 percent of the planning and writing of the Long-Term Management Plan associated with the implementation of the HCP. The term of the grant is one year, starting August 1, 2020, and will cost a total of \$1,750,000. After reimbursement from HCP partners the District's contribution will be approximately \$350,000.

The Board of Directors was supportive of Valley District accepting this grant and providing non-federal funds in the amount of \$875,000 to match the amount of the federally funded portion of the grant (\$875,000).

**Action Item(s):** 1) Staff will prepare a Resolution accepting the grant award and a Matching Funds Commitment Letter for a future regular Board of Directors meeting for consideration.

#### **5. Adjournment**

#### **Staff Recommendation**

Receive and file.



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**DATE:** May 7, 2020

**TO:** Board of Directors' Workshop - Resources

**FROM:** Wen Huang, Chief Engineer

**SUBJECT:** Summary of Santa Ana River Watermaster Annual Report for Water Year 2018-19

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As required in the 1969 Santa Ana River Judgment, the Watermaster Committee comprised of representatives of Valley District, Western Municipal Water District, Inland Empire Utilities Agency, and Orange County Water District, published the Forty-Ninth (49<sup>th</sup>) Annual Report and submitted it to the Court in April. The primary function of the Watermaster is to track water flows in the Santa Ana River and report on whether those flows meet the obligations committed to in the Judgment. This year, as in prior years, the Watermaster Committee determined that all provisions of the Judgment are satisfied. A summary of the report along with the history of the Santa Ana River Watermaster will be provided to the Board in the Workshop.

**Background:**

The Forty-Ninth Annual Report of the Santa Ana River Watermaster covers Water Year 2018-19. The annual report is required by the Stipulated Judgment (Judgment) in the case of Orange County Water District v. City of Chino, et al., Case No. 117628 - County of Orange, entered by the court on April 17, 1969. It contains a declaration of rights of the water users and other entities in the Lower Area of the Santa Ana River Basin downstream of Prado Dam as against those in the Upper Area tributary to Prado Dam, and provides a physical solution to satisfy those rights. The physical solution accomplishes, in general, a regional intra-basin allocation of the surface flow of the Santa Ana River System. The Judgment leaves to each of the major hydrologic units within the basin the determination and regulation of individual rights therein and the development

and implementation of its own water management plan subject only to compliance with the physical solution.

As required by the terms of the 1969 Orange County Judgment, Valley District Staff working in collaboration with Western Municipal Water District (WMWD), Inland Empire Utilities Agency (IEUA), and Orange County Water District (OCWD) Staff prepared and delivered the Annual Watermaster Report for Water Year 2018-19 to the Court in April. As in past years, obligations for all parties were satisfied.

A few principal findings of the Santa Ana River Watermaster for the Water Year 2018-19 include the following: 1) At Prado: the annual adjusted (for total dissolved solids [TDS]) base flow was 122,900 acre-feet (AF) with the minimum required base flow at 34,000 AF; 2) At Riverside Narrows: the annual adjusted base flow was 36,604 AF with the minimum required base flow at 12,420 AF; and 3) At the end of the 2018-19 Water Year, IEUA and WMWD have a cumulative credit of 3,698,381 AF to their base flow obligation at Prado Dam and Valley District has a cumulative credit of 1,371,245 AF to its base flow obligation at Riverside Narrows.

**Staff Recommendation:**

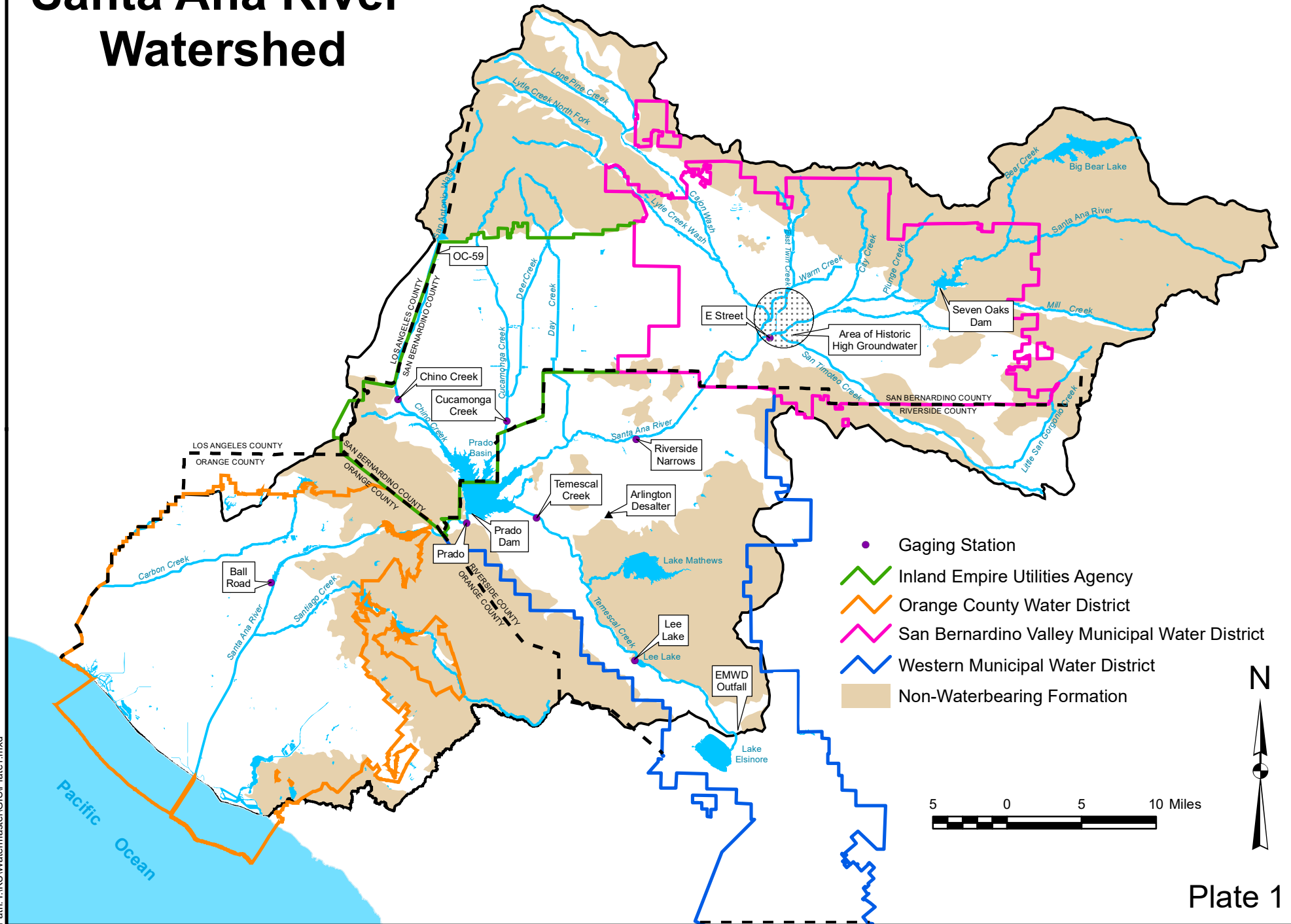
Receive and file.

**Attachment:**

Santa Ana River Watershed Map with Riverside Narrows and Prado Dam



# Santa Ana River Watershed



Path: \\KIU\Watermaster\GIS\Plate1.mxd



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**DATE:** May 7, 2020

**TO:** Board of Directors

**FROM:** Matthew Howard, Water Resources Senior Project Manager  
Dan Borell, GIS Coordinator

**SUBJECT:** Change in Groundwater Storage in 2019

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The Change in Storage (CIS) calculation provides an indicator, or “gauge”, of how groundwater supplies changed during the previous year and also provides a historical comparison. The calculation uses fall well measurements to capture water levels at their lowest point after the heavy, summer pumping season. The results from this calculation have also become a visual tool for showing the importance of State Water Project Water. A summary of the results for last year are provided below:

<b>Basin</b>	<b>2019 Change in Storage (acre-feet)</b>
Rialto-Colton	6,748
San Bernardino Basin (SBB)	160,522
Yucaipa	9,818

Given the slightly above average precipitation in 2019, we expected to see a storage increase in 2019. Despite last year’s increase, the storage for both the Rialto-Colton and the SBB continue to be at historic lows.

In 2019, a new record of approximately 78,000 acre-feet of State Water Project (SWP) Water was imported into the Valley District service area.

**Background**

Since 1970, the San Bernardino Valley Municipal Water District has been calculating the change in groundwater storage in the SBB. In 2013, Valley District began calculating the CIS

for the Yucaipa Basin and, in 2015, Valley District began calculating the CIS for the Rialto-Colton Basin.

Each year staff predicts the change in storage for the region’s largest groundwater basin, SBB, for the coming year. Last year, staff predicted an increase of 139,000 acre-feet which is close to the calculated change of about 161,000 acre-feet.

This year, staff is predicting that storage in the SBB will decrease about 17,000 acre-feet due to the current below average precipitation projection. When this amount is added to the estimated amount of SWP (21,000 acre-feet), the total estimated change in storage for the SBBA in 2020 is a slight increase of about 4,000 acre-feet.

Year	SBB Prediction			SBB Calculated
	Local Supplies	Imported Water Supplies (SWP)	Total	CIS Calculation
2019	54,000	85,000	139,000	160,522
2020	(17,000)	21,000	4,000	(calculated in fall 2020)

The complete, final 2020 report will be available on the Valley District website.

