

January 13, 2022

MEETING NOTICE**WATER CONSERVATION AND DEMAND MANAGEMENT COMMITTEE**

Members of the Water Conservation and Demand Management Committee:

Director Nai Hsueh, Committee Vice Chair
Director Barbara Keegan
Director Linda J. LeZotte, Committee Chair

Staff Support of the Water Conservation and Demand Management Committee:

Rick L. Callender, Esq., Chief Executive Officer
Melanie Richardson, Assistant Chief Executive Officer
Aaron Baker, Chief Operating Officer, Water Utility
Rachael Gibson, Chief of External Affairs
J. Carlos Orellana, District Counsel
Gregory Williams, Deputy Operating Officer, Raw Water Division
Vincent Gin, Deputy Operating Officer, Water Supply Division
Bhavani Yerrapotu, Deputy Operating Officer, Treated Water Operations & Maintenance Division
Don Rocha, Deputy Administrative Officer, Office of Government Relations
Bart Broome, Assistant Officer, Office of Government Relations
Antonio Alfaro, Government Relations Advocate, Office of Government Relations
Kirsten Struve, Assistant Officer, Water Supply Division
Vanessa De La Piedra, Groundwater Management Manager, Groundwater Monitoring and Analysis Unit
Metra Richert, Unit Manager of the Water Supply Planning and Conservation Unit, Water Supply Division,
Samantha Greene, Senior Water Resources Specialist, Water Supply Planning & Conservation Unit
Jing Wu, Senior Water Resources Specialist, Water Supply Planning & Conservation Unit
Justin Burks, Senior Water Conservation Specialist, Water Supply Planning & Conservation Unit

The regular meeting of the Water Conservation and Demand Management Committee is scheduled to be held on **Monday, January 24, 2022, at 11:00 a.m.**, Join Zoom Meeting Link: <https://valleywater.zoom.us/j/92597340524>.

The meeting agenda and corresponding materials are located on our website: <https://www.valleywater.org/how-we-operate/committees/board-advisory-committees>



Water Conservation and Demand Management Committee Meeting

Join Zoom Meeting

<https://valleywater.zoom.us/s/92597340524>

Meeting ID: 925 9734 0524

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Dial by your location

+1 669 900 9128 US (San Jose)

Meeting ID: 925 9734 0524



Santa Clara Valley Water District Water Conservation and Demand Management Committee Meeting

Teleconference-via Zoom

Join Zoom Meeting:

<https://valleywater.zoom.us/j/92597340524>

REGULAR MEETING AGENDA

**Monday, January 24, 2022
11:00 AM**

District Mission: Provide Silicon Valley safe, clean water for a healthy life, environment and economy.

BOARD REPRESENTATIVES:
Director Nai Hsueh, Committee Vice
Chair
Director Barbara Keegan
Director Linda J. LeZotte, Committee
Chair

During the COVID-19 restrictions, all public records relating to an open session item on this agenda, which are not exempt from disclosure pursuant to the California Public Records Act, that are distributed to a majority of the legislative body, will be available to the public through the legislative body agenda web page at the same time that the public records are distributed or made available to the legislative body. Santa Clara Valley Water District will make reasonable efforts to accommodate persons with disabilities wishing to participate in the legislative body's meeting. Please advise the Clerk of the Board Office of any special needs by calling (408) 265-2600.

Mr. Vincent Gin
(Staff Liaison)

Ms. Glenna Brambill, (COB
Liaison)
Management Analyst II
gbrambill@valleywater.org
1-408-630-2408

Note: The finalized Board Agenda, exception items and supplemental items will be posted prior to the meeting in accordance with the Brown Act.

Santa Clara Valley Water District
Water Conservation and Demand Management Committee

REGULAR MEETING
AGENDA

Monday, January 24, 2022

11:00 AM

Teleconference-via Zoom

BY VIRTUAL TELECONFERENCE ONLY

Pursuant to California Government Code section 54953(e), this meeting will be held by teleconference only. No physical location will be available for this meeting; however, members of the public will be able to participate in the meeting as noted below.

