Basin Technical Advisory Committee

Meeting No. 121

AGENDA

Bear Valley Mutual Water Company

City of Colton

East Valley Water District

City of Loma Linda

City of Redlands

City of Rialto

City of Riverside

San Bernardino County Flood Control District

San Bernardino Municipal Water Department

San Bernardino Valley Municipal Water District

San Bernardino Valley Water Conservation District

West Valley Water District

Western Municipal Water District

Yucaipa Valley Water District

BASIN TECHNICAL ADVISORY COMMITTEE
MONDAY, APRIL 3, 2023 – 1:30 P.M.

Public participation is welcome and encouraged. You may participate in the April 3, 2023, meeting of the Basin Technical Advisory Committee **online** and by **telephone** as follows:

San Bernardino Valley Municipal Water District
380 E. Vanderbilt Way
San Bernardino, CA 92408
In-Person: Upstairs Conference Room

Teleconference Information

Dial-in Info: 877 853 5247 US Toll-free
Meeting ID: 864 6271 4600

https://sbvmwd.zoom.us/j/86462714600
Passcode: 3802020

If you are unable to participate online or by telephone, you may also submit your comments and questions in writing for the Committee's consideration by sending them to 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 6:00p.m. on Sunday, April 2, 2023. All public comments will be provided to the Chairman 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. Online participants MUST login with a Zoom account. The Zoom app is free to 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.

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Basin Technical Advisory Committee

Meeting No. 121

AGENDA

April 3, 2023, 1:30 p.m.

1) Call to Order/Pledge of Allegiance/Introductions

2) Public Comment

3) Approval of Minutes

   A. January 30, 2023 Meeting

4) Discussion Items and Presentations

   A. Summary Findings of the 2022 Change in Storage Report

   B. Senate Bill 366: The California Water for All Initiative

5) Updates

   A. San Bernardino Basin Optimization

   B. Water Conservation District Recharge Operations

   C. Enhanced Recharge Stormwater Capture Project

   D. Regional Recycled Water System Construction

   E. Subcommittees/Other

6) Other Business

7) Adjourn - Next Meeting: August 7 @ 1:30 p.m.

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MINUTES
OF
THE
BASIN TECHNICAL ADVISORY COMMITTEE

MEETING NO. 120

January 30, 2023

Guests attended:

Thomas Crowley, City of Rialto
Steve Miller, San Bernardino Municipal Water Department
June Hayes, San Bernardino Valley Municipal Water District
T. Milford Harrison, San Bernardino Valley Municipal Water District
Gil Botello, San Bernardino Valley Municipal Water District
Susan Longville, San Bernardino Valley Municipal Water District
Heather Dyer, San Bernardino Valley Municipal Water District
Bob Tincher, San Bernardino Valley Municipal Water District
Cindy Saks, San Bernardino Valley Municipal Water District
Adekunle Ojo, San Bernardino Valley Municipal Water District
Jose Macedo, San Bernardino Valley Municipal Water District
Melissa Zoba, San Bernardino Valley Municipal Water District
Anel Perez, San Bernardino Valley Municipal Water District
Chris Mann, Yucaipa Valley Water District
Madeline Blua, Yucaipa Valley Water District
Van Jew, West Valley Water District
Don Lee, Tetra Tech
Jeff Noelte, East Valley Water District
Jesus Gastelum, Elsinore Valley Municipal Water District
John Harris, City of Redlands
Cris Fealy, Fontana Water Company
Brian Dickinson, City of Colton
Russ Handy, City of Loma Linda
Jarb Thaipejr, City of Loma Linda
Craig Miller, Western Municipal Water District

Joshua Aguilar, Western Municipal Water District

Mallory Gandara, Western Municipal Water District

Farid Ishak Boushaki, City of Riverside Public Utilities

Michael Plinski, City of Riverside Public Utilities

Bassam Alzammar

George Hanson

Jennifer Ares

Laura Torres

Nicole Hemmans

Toyasha Sebbag

Agenda Item 1. Call to Order/Pledge of Allegiance/Introductions/ Public Comment

The meeting of the Basin Technical Advisory Committee was called to order by Chair Thomas Crowley, at 9:00 a.m. via Zoom and SBVMWD Board Room.

Agenda Item 2. Public Comment.

Agenda Item 3. Approval of Minutes.

A. Approval of the Minutes of the August 1, 2022, meeting.

Adekunle Ojo moved to approve the minutes of the August 1, 2022, meeting and Steve Miller seconded. The summary notes were accepted with no comments.

Agenda Item 4. Presentations

A. Solve the Water Crisis Coalition

Heather Dyer commenced her update by highlighting that for about a year and a half, a group of General Managers have been getting together engage and educate elected officials and the general public about California's water future. Ms. Dyer explained this is not only about the current drought but long-term decades into the future, how are we going to ensure that we have a reliable water supply system throughout the State. This leans on the assumption that we want to have a California of the future that has agriculture, urban, technology and a strong Northern California and Southern California as well as coastal inland components and recognizing that we are all linked through our shared economy and the values that we have here in California in terms of quality of life.

Craig Miller highlighted our water future does not look good. In 2019 it was wet, and it was flooding. In 2021 we had a zero allocation after just 2 years from the floods of 2019. Our water resiliency in the State are only 2 years on the State Water Project; we should have decades of water in our savings account after a wet year. 2017 was the wettest year, 2019 was wet, 2021 had 0 allocation, 2023 we are back to flooding. Mr. Miller stated business people and the public doesn't understand and we need to have this education campaign, so people understand. According to Mr. Miller, the State is around 20-million-acre feet of water supply short.