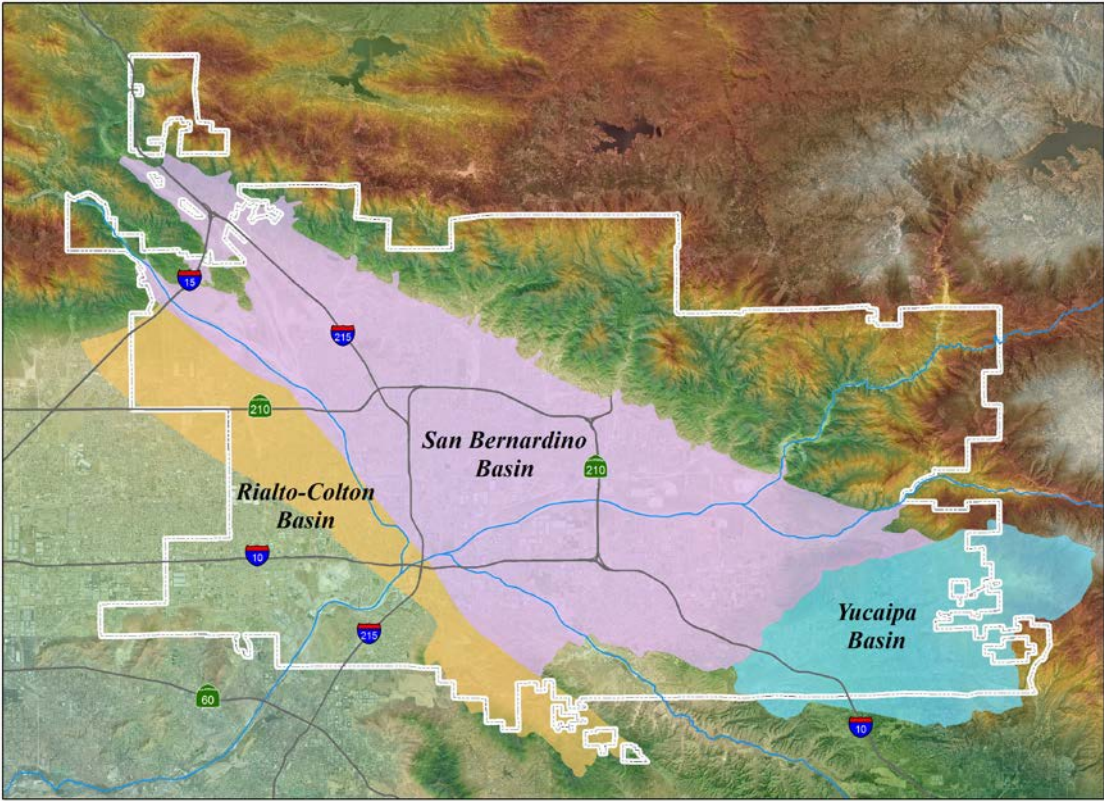
**Staff Recommendation**

Receive and file

**Attachment**

Excerpt from *2020 Change in Groundwater Storage for the San Bernardino, Rialto-Colton and Yucaipa Basins*

# Change in Groundwater Storage for the San Bernardino, Rialto-Colton and Yucaipa Basins



March 2020



# **Change in Groundwater Storage for the San Bernardino, Rialto-Colton And Yucaipa Basins**

## **EXECUTIVE SUMMARY AND APPENDIX**



**March 2020**

San Bernardino Valley Municipal Water District

Robert M. Tincher  
Deputy General Manager - Resources


Matt Howard  
Water Resources Senior Project Manager

Dan Borell  
GIS Coordinator

## **ACKNOWLEDGMENT**

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Many public and private water agencies and various individuals have cooperated with the San Bernardino Valley Municipal Water District in furnishing the essential information upon which the Change in Storage Calculation is based.



# Change in Groundwater Storage For the San Bernardino, Rialto-Colton And Yucaipa Basin 1934 – 2019

## EXECUTIVE SUMMARY AND APPENDIX

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**San Bernardino Basin Area** \_\_\_\_\_ A3

Cumulative Change Storage  
Annual Change in Storage  
Tabular change in storage data

**Cajon Sub-basin** \_\_\_\_\_ A7

Cumulative Change Storage  
Annual Change in Storage  
Tabular change in storage data  
Hydrographs

**Devil Canyon Sub-basin** \_\_\_\_\_ A13

Cumulative Change in Storage  
Annual Change in Storage  
Tabular change in storage data  
Hydrographs

**Lytle Creek Sub-basin** \_\_\_\_\_ A19

Cumulative Change in Storage  
Annual Change in Storage  
Tabular change in storage data  
Hydrographs

**Pressure Zone Sub-basin** \_\_\_\_\_ A25

Cumulative Change in Storage  
Annual Change in Storage  
Tabular change in storage data  
Hydrographs

**City Creek Sub-basin** \_\_\_\_\_ A31

Cumulative Change in Storage  
Annual Change in Storage  
Tabular change in storage data  
Hydrographs

**Redlands Sub-basin** \_\_\_\_\_ A37

Cumulative Change in Storage  
Annual Change in Storage  
Tabular change in storage data  
Hydrographs

**Mill Creek Sub-basin** \_\_\_\_\_ A43

Cumulative Change in Storage  
Annual Change in Storage  
Tabular change in storage data  
Hydrographs



<b>Reservoir Sub-basin</b>	_____	<b>A49</b>
Cumulative Change in Storage		
Annual Change in Storage		
Tabular change in storage data		
Hydrographs		
<b>Divide Sub-basin</b>	_____	<b>A55</b>
Cumulative Change in Storage		
Annual Change in Storage		
Tabular change in storage data		
Hydrographs		
<b>Yucaipa Basin Area</b>	_____	<b>A61</b>
Cumulative Change Storage		
Annual Change in Storage		
Tabular change in storage data		
<b>Calimesa Sub-basin</b>	_____	<b>A65</b>
Cumulative Change Storage		
Annual Change in Storage		
Tabular change in storage data		
Hydrographs		
<b>Crafton Sub-basin</b>	_____	<b>A70</b>
Cumulative Change Storage		
Annual Change in Storage		
Tabular change in storage data		
Hydrographs		
<b>Gateway Sub-basin</b>	_____	<b>A75</b>
Cumulative Change Storage		
Annual Change in Storage		
Tabular change in storage data		
Hydrographs		
<b>Oak Glen Sub-basin</b>	_____	<b>A80</b>
Cumulative Change Storage		
Annual Change in Storage		
Tabular change in storage data		
Hydrographs		
<b>Triple Falls Sub-basin</b>	_____	<b>A85</b>
Cumulative Change Storage		
Annual Change in Storage		
Tabular change in storage data		
Hydrographs		
<b>Western Heights Sub-basin</b>	_____	<b>A90</b>
Cumulative Change Storage		
Annual Change in Storage		
Tabular change in storage data		
Hydrographs		

**Wilson Creek Sub-basin** \_\_\_\_\_ **A95**  
Cumulative Change Storage  
Annual Change in Storage  
Tabular change in storage data  
Hydrographs

**Rialto-Colton Basin Area** \_\_\_\_\_ **A100**  
Cumulative Change in Storage  
Annual Change in Storage  
Tabular change in storage data  
Hydrographs

**SBVMWD Change in Storage** \_\_\_\_\_ **M1**  
**Methodology**

## SUMMARY OF RESULTS

### *Background*

The Change in Storage calculation provides an indicator, or “gauge”, of current groundwater supplies and how they compare to past years. The San Bernardino Valley Municipal Water District (SBVMWD) has been calculating the change in groundwater storage for the San Bernardino Basin (SBB) since 1970. The first calculation was completed for the years 1934 – 1960 by the State of California Department of Water Resources (DWR) and the results were summarized in Bulletin 104-5, Meeting Water Demands in the Bunker Hill-San Timoteo Area, Geology, Hydrology, and Operation-Economics Studies, Text and Plates (Olson, pp. 90 – 92). The DWR change in storage values were calculated using the Specific Yield Method (Olson, pp. 85 – 98) and a mathematical model developed by TRW, Incorporated, Redondo Beach, California (TRW). In 1980, SBVMWD updated the change in storage calculation to include the years 1961 – 1980 (Van Gelder). In the early 1990’s, SBVMWD created a new change in storage model (SBVMWD Model) using software developed by Environmental Systems Research Institute (ESRI), Redlands, California. Like its predecessors, the SBVMWD Model calculates the change in groundwater storage (volume) using the Specific Yield Method which is based largely on the change in water level measurements and the soil porosity (for a detailed explanation of how the model works see **Appendix: SBVMWD Change in Storage Methodology**). In 2014, Valley District began calculating the change in storage for the Yucaipa and Rialto-Colton Basin.

In 2019, SBVMWD consulted with Geoscience to perform a study to determine the amount of usable groundwater storage in the San Bernardino Basin (SBB) and Rialto-Colton Basins using the Upper Santa Ana River Integrated Groundwater Model (Integrated SAR Model). The objective of this study was to determine the total amount of usable groundwater storage that is available in the SBB and Rialto-Colton Basins. The usable groundwater storage is the volume of groundwater stored between the current water level and the bottom elevation of the aquifer as defined in the Integrated SAR Model. The results estimated the total usable storage in the SBB to be 5,690,000 acre-feet and in the Rialto-Colton Basin to be 1,749,000 acre-feet.