In accordance with the requirements of Gov. Code Section 54954.3(a), members of the public wishing to address the Board/Committee at a video conferenced meeting, during public comment or on any item listed on the agenda, should use the "Raise Hand" tool located in the Zoom meeting link listed on the agenda, at the time the item is called. Speakers will be acknowledged by the Board Chair in the order requests are received and granted speaking access to address the Board.

Santa Clara Valley Water District (Valley Water) in complying with the Americans with Disabilities Act (ADA), requests individuals who require special accommodations to access and/or participate in Valley Water Committee meetings to please contact the Clerk of the Board's office at (408) 630-2711, at least 3 business days before the scheduled meeting to ensure that Valley Water may assist you.

This agenda has been prepared as required by the applicable laws of the State of California, including but not limited to, Government Code Sections 54950 et. seq. and has not been prepared with a view to informing an investment decision in any of Valley Water's bonds, notes or other obligations. Any projections, plans or other forward-looking statements included in the information in this agenda are subject to a variety of uncertainties that could cause any actual plans or results to differ materially from any such statement. The information herein is not intended to be used by investors or potential investors in considering the purchase or sale of Valley Water's bonds, notes or other obligations and investors and potential investors should rely only on information filed by Valley Water on the Municipal Securities Rulemaking Board's Electronic Municipal Market Access System for municipal securities disclosures and Valley Water's Investor Relations website, maintained on the World Wide Web at <https://emma.msrb.org/> and <https://www.valleywater.org/how-we-operate/financebudget/investor-relations>, respectively.

Under the Brown Act, members of the public are not required to provide identifying information in order to attend public meetings. Through the link below, the Zoom webinar program requests entry of a name and email address, and Valley Water is unable to modify this requirement. Members of the public not wishing to provide such identifying information are encouraged to enter "Anonymous" or some other reference under name and to enter a fictional email address (e.g., attendee@valleywater.org) in lieu of their actual address. Inputting such values will not impact your ability to access the meeting through Zoom.

Join Zoom Meeting:
<https://valleywater.zoom.us/j/92597340524>

Meeting ID: 925 9734 0524
One tap mobile
+16699009128,,92597340524# US (San Jose)

1. CALL TO ORDER:

1.1. Roll Call.

2. TIME OPEN FOR PUBLIC COMMENT ON ANY ITEM NOT ON THE AGENDA.

Notice to the Public: Members of the public who wish to address the Committee on any item not listed on the agenda should access the "Raise Hand" tool located in Zoom meeting link listed on the agenda. Speakers will be acknowledged by the Committee Chair in order requests are received and granted speaking access to address the Committee. Speakers comments should be limited to two minutes or as set by the Chair. The law does not permit Committee action on, or extended discussion of, any item not on the agenda except under special circumstances. If Committee action is requested, the matter may be placed on a future agenda. All comments that require a response will be referred to staff for a reply in writing. The Committee may take action on any item of business appearing on the posted agenda.

3. APPROVAL OF MINUTES:

3.1. Approval of Minutes.

[22-0075](#)

Recommendation: Approve the December 20, 2021, Meeting Minutes

Manager: Candice Kwok-Smith, 408-630-3193

Attachments: [Attachment 1: 12202021 WCaDMC DRAFT Mins](#)

Est. Staff Time: 5 Minutes

4. ACTION ITEMS:

- 4.1. Monthly update on progress towards Valley Water Resolution 21-68's water use reduction target and water conservation efforts related to the drought emergency. [22-0076](#)
- Recommendation: Receive an update on progress towards meeting the Board's call for water use reduction in response to the water shortage emergency condition and water conservation efforts relevant to the overall drought emergency response and provide feedback to staff.
- Manager: Kirsten Struve, 408-630-3138
- Attachments: [Attachment 1: PowerPoint Presentation](#)
[Attachment 2: December Drought Response Report](#)
- Est. Staff Time: 15 Minutes
- 4.2. Agricultural Water Use Baseline Study Update. [22-0077](#)
- Recommendation: This is an information only item and no action is required, however, the committee may provide recommendations to the Board related to the Agricultural Water Use Baseline Study.
- Manager: Kirsten Struve, 408-630-3138
- Attachments: [Attachment 1: Powerpoint](#)
- Est. Staff Time: 15 Minutes
- 4.3. Flood-Managed Aquifer Recharge Preliminary Feasibility Study for Santa Clara County. [22-0078](#)
- Recommendation: This is an information only item and no action is required.
- Manager: Kirsten Struve, 408-630-3138
- Attachments: [Attachment 1: Powerpoint Flood](#)
- Est. Staff Time: 15 Minutes