Ms. Dyer added that this does not mean there is no more water but very extended periods of drought require rethinking our water Statewide water system. The volume of water is there. It's that we haven't fully invested in the infrastructure; we need to be able to take advantage of those changed conditions. That's what this effort is advocating for.

Mr. Miller highlighted that Solve the Water Crisis is an education campaign not an advocacy campaign.

No action was needed, item was received and filed.

Agenda Item 5. New Business

A. Consider the 2023 BTAC Regional Water Management Plan

Adekunle Ojo commenced the item highlighting the 3 goals of the annual RWMP which are our plan to manage water levels, manage Santa Ana River diversions and both play a role in managing the contaminant plumes. Mr. Ojo stated the three actions he will go over are the recharge thresholds, the recharge in Riverside North basin and how they all affect the contaminant plumes. Mr. Ojo said the plan for 2023 is on track and the Santa Ana River Diversions are in compliance for recharge into Riverside north basin has not been met and for contaminant plumes we are on track.

Mr. Ojo added in terms of water levels, it helps us achieve goal number 1 and 3. He states the artificial recharge threshold for the basins is roughly at 570,000 A/F or roughly about 10% of the basin capacity.

Jarb Thaipejr moved to approve the 2023 BTAC Regional Water Management Plan, John Harris seconded. The summary notes were accepted with no comments.

Agenda Item 6. Updates

A. San Bernardino Basin Optimization

B. Conservation Subcommittee Update

C. Projects Update (Open Mic)

Jose Macedo commented in the interest of time that item 6 would be skipped and move to item 7. Chair Crowley agreed but added Greg Herzog had contacted him about resigning from being the Project Review subcommittee chair. Chair Crowley asked if anyone would be interested and if interested to email him.

Agenda Item 7. Other Business

A. Discuss 2023 Meeting Schedule and Confirm Next Meeting Date

Cancel February 6, June 5 and October 2. Resume bimonthly schedule with April 3 August 7 and reschedule December 4 to December 11.

Jarb Thaipejr moved to approve the 2023 BTAC Schedule, Van Jew seconded. The summary notes were accepted with no comments.

Agenda Item 8. Adjourn.

There being no further business, Chair Crowley adjourned the meeting at 10:23 a.m.

APPROVAL CERTIFICATION
I hereby certify to approval of the foregoing Minutes of the Basin Technical Advisory Committee.

Secretary
Date _____

Respectfully submitted,

Anel Perez
Administrative Specialist

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

EXECUTIVE SUMMARY AND APPENDIX

March 2023

San Bernardino Valley Municipal Water District

Wen Huang, P.E.
Assistant General Manager/Chief Operating Officer

Adekunle Ojo
Manager of Water Resources

Dan Borell
Geospatial Services Program Manager

ACKNOWLEDGMENT

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.

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 performed a study to determine the total amount of usable groundwater storage in the San Bernardino Basin (SBB) and Rialto-Colton Basin (RC) using the Upper Santa Ana River Integrated Groundwater Model (Integrated SAR Model). The usable groundwater storage is the theoretical maximum volume of groundwater that can be stored from the bottom elevation of the aquifer to the maximum water level in the basin **(Calculation details can be found in Appendix: Total Usable Storage)**. Storage in the SBB is constrained by the goal to minimize, or eliminate, liquefaction potential in the Pressure Zone Area. In order to achieve this goal, water levels in the Pressure Zone must not be shallower than 50 feet below ground surface. The estimated total usable storage in the SBB is 5,690,000 acre-feet, Rialto-Colton Basin is 1,749,000 acre-feet, and the Yucaipa Basin is 2,796,000 acre-feet.

Calculation

SBVMWD calculates the change in groundwater storage in the San Bernardino, Rialto-Colton and Yucaipa Basins annually. The change is groundwater storage is based upon the the Basins geology, and field water level measurements from wells throughout the Basins. Storage is a important metric that SBVMWD uses to gauge the effectiveness of various water resource management activities, such as groundwater recharge. The annual change in storage is then a comparison of the current year's change in groundwater storage with the previous year's value.

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 .

Summary of 2022 Results

Due to the current drought which began in 1998, the volume of groundwater in storage for the San Bernardino Basin (SBB) and Rialto-Colton Basin continues to be at historic lows. Given the below average precipitation index of 29.48 inches, or 95% of the historic mean of 31.03 inches received in Water Year 2021-2022 and relatively low amount of imported water through the State Water Project (5% Table A allocation in 2022), the decline in groundwater storage was moderate for the San Bernardino Basin and relatively flat for Rialto-Colton and Yucaipa Basins. The reductions in each of the basins represent a 1.2% decrease in total storage from 2021.

The change in storage results are summarized in Table 2.