The results from the usable storage study utilize the annual change in storage calculation performed by SBVMWD to display the total change in groundwater storage in the SBB and Rialto-Colton Basins.

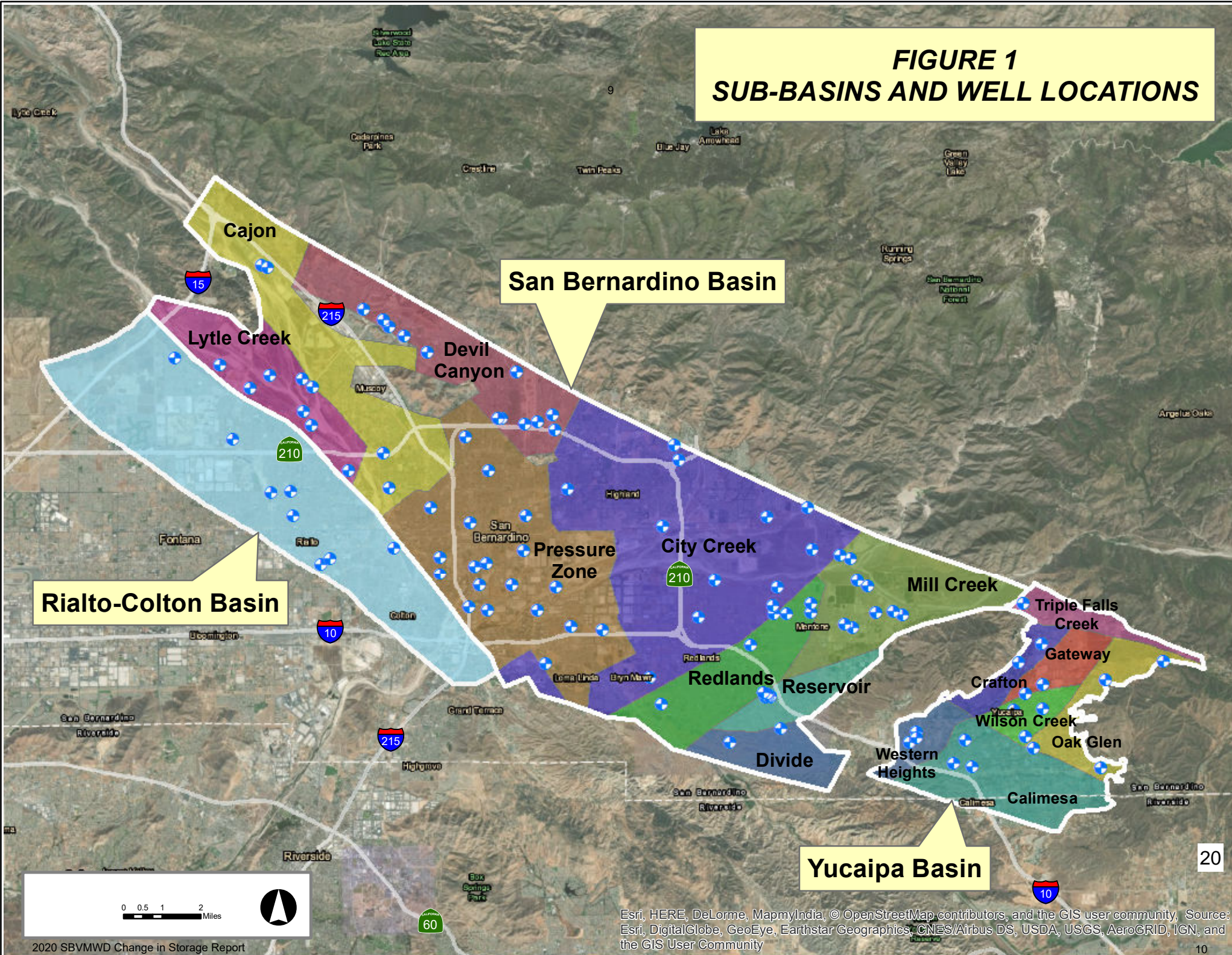
## *Calculation*

SBVMWD calculates the change in groundwater storage by measuring the volume of water lost or gained as compared to the base year, 1934 which was selected to correspond with the first year of the DWR base period (Motokane, pp. 123 – 129). To provide consistency for the Rialto-Colton and Yucaipa Basins, the same base year or its equivalent, 1993, was used. The annual change in storage (ACIS) is a measure of the volume of water lost or gained in the basin during the calendar year.

The wells used in the SBVMWD Model are shown on Figure 1 and the static water level data for these wells is illustrated on Figure 2. A comparison of current water levels to the first historic low water level/year is shown on Figure 3.