4.4. Standing Items Report.

[22-0079](#)

- Recommendation:
- A. This agenda item allows the Committee to receive verbal or written updates and discuss the below subjects. These items are generally informational; however, the Committee may request additional information from staff:
 - B. This is informational only and no action is required. *Staff may provide a verbal update at the 1/24/2022, meeting if there is reportable/updated information.*
 - 1. Sustainable Groundwater Management Act (SGMA)
 - 2. Flood MAR (*separate agenda item 1/24/2022*)
 - 3. Agricultural Water Use Baseline Study (*separate agenda item 1/24/2022*)

Manager: Candice Kwok-Smith, 408-630-3193

Est. Staff Time: 5 Minutes

4.5. Review Water Conservation and Demand Management Committee Work Plan, the Outcomes of Board Action of Committee Requests; and the Committee's Next Meeting Agenda.

[22-0080](#)

Recommendation: Review the Committee work plan to guide the committee's discussions regarding policy alternatives and implications for Board deliberation.

Manager: Candice Kwok-Smith, 408-630-3193

Attachments: [Attachment 1: WCaDMC Work Plan](#)

Est. Staff Time: 5 Minutes

5. CLERK REVIEW AND CLARIFICATION OF COMMITTEE REQUESTS.

This is an opportunity for the Clerk to review and obtain clarification on any formally moved, seconded, and approved requests and recommendations made by the Committee during the meeting.

6. ADJOURN:

6.1. Adjourn to Regular Meeting at 11:00 a.m., on February 28, 2022.



Santa Clara Valley Water District

File No.: 22-0075

Agenda Date: 1/24/2022
Item No.: 3.1.

COMMITTEE AGENDA MEMORANDUM

Water Conservation and Demand Management Committee

SUBJECT:

Approval of Minutes.

RECOMMENDATION:

Approve the December 20, 2021, Meeting Minutes

SUMMARY:

A summary of Committee discussions, and details of all actions taken by the Committee, during all open and public Committee meetings, is transcribed and submitted for review and approval.

Upon Committee approval, minutes transcripts are finalized and entered into the District's historical records archives and serve as historical records of the Committee's meeting.

ATTACHMENTS:

Attachment 1: 12202021 WCaDMC Draft Minutes

UNCLASSIFIED MANAGER:

Candice Kwok-Smith, 408-630-3193



WATER CONSERVATION AND DEMAND MANAGEMENT COMMITTEE MEETING

DRAFT MINUTES

**MONDAY, DECEMBER 20, 2021
11:00 AM**

A regular scheduled meeting of the Water Conservation and Demand Management Committee was held on December 20, 2021, via zoom in San Jose, California.

1. CALL TO ORDER

Committee Chair Director Linda J. LeZotte called the meeting to order at 11:01 a.m.

1.1. ROLL CALL

Committee Board Members in attendance were: Committee Vice Chair, Director Nai Hsueh (District 5), Director Barbara Keegan (District 2), Committee Chair, Director Linda J. LeZotte (District 4) establishing a quorum.

Staff members in attendance were: Joseph Aranda, Meghan Azralon, Neeta Bijoor, Glenna Brambill, Justin Burks, Keila Cisneros, Vanessa De La Piedra, Phil Dolan, Melissa Fels, Paola Giles, Vincent Gin, Andy Gschwind, Bassam Kassab, Candice Kwok-Smith, Jim McCann, Carlos Orellana, Colin Resch, Metra Richert, Don Rocha, Ashley Shannon, and Kirsten Struve,

Guest Agencies in attendance were: Michael Bolzowski (California Water Service Company), Anthony Eulo (City of Morgan Hill), Tim Guster (Great Oaks Water Company), Kurt Elvert, Curt Rayer, and Bill Tuttle (San Jose Water Company-SJWC).