Basin	Total Usable Storage (acre-feet)	2022 Change in Storage (acre-feet)	2022 Total Storage (acre-feet)	Percent Full (%)
Rialto-Colton Basin	1,749,000	(7,970)	1,508,721	86%
San Bernardino Basin	5,690,000	(92,643)	4,658,475	82%
Yucaipa Basin	2,796,000	(2,619)	2,242,459	80%
	10,235,000	**(103,232)**	**8,409,655**	**83%**

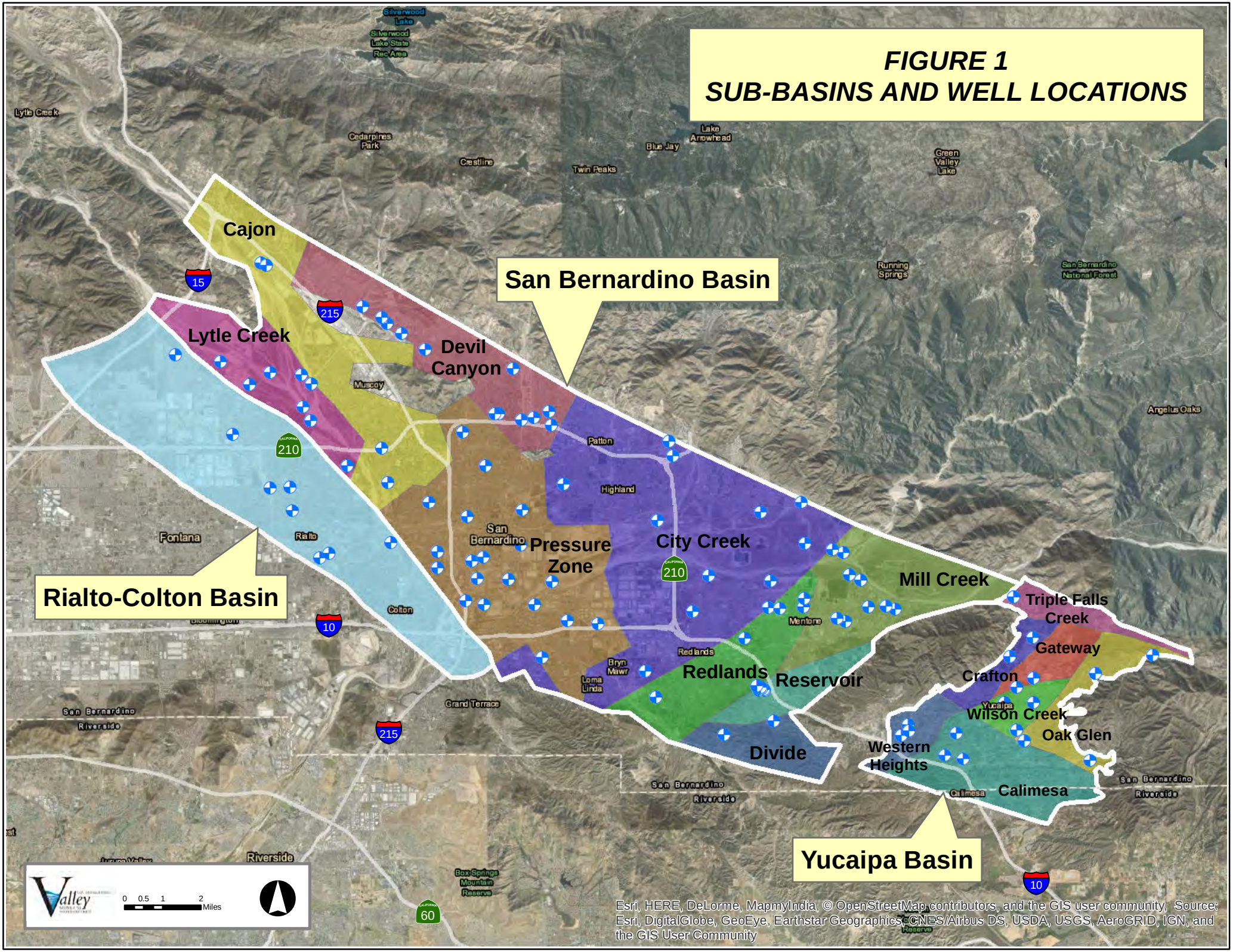

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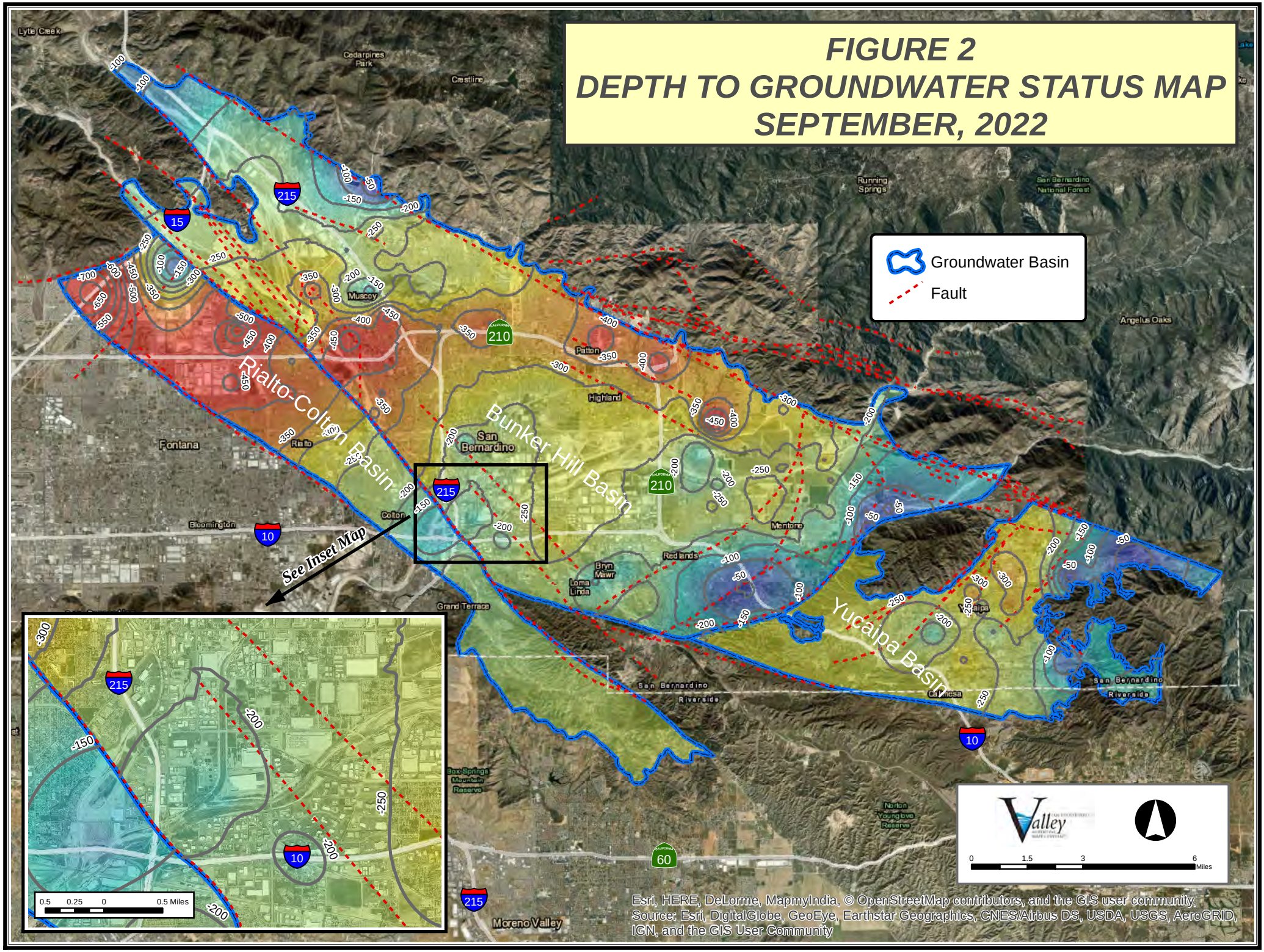
FIGURE 2
DEPTH TO GROUNDWATER STATUS MAP
SEPTEMBER, 2022



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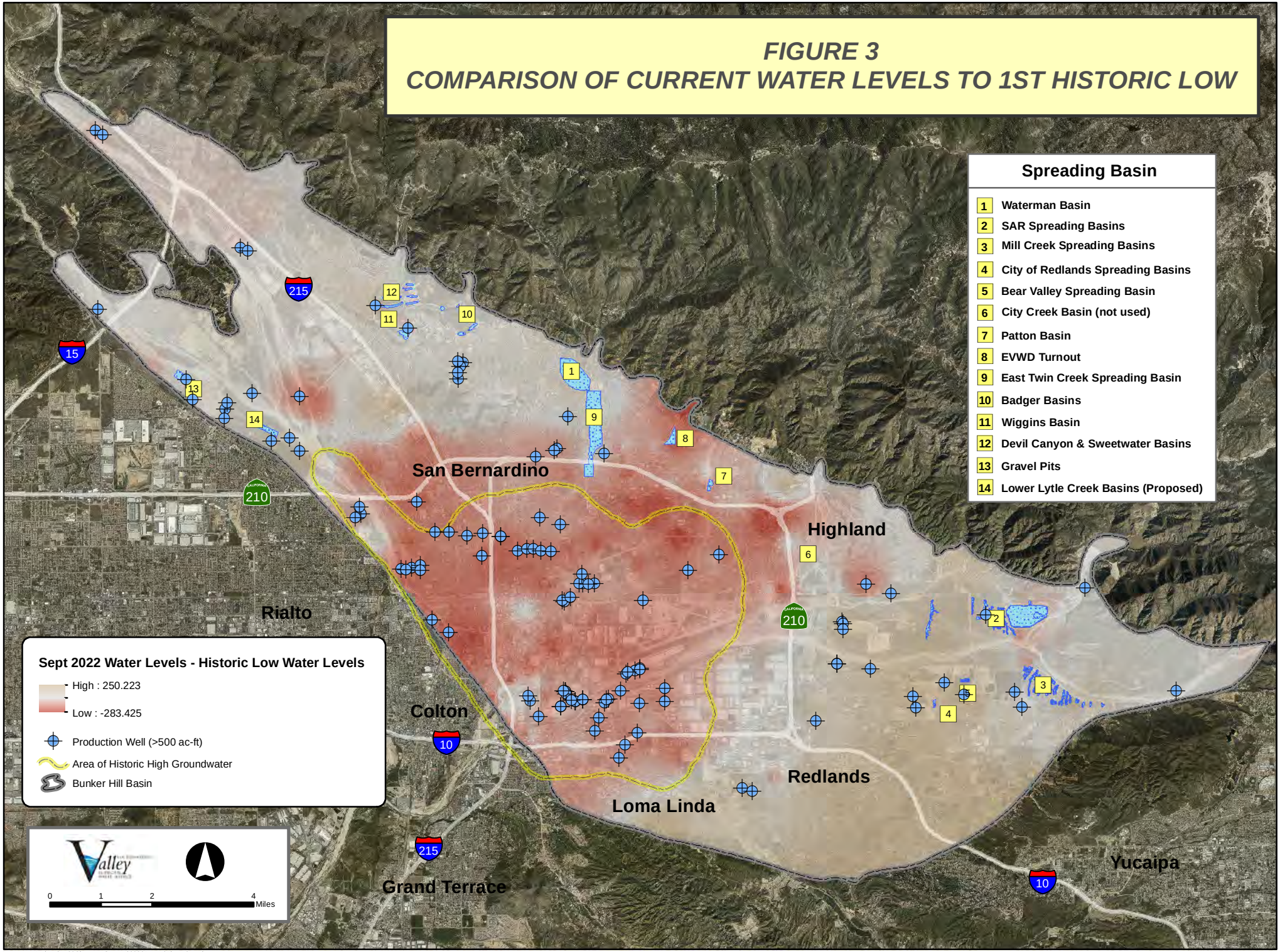