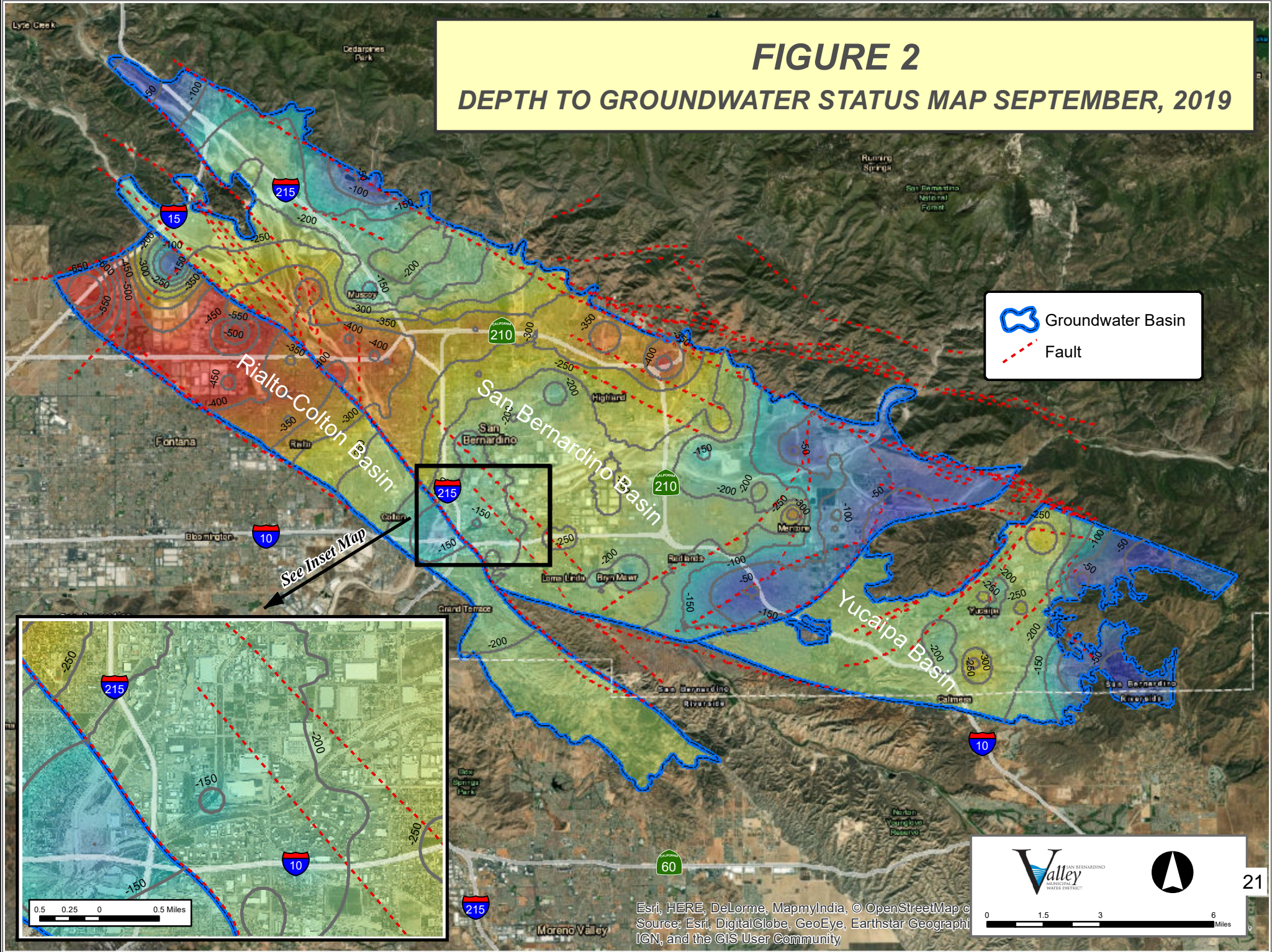


**FIGURE 1  
SUB-BASINS AND WELL LOCATIONS**



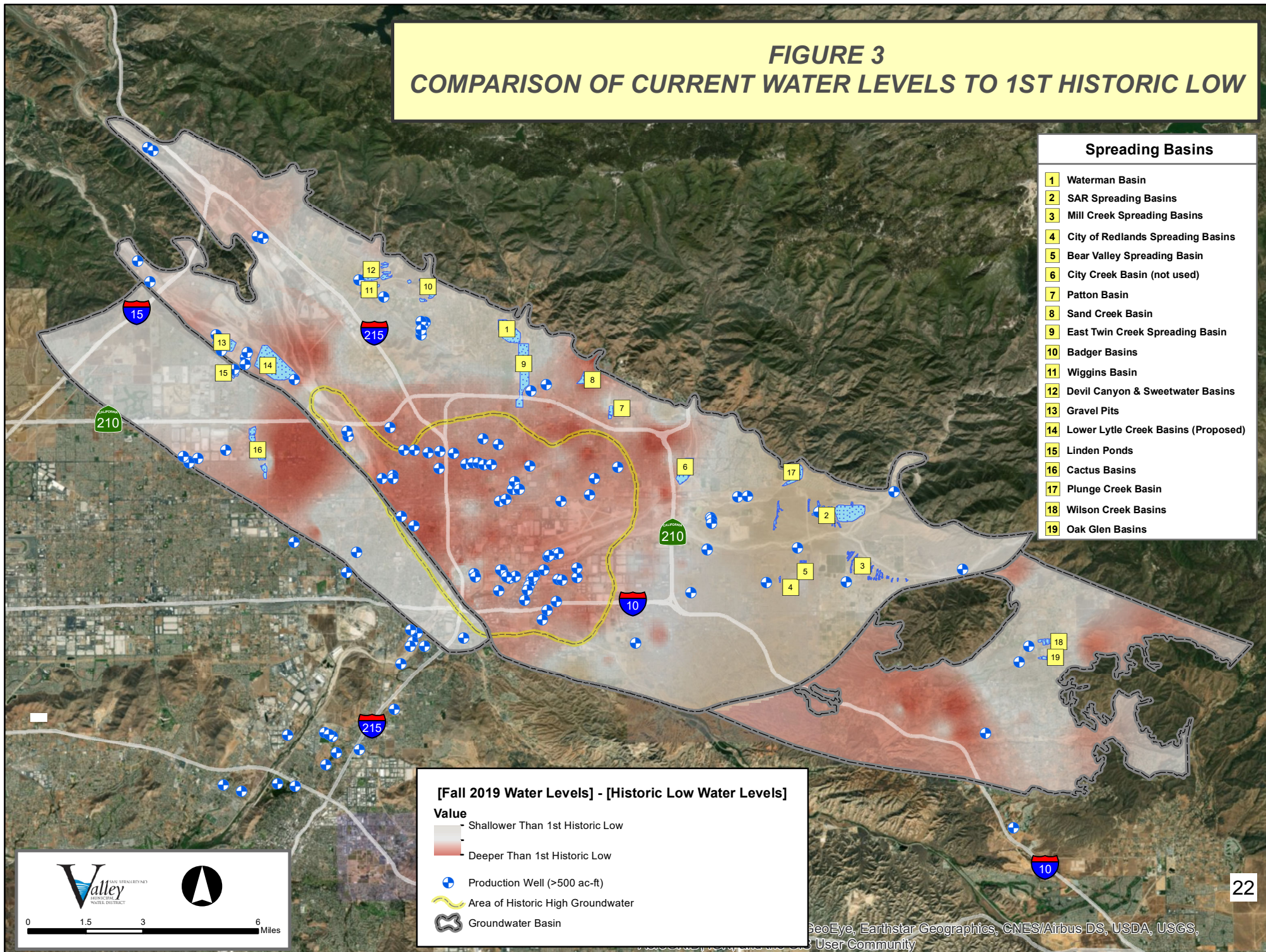


**FIGURE 2**  
**DEPTH TO GROUNDWATER STATUS MAP SEPTEMBER, 2019**





**FIGURE 3  
COMPARISON OF CURRENT WATER LEVELS TO 1ST HISTORIC LOW**



In each basin, the SBVMWD Model is checked against independent models. The below table summarizes the independent models used to check the results:

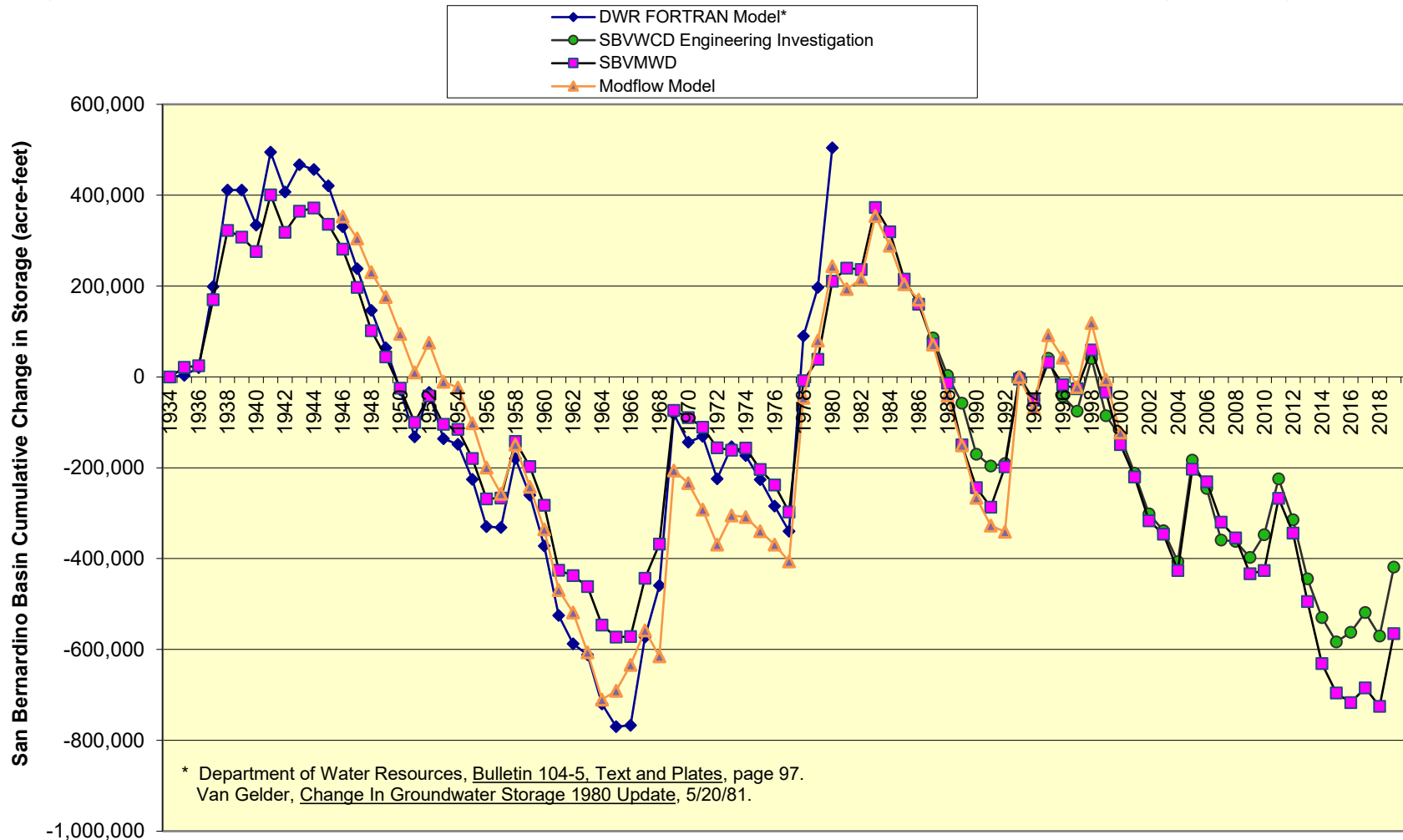
Table 1. Independent models used to check the calculation.

<b>Basin</b>	<b>Independent Models</b>
Rialto Colton	Modflow Model
San Bernardino	Modflow Model San Bernardino Valley Water Conservation District (SBVWCD) Engineering Investigation (IE)
Yucaipa	Yucaipa Valley Water District (YVWD) Calculation

The independent models used to check the calculation for the Rialto-Colton and Yucaipa Basins can be found in Appendix.



**Figure 5. Comparison of DWR, SBVMWD, USGS and SBVMWD San Bernardino Basin Cumulative Change in Storage Results**



*Summary of 2018 Results*

The total change in storage for the San Bernardino Basin Area (SBB) continues to be at a historic low which is largely due to the current drought which began in about 1998. The annual change in storage for the San Bernardino Basin and Rialto-Colton Basin increased in 2018.