Public in attendance was: Hon. Jim Beall, Christophe LaBelle, William (Bill) Sherman, and Hon. John L. Varela (Valley Water Board Member, District 1).

2. TIME OPEN FOR PUBLIC COMMENT ON ANY ITEM NOT ON AGENDA

There was no one present who wished to speak.

3. APPROVAL OF MINUTES

3.1 APPROVAL OF MINUTES

It was moved by Director Barbara Keegan, seconded by Director Nai Hsueh, and carried by roll call and unanimous vote, to approve the minutes of the November 22, 2021, Water Conservation and Demand Management Committee meeting as presented.

4. ACTION ITEMS

4.1 MONTHLY UPDATE ON PROGRESS TOWARDS VALLEY WATER RESOLUTION 21-68'S WATER USE REDUCTION TARGET AND WATER CONSERVATION EFFORTS RELATED TO THE DROUGHT EMERGENCY

Ms. Neeta Bijoor reviewed the materials as outlined in the agenda items.

The Water Conservation and Demand Management Committee discussed the following: Valley Water's process in securing water, continued drought plans, surface water recommendation plan, possible future actions, engage with water retailers (invited to the January 25, 2022, Board meeting) feeling of penalization for those already conserving, public outreach campaigns, and complaints on water wasters or high-water users.

Public Questions/Comments:

- Mr. Bill Tuttle (San Jose Water Company-SJWC) what is considered the rainfall associated with medium or dry conditions? Does normal rainfall at year-end correspond to medium or dry (conditions), and is scenario 1 equaled to medium conditions or scenario 2 with dry conditions?
- Mr. Anthony Eulo (City of Morgan Hill) the rainfall chart includes demand reduction of 10% is below what Valley Water calls for and what has been called for in the past, does the scenario change if at 15% or 20%? Going after high-water users can be labor intensive.

Mr. Vincent Gin, Mr. Bassam Kassab, and Ms. Kirsten Struve were available to answer questions.

The Water Conservation and Demand Management Committee took no action.

4.2 STANDING ITEMS REPORT

Committee Chair Director Linda J. LeZotte reviewed the materials as outlined in the agenda items.

Ms. Vanessa De La Piedra reported on the following:

- The 2021 Groundwater Management Plan of the Santa Clara and Llagas subbasins was filed December 17, 2021, with DWR as Valley Water's five-year update to our approved alternative plan. Looks like we were first to submit.
- DWR will post to website within 20 days for public comment period and stakeholders will be contacted for input.
- Groundwater Sustainability Plan (GSP) for the north San Benito subbasin will be submitted by January 31, 2022, deadline.
- Thanks to the Committee for supporting the SGMA Plans and for the stakeholders' engagement.

The Committee thanked staff for being a continued leader in groundwater management.

Ms. Metra Richert reported on the following:

Flood-MAR:

- Completing first year of work with the UC Water team
- Significant progress has been made on developing the GIS-based tool that will help identify potential areas that may be feasible for Flood-MAR projects in SCC, includes compiling and processing all needed spatial datasets related to soils, groundwater, land use, and hydrology.
- Three workshops were held with Valley Water & UC Water Team to better understand how flood-MAR can be implemented in SCC.
- 2022 work includes:
 - a. Completion of the GIS-based tool,
 - b. Utilizing the GIS tool to identify the potential pilot site, and
 - c. Conducting detailed evaluations of institutional needs and potential participation incentives for the Flood-MAR pilot project in SCC.

Ag Baseline Water Use Study:

- Valley Water Staff is working with UC Merced.
- In the final stages of gathering spatial datasets and ground-truthing spatial data by driving by farms throughout SCC, and next steps include analyzing the spatial datasets and developing recommendations.
- UC Merced will present an update on their work to Water Conservation and Demand Management Committee and the Agricultural Water Advisory Committee in January 2022.

The Water Conservation and Demand Management Committee took no action.

The Committee thanked staff for a successful 2021 in accomplishing many of the projects and programs.