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Figure 5: Rialto-Colton Basin Change in Storage Results (in acre-feet)

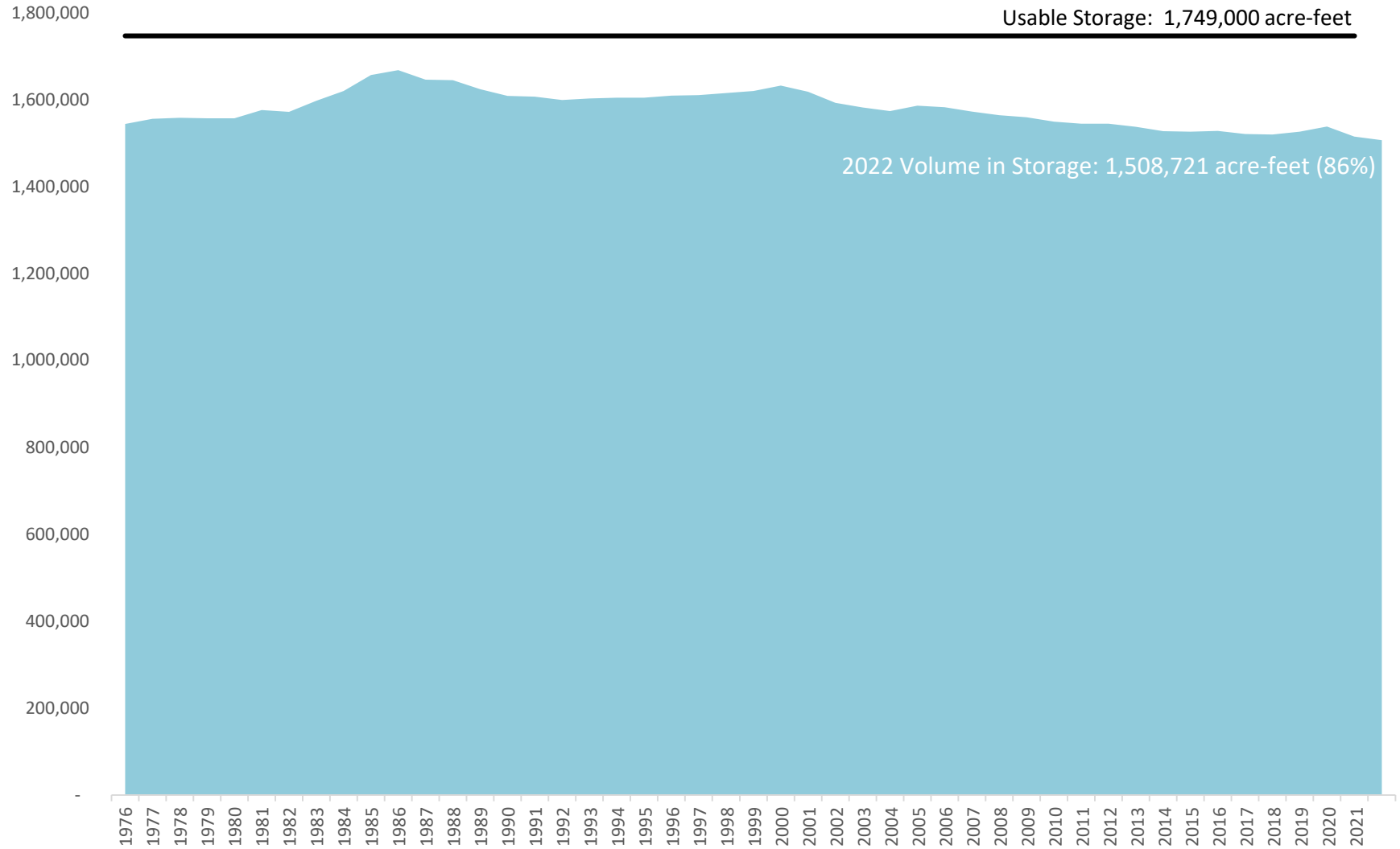


Figure 6: Yucaipa Basin Change in Storage Results (in acre-feet)