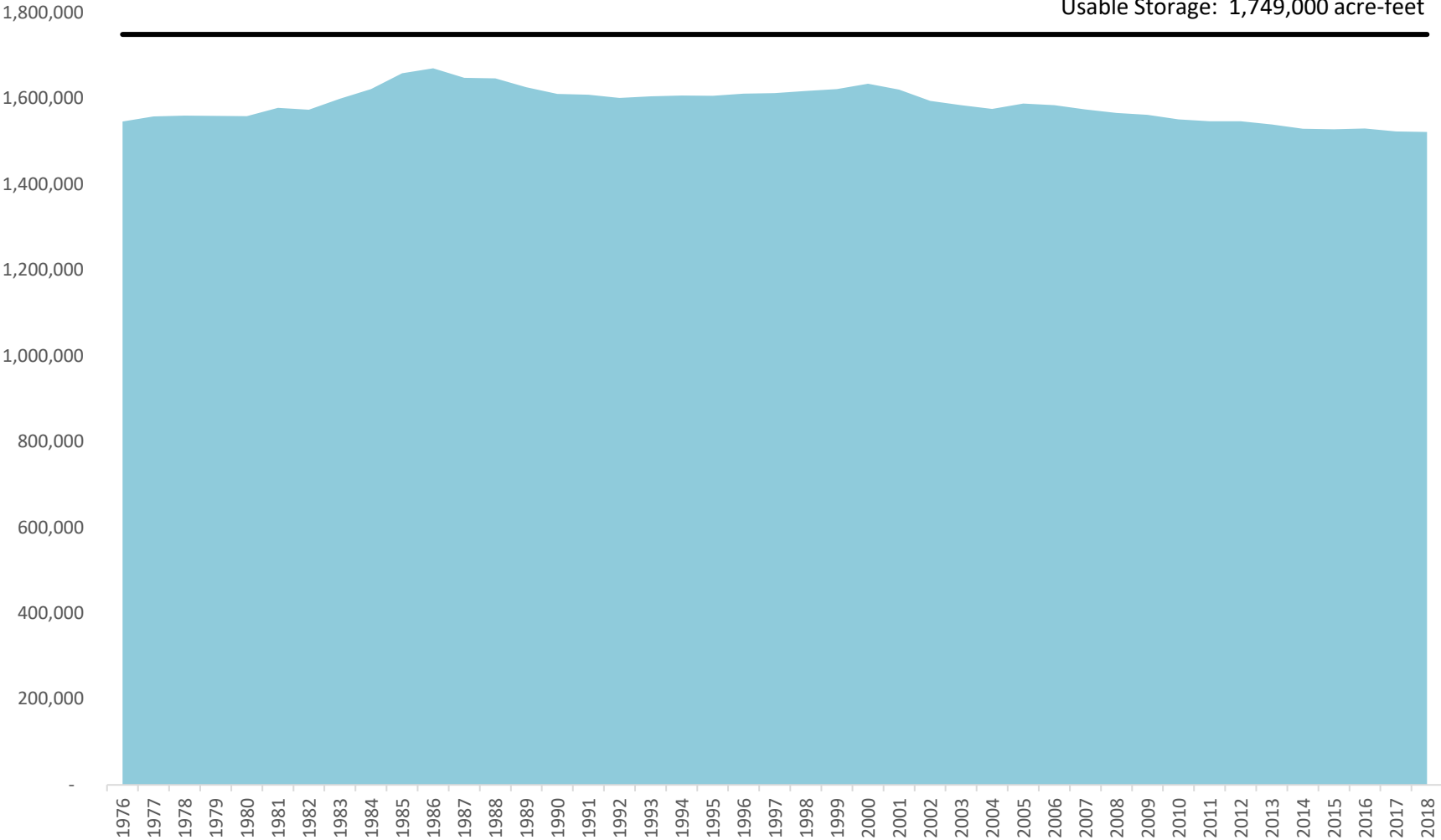
The annual and total change in storage results are summarized in Table 2. The Yucaipa Basin increased approximately 10,000 acre-feet, when compared to 2017. This is largely due to the import of water into this basin.

**Table 2. Change in storage results**

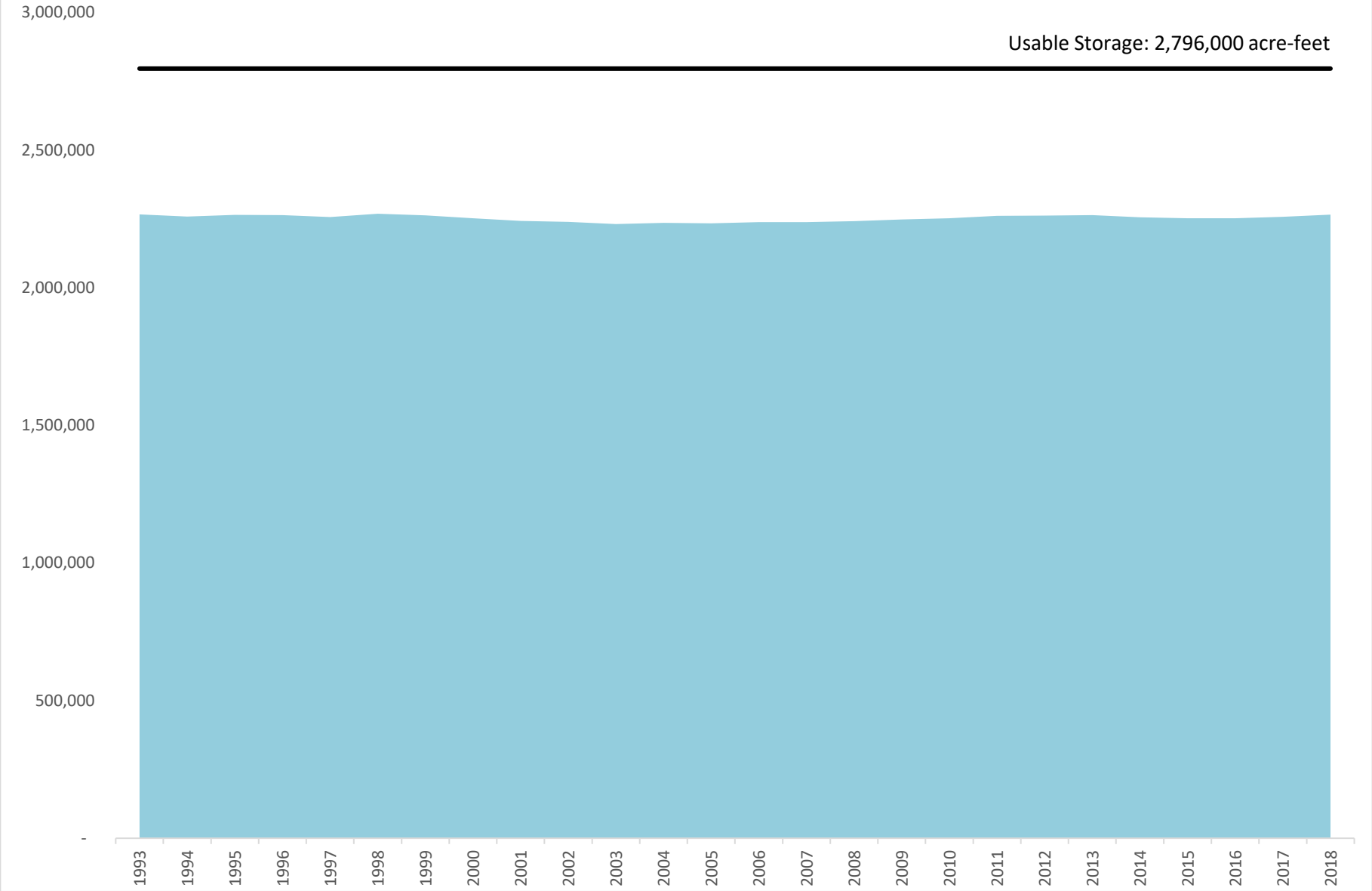
<b><i>Basin</i></b>	<b>Annual Change in Storage (acre-feet)</b>	<b>Total Change in Storage (acre-feet)</b>
<i>Rialto-Colton Basin</i>	+6,748	-76,315
<i>San Bernardino Basin</i>	+160,522	-564,917
<i>Yucaipa Basin</i>	+9,818	+8,935