4.3 REVIEW WATER CONSERVATION AND DEMAND MANAGEMENT COMMITTEE WORK PLAN, THE OUTCOMES OF BOARD ACTION OF COMMITTEE REQUESTS; AND THE COMMITTEE'S NEXT MEETING AGENDA

Ms. Glenna Brambill and Ms. Kirsten Struve reviewed the materials as outlined in the agenda items.

Committee Vice Chair Director Nai Hsueh requested that work plan item #10 be separated into 3 separate items.

Agenda Items for next meeting:

Monthly Drought Information, Flood MAR, Agricultural Water Use Baseline Study and Standing Items Report.

The Committee confirmed the next regularly scheduled meeting on Monday, January 24, 2022, at 11:00 a.m.

5. CLERK REVIEW AND CLARIFICATION OF COMMITTEE'S REQUESTS

Ms. Glenna Brambill stated there was no action item for Board consideration.

6. ADJOURNMENT

Committee Chair Director Linda J. LeZotte adjourned at 12:12 p.m., to the next regularly scheduled meeting Monday, January 24, 2022, 11:00 a.m.

Glenna Brambill
Board Committee Liaison
Office of the Clerk of the Board

Approved:



Santa Clara Valley Water District

File No.: 22-0076

Agenda Date: 1/24/2022

Item No.: 4.1.

COMMITTEE AGENDA MEMORANDUM

Water Conservation and Demand Management Committee

SUBJECT:

Monthly update on progress towards Valley Water Resolution 21-68's water use reduction target and water conservation efforts related to the drought emergency.

RECOMMENDATION:

Receive an update on progress towards meeting the Board's call for water use reduction in response to the water shortage emergency condition and water conservation efforts relevant to the overall drought emergency response and provide feedback to staff.

SUMMARY:

On June 9, 2021, the Valley Water Board of Directors declared a water shortage emergency condition pursuant to California Water Code §350, called for water use reduction of 15% compared to 2019, and urged the County of Santa Clara to proclaim a local emergency. The County adopted a Resolution ratifying the proclamation of a local emergency due to the drought on June 22, 2021.

Despite rains received since October 2021, Santa Clara County remains in drought. The U.S. Drought Monitor Report from January 4, 2021, indicates that the majority of the County is in severe drought, and the northeastern portion of the County is in extreme drought. The northern Sierra Nevada snowpack, a primary source of imported water, has shown improvement and as of January 10, 2022, it was above normal for this date.

Reflecting critically dry conditions across the state, the Central Valley Project and State Water Project drastically reduced imported water allocations in 2021, which typically comprise half of Valley Water's annual water supply. An additional Central Valley Project Municipal and Industrial Public Health and Safety increment of 28,500 acre-feet (AF) was delivered by December 2021. In 2021, Valley Water secured agreements for about 58,000 AF of emergency transfer supplies (not considering conveyance losses) and recovered approximately 35,000 AF from its Semitropic Groundwater Bank.

On December 1, 2021, the California Department of Water Resources (DWR) issued a Notice to State Water Project Contractors stating that the initial 2022 State Water Project allocation will be based on unmet minimum human health and safety needs. Valley Water submitted a request for human health and safety water in December 2021 and is currently working with DWR to confirm the specific quantity allocated. Valley Water has also begun negotiating additional purchases of emergency transfer water in 2022 if conditions continue to be dry.

While seasonal recovery has begun to stabilize or increase groundwater levels in many areas of the

county, groundwater levels continue to decline due to the drought in some areas. Emergency imported water supplies and water use reduction by the community have helped slow groundwater level declines. However, if dry conditions continue and the Board's water use reduction target is not met consistently, projected 2022 groundwater storage is similar to what was observed in 2014. This would increase the risk in 2022 of resumed subsidence in North County and wells going dry, particularly in South County. In South County, groundwater is the only drinking water supply.

Consequently, water conservation is an important strategy to help alleviate these negative impacts.

Water Conservation Outreach

Valley Water provides multi-language radio, TV, digital and social media ads to increase conservation and promote the purified water program. Media continues to be interested in the drought and recent storms. Valley Water Board members and staff are highlighting to the media the importance of continuing to conserve water despite substantial rainfall from recent storms.