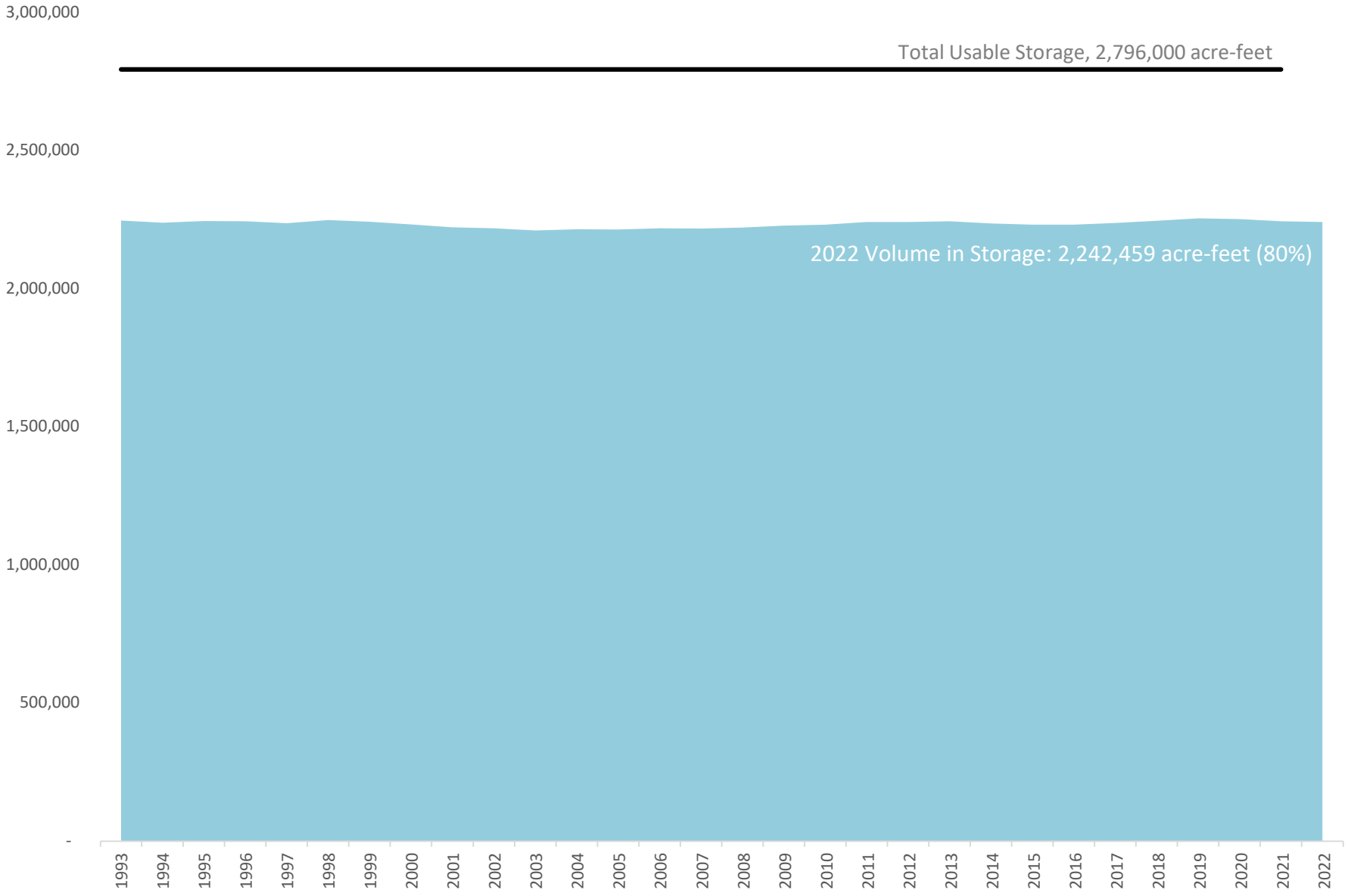
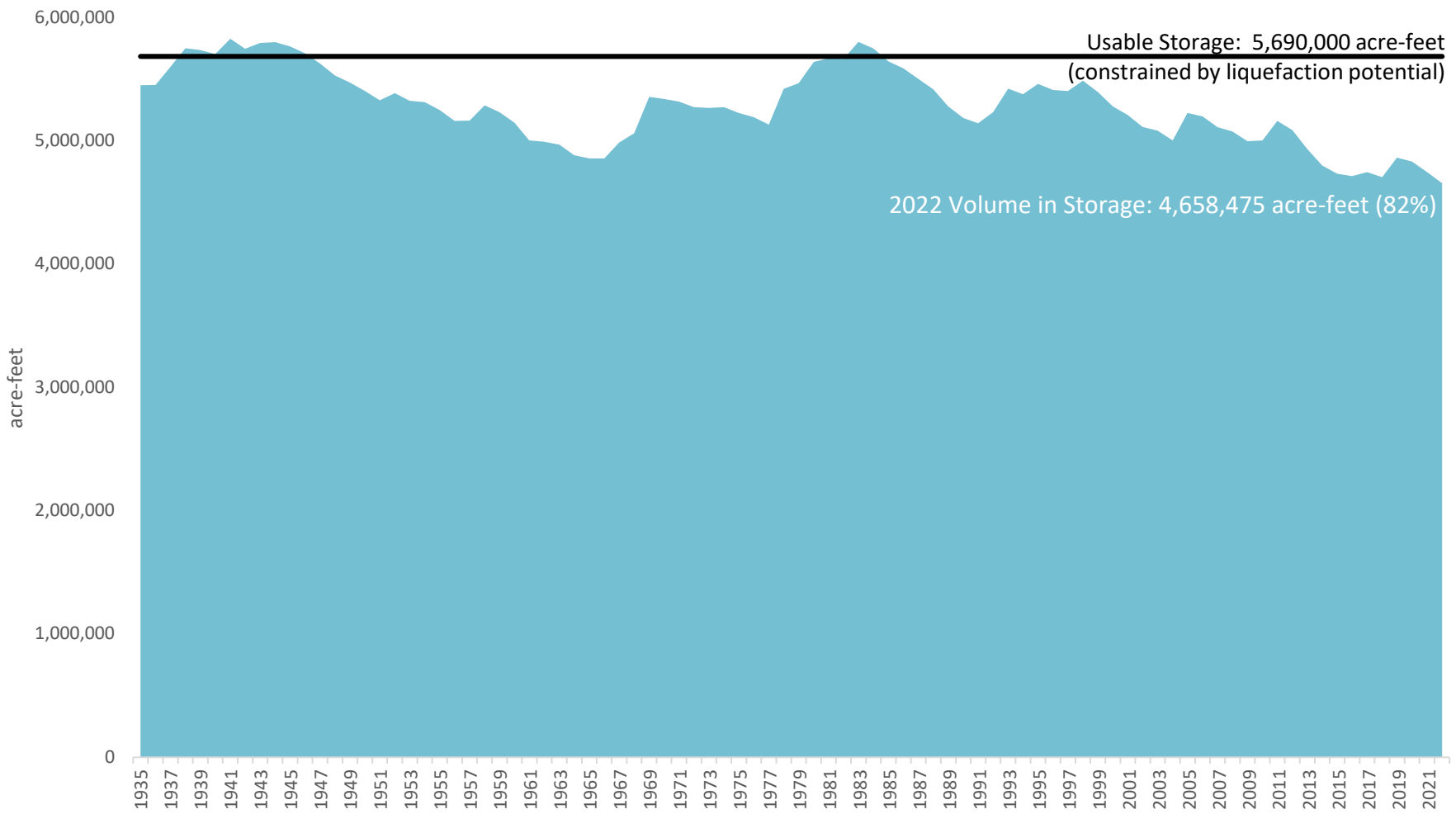