**Figure 6. Rialto-Colton Basin Change in Storage Results  
(acre-feet)**

Usable Storage: 1,749,000 acre-feet

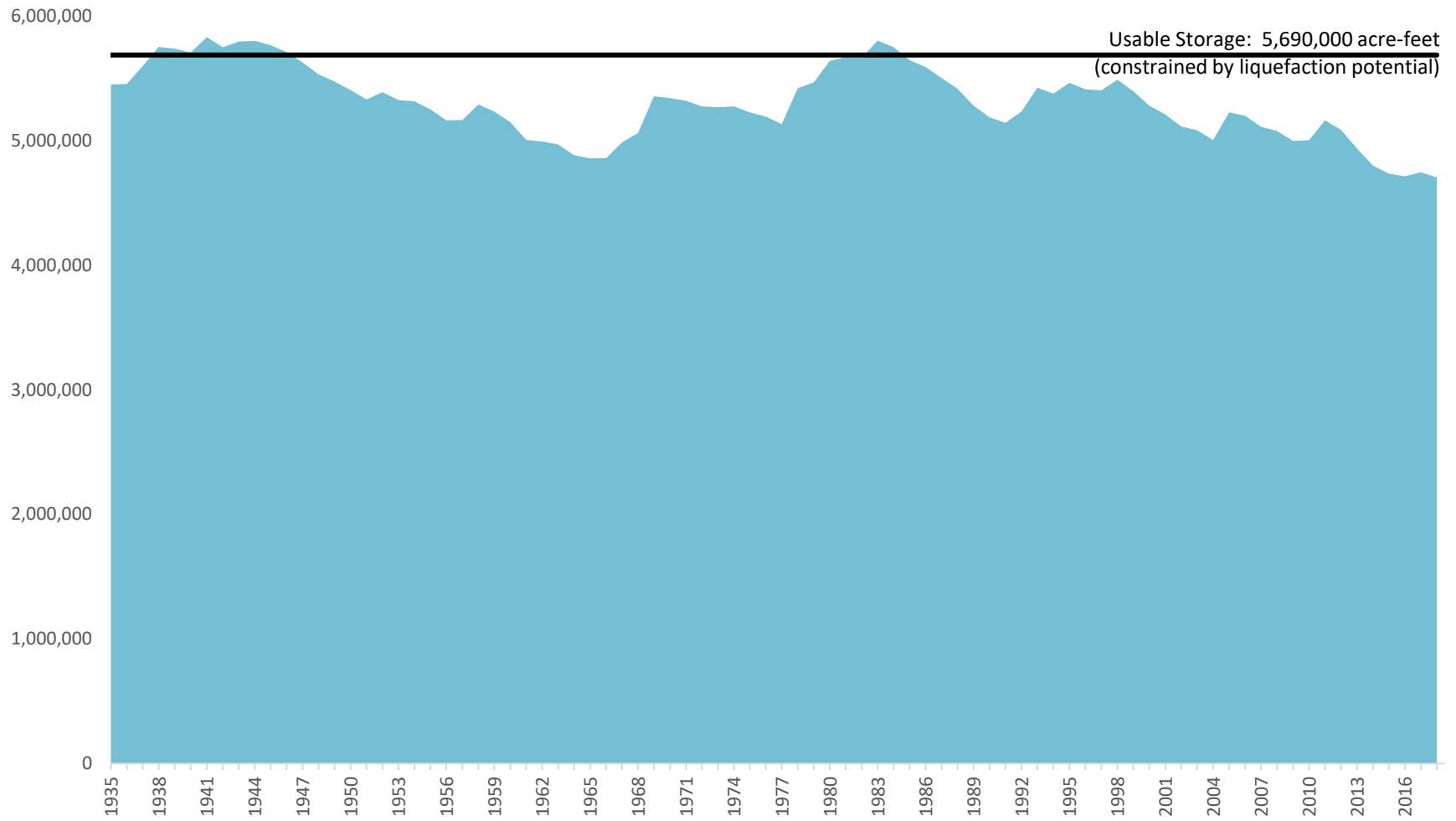


**Figure 7. Yucaipa Basin Change in Storage Results  
(acre-feet)**



Usable Storage: 2,796,000 acre-feet

**Figure 8. San Bernardino Basin Change in Storage Results  
(acre-feet)**



The calculations in the SBB and Yucaipa are performed for each individual sub-basin. The below bar charts illustrate the annual change in storage, by sub-basin.

Figure 8. Annual Change in Storage for the San Bernardino Basin, by sub-basin.

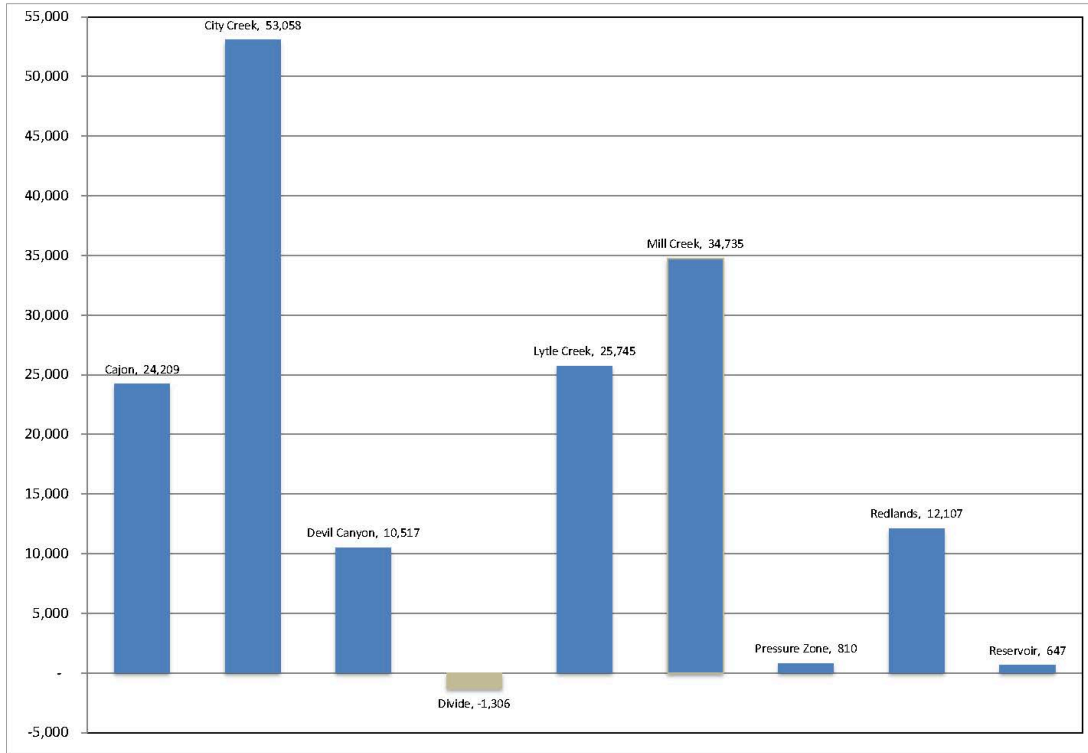
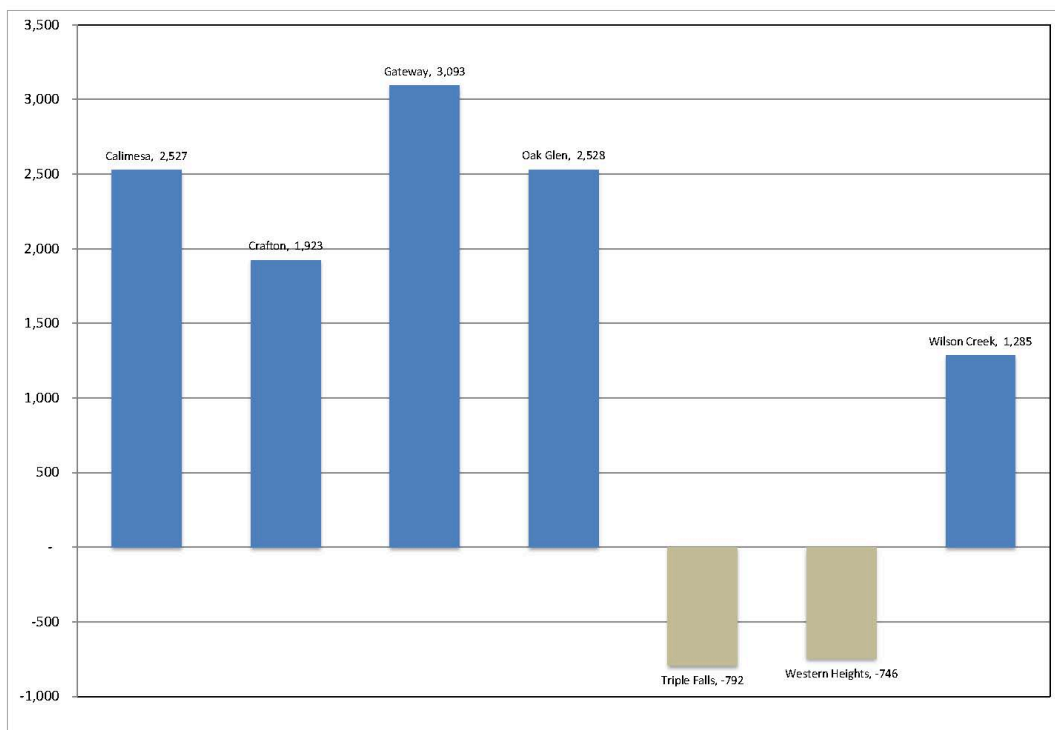


Figure 9. Annual Change in Storage for the Yucaipa Basin, by sub-basin.



## 2. Bibliography

- 1) Basin Groundwater Storage Data, San Bernardino Valley Municipal Water District library call number GB 1025, C2 S26, 1934 – 1990.
- 2) Department of Water Resources (DWR), Meeting Water Demands in the Bunker Hill - San Timoteo Area, Geology, Hydrology, and Operation—Economics Studies, Text and Plates, February 1971.
- 3) Final Statement, 2011 Regional Water Management Plan, Basin Technical Advisory Committee, September 2011.
- 4) Motokane, Earl S., “Evaluation of the Base Period for the Bunker Hill-San Timoteo Area Investigation”. Meeting Water Demands in the Bunker Hill - San Timoteo Area, Geology, Hydrology, and Operation—Economics Studies, Text and Plates, February 1971, pp. 123 – 129.
- 5) Olson, L.J. and Stig J. Johanson, “Specific Yield and Storage Determination”. Meeting Water Demands in the Bunker Hill - San Timoteo Area, Geology, Hydrology, and Operation—Economics Studies, Text and Plates, February 1971.
- 6) San Bernardino Valley Water Conservation District (SBWCD), Engineering Investigation of the Bunker Hill Basin, 2011-2012, March 2012.
- 7) Southern California Earthquake Center (SCEC), University of Southern California. Recommended Procedures for Implementation of DMG Special Publication 117 Guidelines for Analyzing and Mitigating Liquefaction Hazards in California, March 1999.
- 8) TRW, Incorporated. Simulation Program for Planned Utilization of the San Bernardino Valley and Riverside Ground Water Basins, Second Report, Report No. 07143-6001-R000, October 1967.
- 9) Utah Geological Survey web site (UGS):  
<http://geology.utah.gov/utahgeo/hazards/liquefy.htm>
- 10) University of Washington (UW) web site:  
<http://www.ce.washington.edu/~liquefaction/html/what/what1.html>
- 11) Van Gelder, Randy, Change in Groundwater Storage 1980 Update, May 20, 1981.
- 12) Western San Bernardino Watermaster (Watermaster), Annual Report of the Western-San Bernardino Watermaster for Calendar Year 1997, August 1, 2001.