Figure 7: San Bernardino Basin Change in Storage Results (in acre feet)



The calculations in the SBB and Yucaipa are performed for each individual sub-basin. The increase or decrease of individual sub-basin change in storage values are influenced by a variety of factors such as local precipitation, groundwater production, groundwater recharge, proximity to river and creeks, and water conservation.

Figure 8. 2022 Change in Storage for the San Bernardino Basin, by sub-basin.

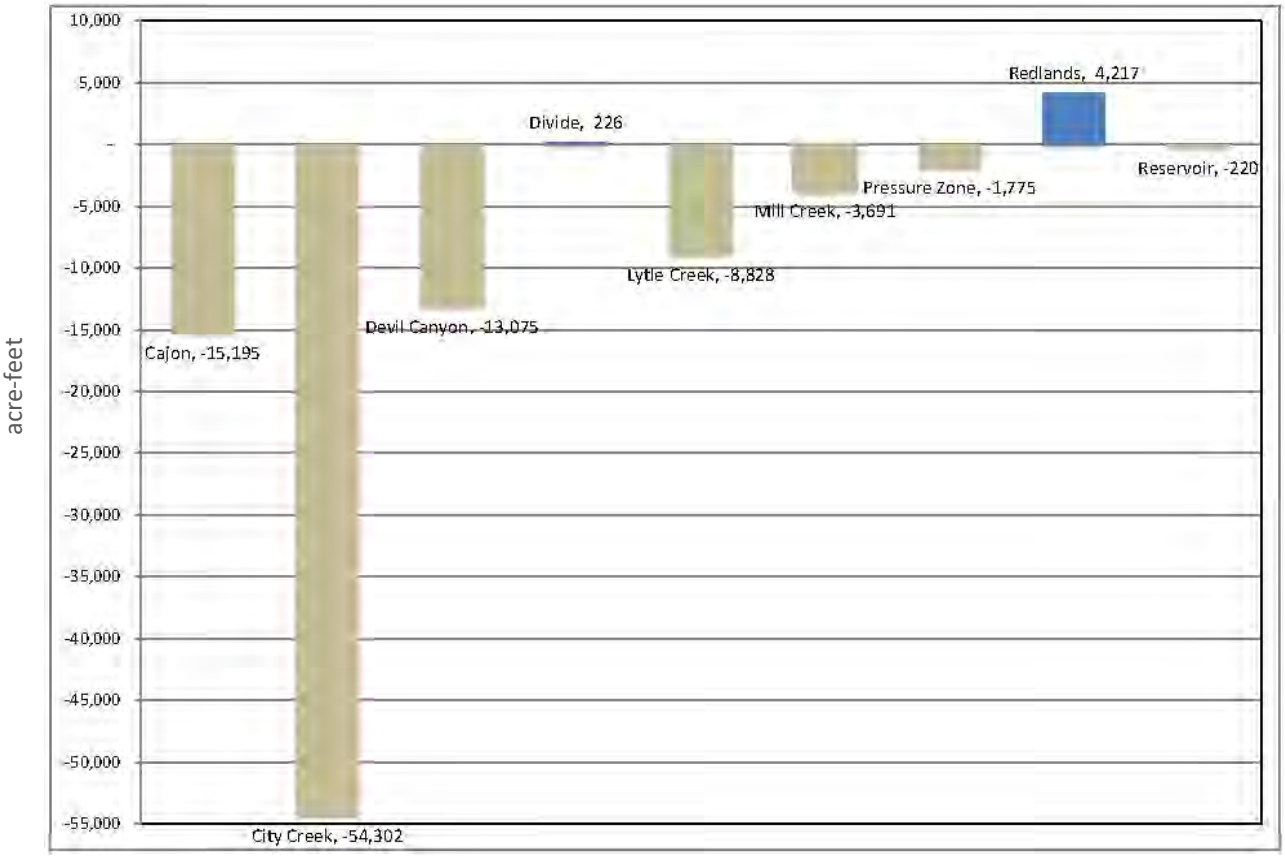
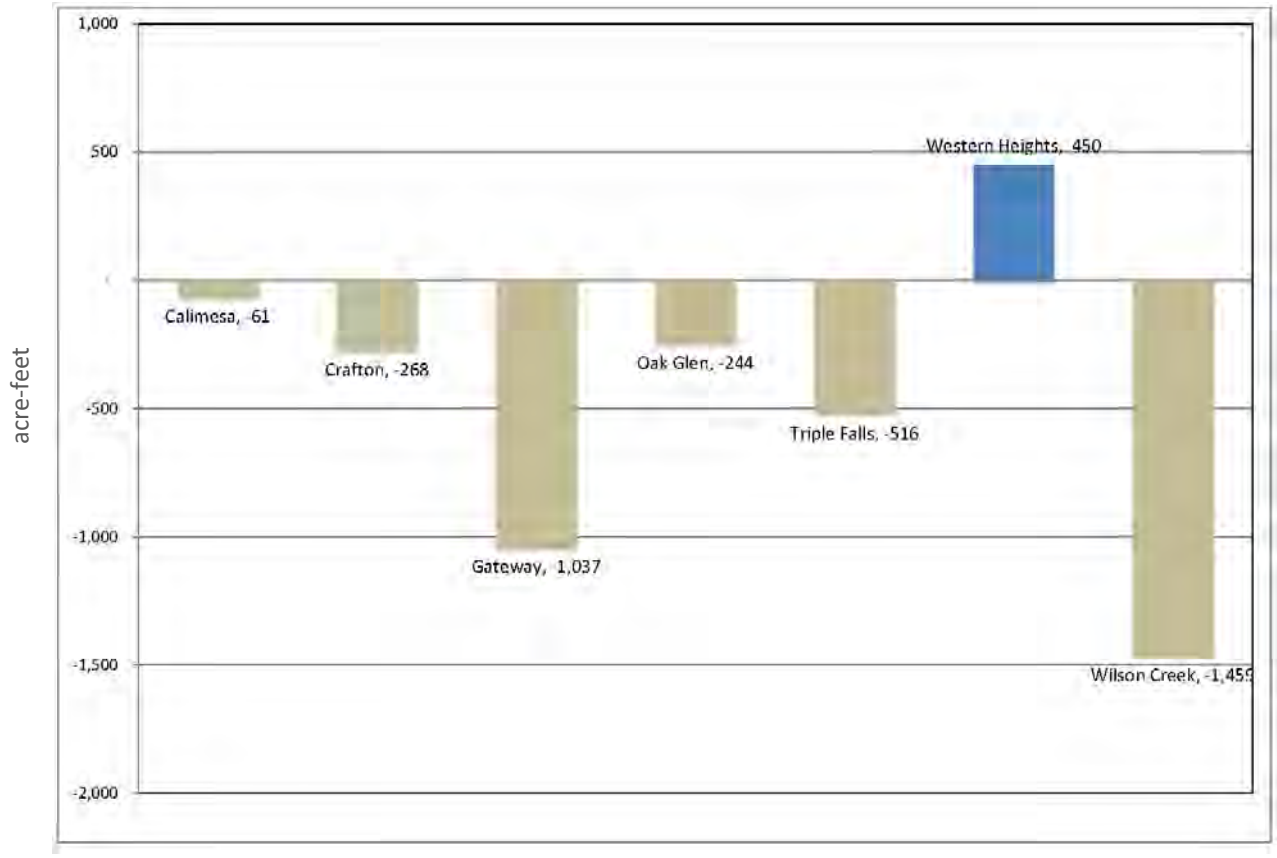


Figure 9. 2022 Change in Storage for the Yucaipa Basin, by sub-basin.



Anna M. Caballero

14th Senate District

SB 366 – California Water for All

SUMMARY

SB 366 would modernize the California Water Plan to reflect the State's new climate reality and establish long-term water supply targets that, when met, will ensure sufficient, high quality water for all beneficial uses.

BACKGROUND

California is in a race against climate change. Pressured by multi-year droughts, floods and other intensifying climate change impacts, California's aging water infrastructure and facilities are unable to keep pace, leaving groundwater basins overdrafted, wells dry, water quality degraded, land fallowed, businesses suffering and severe cutbacks to the State's water delivery systems and local supplies. Every sector in California is affected and bold changes are necessary to address deficiencies and adequately serve the state's population and environmental, agricultural and business needs.

Recently, the State has taken steps to move California toward sustainability including a major investment of over $8 billion in the past two years for water projects. The Newsom Administration's recently released "Water Supply Strategy: Adapting to a Hotter, Drier Future," outlines multiple steps and goals for ensuring the State has sufficient water in the future to meet our needs. But this plan is not in statute and is not financed. More is needed.

EXISTING LAW

The California Water Plan is currently the State's strategic plan for managing and developing water resources for current and future generations. Required by Water Code Section 10005(a), it presents the status and trends of California's water-dependent natural resources; water supplies; and agricultural, urban, and environmental water demands for a range of plausible future scenarios. Major revisions to the Water Plan have not been made for at least 20 years. During those same twenty years, extreme weather resulting from climate change has profoundly and detrimentally impacted water supply in the state for virtually all beneficial uses.

SOLUTION

SB 366 would revise and recast the California Water Plan statute, updating its provisions to address the extreme climate impacts of the 21st century. As part of this modernization, the bill would establish long-term water supply targets for the State to achieve, require a financing plan, and would update the requirement that state agencies develop a plan to achieve those targets, in consultation with local water agencies, wastewater service providers, irrigation districts, and other stakeholders recognizing the state's diverse regional needs. The targets would complement and amplify Governor Newsom's Water Supply Strategy, ensuring there are water supply targets that extend beyond any single Administration.

SUPPORT

California Municipal Utilities Association (sponsor)

CONTACT

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