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**DATE:** May 7, 2020

**TO:** Board of Directors Workshop - Resources

**FROM:** Heather Dyer, General Manager

**SUBJECT:** Consider Terms for an Agreement with West Valley Water District for Technical Assistance on the Cactus Basin #2 Project

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**BACKGROUND**

Valley District has been recharging water in detention basins owned and operated by San Bernardino County Flood Control District (SBCFCD), when they are not needed for flood control, since the 1970s. The Cactus Basins, located south of Interstate 210 and north of Etiwanda Avenue just west of Cactus Avenue, are a feasible location to facilitate state water recharge activities for the Rialto – Colton Basin due to their location and size. SBCFCD owns these facilities and requires entities using their facilities obtain permits and as the applicant, must also perform CEQA analysis and obtain other regulatory clearances from the environmental regulators, including the required mitigation.

Valley District has proposed to construct, operate and maintain the Cactus Basins Connector in order to recharge State Water in Basins 3, 3A, 4, and 5 (see layout attached). We do not anticipate mitigation will be required if permits are confined to these four basins. However, if Cactus Basin #2 is cleared of the wetland and riparian vegetation that has established in this basin then compensatory mitigation would be required.

West Valley currently discharges treated water into Basin #2 as part of their regular perchlorate treatment operations. In most circumstances, the water slowly infiltrates into the substrate. Due to the lack of maintenance activities in the past, the regular presence of water facilitates the growth of vegetation and has been a problem for vector control in the past. West Valley initiated the permitting process in 2018 but did not finalize permits due to the potentially high cost of compensatory mitigation that would be required to offset the loss of wetland and riparian habitat within the basin.



In 2019, Valley District was approached by West Valley Water District requesting partnership and/or assistance in permitting the maintenance of Cactus Basin #2 since Valley District had intended to use that basin for SWP recharge. Valley District identified the mitigation opportunity at Hidden Valley Wetlands and offered to cost-share the mitigation for Cactus Basin #2 since both agencies wanted to discharge in this location and needed permits to clear vegetation. However, some months later, West Valley staff indicated that they were going to implement a different discharge option rather than permit Cactus Basin #2. Since West Valley no longer needed Basin #2 and there were more environmental constraints associated with that basin, Valley District engineering staff decided to focus efforts on completion of improvements to Cactus Basins 3, 3A, 4 & 5, which will have sufficient capacity to meet our SWP recharge needs. We are currently completing CEQA analysis for Cactus Basins the Cactus Basins project which is expected to be completed later this year. We hope to begin recharging in Basins 3, 4, and 5 in 2021.

Recently, West Valley has once again decided to pursue Cactus Basin #2 maintenance permits and requested Valley District's assistance on the mitigation requirements since they already have a draft permit from California Department of Fish & Wildlife and have nearly completed the CEQA for the project. Valley District has approximately 20 acres of wetland habitat set aside within our restoration plan that was originally intended to offset impacts to Cactus Basin #2. West Valley has requested we consider allowing them to fund their required acreage (approximately 12 acres) of habitat mitigation at Hidden Valley Wetlands so they can use it to satisfy their mitigation requirements for the permits. They have also requested Valley District provide technical assistance in negotiation with the Wildlife Agencies to finalize the permits. Although we do not need Basin #2 for recharge capacity, staff does believe there would be additional flexibility if Basin #2 were available and for that reason sees benefit to assisting West Valley obtain the permits required to maintain the basin.

The West Valley ad-hoc committee made up of Director Hayes and President Harrison recently met with the West Valley ad-hoc members and staff to discuss the possibility of working together on this project. Staff of the two agencies developed the proposed terms of an agreement for your consideration. The objective of an agreement is to identify a cooperative path forward to obtain long-term maintenance permits for the Cactus Basin #2 which would benefit both agencies. The Term sheet is intended to set forth the preliminary and non-binding terms of subsequent negotiations toward a possible Agreement between the two agencies. Should the Board approve the terms, a formal agreement would be developed based on the approved terms and brought back to the Board for consideration.

For your consideration today is a Term Sheet that outlines the responsibilities for both Valley District and West Valley (Parties) associated with a Cactus Basins Water Spreading Agreement.

*Summary of Term Sheet*

### Valley District Responsibilities

1. Valley District will provide technical support to West Valley in completing or reviewing CEQA analysis and document, as needed to support permit issuance from the California Department of Fish and Wildlife, and other regulatory agencies.
2. Valley District will provide technical assistance in the development of biological resources assessments, impact analysis, and as needed, support any additional CEQA analysis required.
3. Valley District will provide technical assistance in the preparation, negotiation, and finalization of regulatory permits required including from the California Department of Fish and Wildlife, U.S. Fish & Wildlife Service, and Army Corps of Engineers, as needed.
4. Valley District will provide written explanation and supporting documentation regarding provision of the required mitigation associated with permits for Cactus Basin #2. This will include a description of the Permittee-responsible mitigation opportunity at the Hidden Valley Wetlands.
5. Valley District will provide technical assistance in support of West Valley certification or adoption of all Cactus Basin #2 documents.
6. Valley District will serve as the lead agency for planning, CEQA, permitting, and implementation, and compliance reporting for the permittee-responsible mitigation project at Hidden Valley Wetlands which will be used to satisfy permit requirements for maintenance of Cactus Basin #2.
7. Valley District will bill West Valley proportionate share of the mitigation project cost (currently estimated to be approximately 14% of the total project, 12 acres, approximately \$210,000)

### West Valley Responsibilities

1. Shall operate and maintain the Plant and Delivery System in accordance with prudent industry practices and applicable laws and regulations sufficient to meet the Product Water quality, product water quantity, and permitting requirements of the Agreement.
2. West Valley will complete any required CEQA analysis for the Cactus Basin #2. Project will be completed by July 30, 2020. West Valley will make all findings and adopt all mitigation measures in accordance with CEQA and all other applicable laws.
3. West Valley will serve as lead agency for permit applications required for clearing and maintenance of Cactus Basin #2.
4. West Valley will undertake a Feasibility Study (opportunities & constraints analysis) for Delivery System alignment for Cactus Basin #3 the results of which will be determined by August 30, 2020. Valley District will provide technical assistance on the Feasibility Study.
5. If Cactus Basin #3 is undertaken, West Valley will serve as the lead agency on design, engineering, and permitting of the project, with technical assistance provided by Valley District.
6. If Cactus Basin #3 option is undertaken, West Valley will complete the necessary CEQA analysis related to construction and operations those facilities, with technical assistance provided by Valley District.

If the Parties' Board of Directors act to approve this Term Sheet and authorize the Parties to negotiate the Agreement, the Agreement will be negotiated and ready for approval by the Boards of Directors and execution by the Parties by the end of May 2020.

**Fiscal Impact**

There is not fiscal impact from this activity. The proposed contribution from Valley District is staff time to assist with the environmental permitting of the maintenance of Cactus Basin #2.

**Recommendation**

Staff recommends that the Board direct staff to prepare an agreement for legal review and future consideration.

**Attachments**

1. Term Sheet Cactus Basins Water Spreading Agreement
2. Cactus Basins Layout



**Term Sheet**

**Cactus Basins Water Spreading Agreement**



**April 29, 2020**

The purpose of the Term Sheet is to set forth the preliminary and non-binding terms of subsequent negotiations toward a possible Agreement between the Parties. The proposed terms and conditions set forth herein represent the current intention of the Parties, do not bind either Party in any manner, do not commit any Party to a particular course of action, and do not limit the Parties discretion under CEQA. This Term Sheet is a summary only and is not comprehensive or definitive.

As required by law, prior to entering into the transactions contemplated herein, the Parties retain their sole and independent discretion to, among other things, balance the benefits of the proposed Project against any potential environmental impacts prior to taking final action if such impacts cannot be avoided, consider alternatives to the proposed Project (including the “no project” alternative”), and determine not to proceed with the proposed Project.

The Parties understand that substantive terms and detailed provisions not noted or fully developed in this Term Sheet are expected to be included in any final Contract.

The objective of this agreement is to identify a cooperative path forward to obtain long-term maintenance permits for the Cactus Basin #2, as required by San Bernardino Co. Flood Control in order to discharge water into the basin. Maintenance permits for this basin will require compensatory mitigation to offset the loss of wetland and riparian habitat that has developed within the basin.

A. SBVMWD

1. Regarding Cactus Basin #2 maintenance activities, SBVMWD will provide technical support to WVWD in completing or reviewing CEQA analysis and document, as needed to support permit issuance from the California Department of Fish and Wildlife, and other regulatory agencies.
2. SBVMWD will provide technical assistance in the development of biological resources assessments, impact analysis, and as needed, support any additional CEQA analysis required.
3. SBVMWD will provide technical assistance in the preparation, negotiation, and finalization of regulatory permits required including from the California Department of Fish and Wildlife, U.S. Fish & Wildlife Service, and Army Corps of Engineers, as needed.
4. SBVMWD will provide written explanation and supporting documentation regarding provision of the required mitigation associated with permits for Cactus Basin #2. This will include a description of the Permittee-responsible mitigation opportunity at the Hidden Valley Wetlands.

5. SBVMWD will provide technical assistance in support of WVWD certification or adoption of all Cactus Basin #2 documents.

6. SBVMWD will serve as the lead agency for planning, CEQA, permitting, and implementation, and compliance reporting for the permittee-responsible mitigation project at Hidden Valley Wetlands which will be used to satisfy permit requirements for maintenance of Cactus Basin #2.

7. SBVMWD will bill WVWD proportionate share of the mitigation project cost (currently estimated to be approximately 14% of the total project, 12 acres of 85 total, approximately \$210,000)

B. WVWD

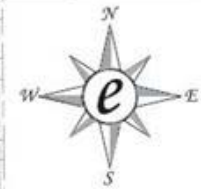
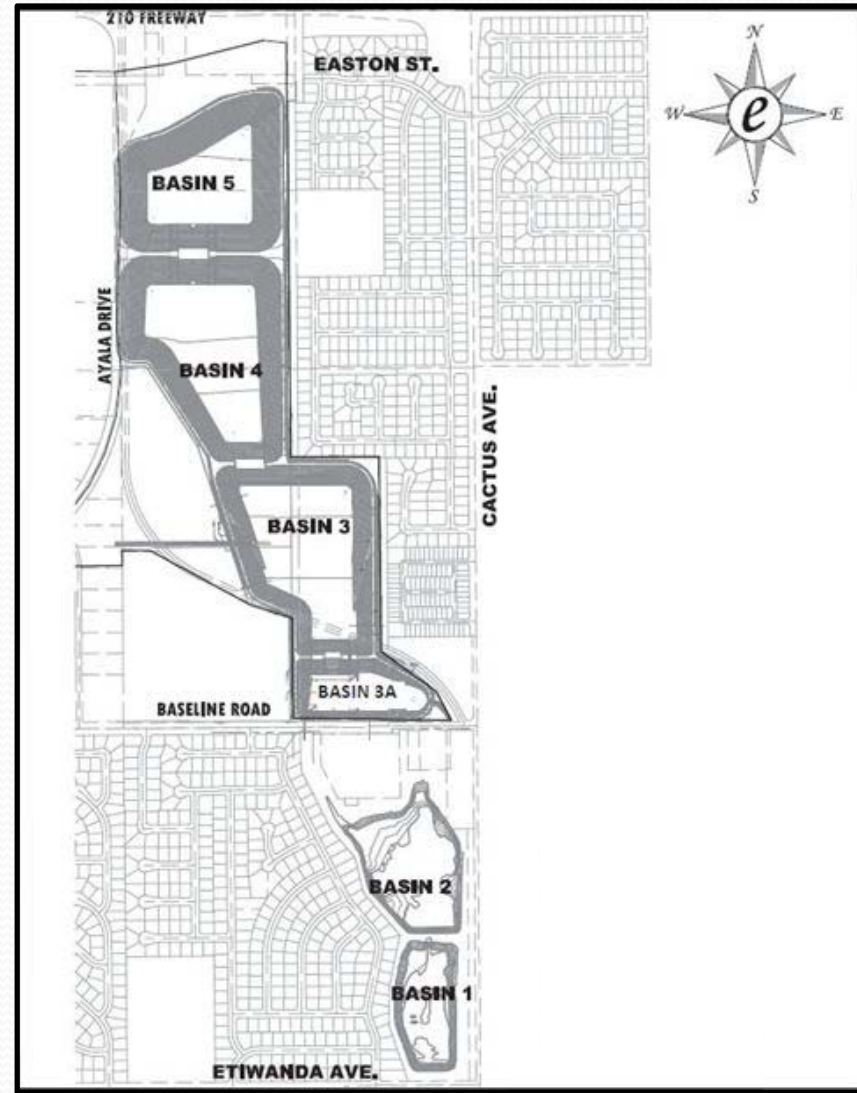
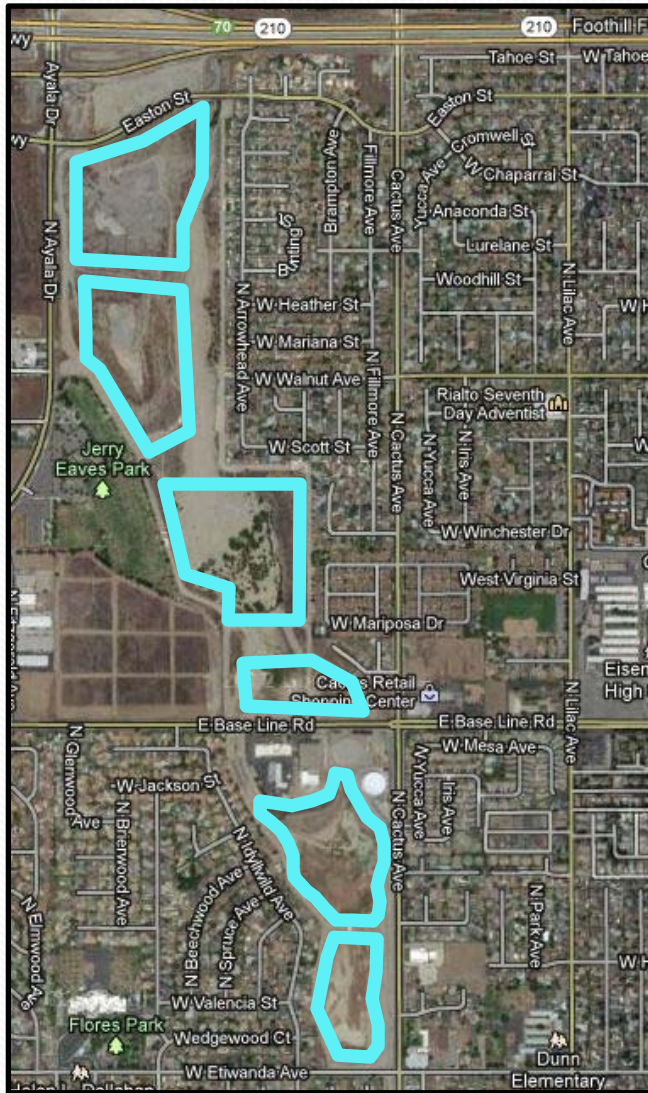
1. Shall operate and maintain the Plant and Delivery System in accordance with prudent industry practices and applicable laws and regulations sufficient to meet the Product Water quality, product water quantity, and permitting requirements of the Agreement.
2. WVWD will complete any required CEQA analysis for the Cactus Basin #2 Project will be completed by July 30, 2020. WVWD will make all findings and adopt all mitigation measures in accordance with CEQA and all other applicable laws.
3. WVWD will serve as lead agency for permit applications required for clearing and maintenance of Cactus Basin #2.
4. WVWD will undertake a Feasibility Study (opportunities & constraints analysis) for Delivery System alignment for Cactus Basin #3 the results of which will be determined by August 30, 2020. SBVMWD will provide technical assistance on the Feasibility Study.
5. If Cactus Basin #3 is undertaken, WVWD will serve as the lead agency on design, engineering, and permitting of the project, with technical assistance provided by SBVMWD.
6. If Cactus Basin #3 option is undertaken, WVWD will complete the necessary CEQA analysis related to construction and operations those facilities, with technical assistance provided by SBVMWD.

C. Parties

1. The Parties shall cooperate during the period of the Project, as necessary and appropriate, with respect to all activities such as permitting, regulatory monitoring and reporting, public information, and other Project matters.
2. If the Parties' Board of Directors acts to approve this Term Sheet and authorizes the Parties to negotiate the Agreement, the Agreement will be negotiated and ready for approval by the Boards of Directors and execution by the Parties no later than May 30, 2020.
3. The parties will attend monthly progress meetings and each Party will provide the other Party access to information such Party has regarding the Project, including without limitation any material information. WVWD will consider and respond to material comments or concerns with respect to such information made by SBVMWD.
4. If the Cactus basins #3 delivery point is undertaken following a Feasibility Study, the Parties will amend this agreement to reflect the necessary steps to move forward on developing mutually beneficial components of the Project.
5. WVWD will make the Plant and Delivery System available for SBVMWD tours after start of operations, subject to reasonable notice by the SBVMWD
6. SBVMWD Staff, Consultants and contractors will be provided reasonable access to the Project site during the construction period and after the start of operations, subject to reasonable notice by the SBVMWD.
7. If the Parties' Board of Directors acts to approve this Term Sheet and authorizes the Parties to negotiate the Agreement, the Agreement will be negotiated and ready for approval by the Boards of Directors and execution by the Parties no later than May 30, 2020



# Layout of Cactus Basins





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**DATE:** May 7, 2020  
**TO:** Board of Directors Workshop - Resources  
**FROM:** Heather Dyer, General Manager  
**SUBJECT:** Director Requests for Consideration by the Board

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At the April 21, 2020 Board meeting, the board approved a standardized process and form that would facilitate full Board consideration of requests initiated by an individual Director. The policy ensures that staff is acting in accord with the desires of the Valley District Board of Directors as a whole rather than responding to directives of individual Board members. It also promotes discussion and consensus by the Board regarding activities that are appropriate uses of staff time and other District resources.

Once a request is received from a Director, the General Manager will place the item(s) on an upcoming workshop as part of a standing agenda item, "Director Requests for Consideration," which will allow the Board of Directors to fully discuss the requested activity and provide direction to staff in compliance with the Brown Act.

Director Longville is requesting the board to consider using staff time to examine the potential financial impact to Valley District should California's voters approve the November 2020 ballot initiative entitled "Schools and Communities First"

The attached form provides the details of the request.

**Fiscal Impact**

The only fiscal impact on this item is the staff time associated to the request as indicated on the attached form.

**Staff Recommendation**

Consider attached request.



**DATE:**

**TO:** Board of Directors

**FROM:**

**SUBJECT:** Director's Request for Consideration by Board

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I. **Director's Requested Activity to be Considered by the Board:**

II. **Discussion of Activity's Value to Valley District and/or the Board:**

III. **Estimated Staff Time Required (to be completed by Staff):**

IV. **Estimated Cost or Use of District Resources (to be completed by Staff):**

V. **Possible Modification or Suggested Alternative:**