Valley Water partnered with the City of Sunnyvale to run an ad from our Purified Water & Conservation campaign in two movie theaters. Staff is exploring partnerships with other cities to run similar ads in their movie theaters. On social media, Valley Water continued to provide drought and conservation messaging. Efforts included a series of posts to remind people to turn off their outdoor irrigation before, during and after storms, and an animation with outdoor watering tips. Valley Water also shared a social media graphic to share the news that Santa Clara County reached its conservation goal of 15% reduction in water use in October and November. This post saw the highest engagement of all December posts without additional monetary boosting. Valley Water continues to share water conservation tips, tools, rebates, and programs on our social media pages, including the Sustainable Landscape Guide.

A Summer 2021 Conservation Campaign Report was completed for the media and outreach campaign to quantify impressions, the number of times content is displayed. The report states that the campaign resulted in over 46 million impressions, indicating a successful campaign.

There were two Speakers Bureau Program presentations focused on the drought, water conservation, and water supply in December 2021. On December 10, Vice Chair Kremen and staff presented to Leadership Sunnyvale as part of that group's Special District Day. On December 16, Director Varela and staff provided an in-person presentation to the Sons in Retirement group in Gilroy. Director Kremen presented to the Evergreen Islamic Center on December 11, 2021 on Valley Water's conservation efforts, an event that was funded through Valley Water's Mini-Grants Program.

Valley Water continues water conservation outreach to the agricultural community. Through the Board's Agricultural Water Advisory Committee, Valley Water and local farmers discuss relevant issues, including water supply conditions and agricultural water use. Director John Varela meets regularly with the Farm Bureau Board of Directors on current issues and opportunities for collaboration, while also providing presentations on the water conservation programs Valley Water offers to the agriculture and farming community. Director Richard Santos joined Director Varela in periodic meetings with the Executive Director of the Farm Bureau and members of his Executive Board during fall and winter of 2021. Valley Water also promotes our agricultural water conservation

programs in Farm Bureau newsletters. Valley Water mailed letters to all agricultural groundwater pumpers in July 2021 with information on the Board's call for water use reduction and our agricultural water conservation programs. Valley Water plans to send another round of letters prior to spring to reinforce the need for water use reduction and to encourage water-efficient practices and participation in our conservation programs.

Water Conservation Programs

Valley Water has received a significant increase in applications for our landscape rebates, requests for water-saving devices, and reports of water waste in 2021. In December, Valley Water received 106 applications for the Landscape Rebate Program, 452 orders for water-efficient devices from our website, and 82 water waste reports. These are signs that people are taking this drought seriously and are taking actions to support water use reduction.

Valley Water is implementing strategies to address the high levels of applications and the wait time for a Landscape Rebate Program pre-inspection has been reduced to approximately a week now, which is a significant accomplishment. A new vendor is assisting to provide labor-intensive pre-inspections and expedite processing.

Countywide Water Use Reduction

Valley Water is engaging with retailers and cities to encourage drought response actions. As of January 10, 2022, the County of Santa Clara and 13 cities in Santa Clara County have taken Board of Supervisor/Council action in response to the extreme drought conditions and to Valley Water's call to reduce water use by 15% compared to 2019 levels. Cities that have not yet taken formal Council action still recognize the current drought conditions and have provided information on Valley Water's water conservation rebates and programs on their websites to encourage water use reduction.

After months of progress, Santa Clara County met Valley Water's call to reduce water use by 15% compared to 2019. Valley Water's retailers used 20% less water in November 2021 compared to November 2019. The call was first achieved in October 2021. Rain received in October and November may have helped in achieving the call. Rain often results in a decrease in outdoor water use. Valley Water anticipates that consistently maintaining a 15% reduction in water use each month will be challenging. Valley Water continues its outreach to the media and community to encourage residents, businesses, farms, and others to continue to save water.

ATTACHMENTS:

Attachment 1: PowerPoint

Attachment 2: December 2021 Drought Response Report

UNCLASSIFIED MANAGER:

Kirsten Struve, 408-630-3138



Monthly Drought Emergency Response and Water Supply Update

Water Conservation and Demand Management Committee Meeting

January 24, 2022

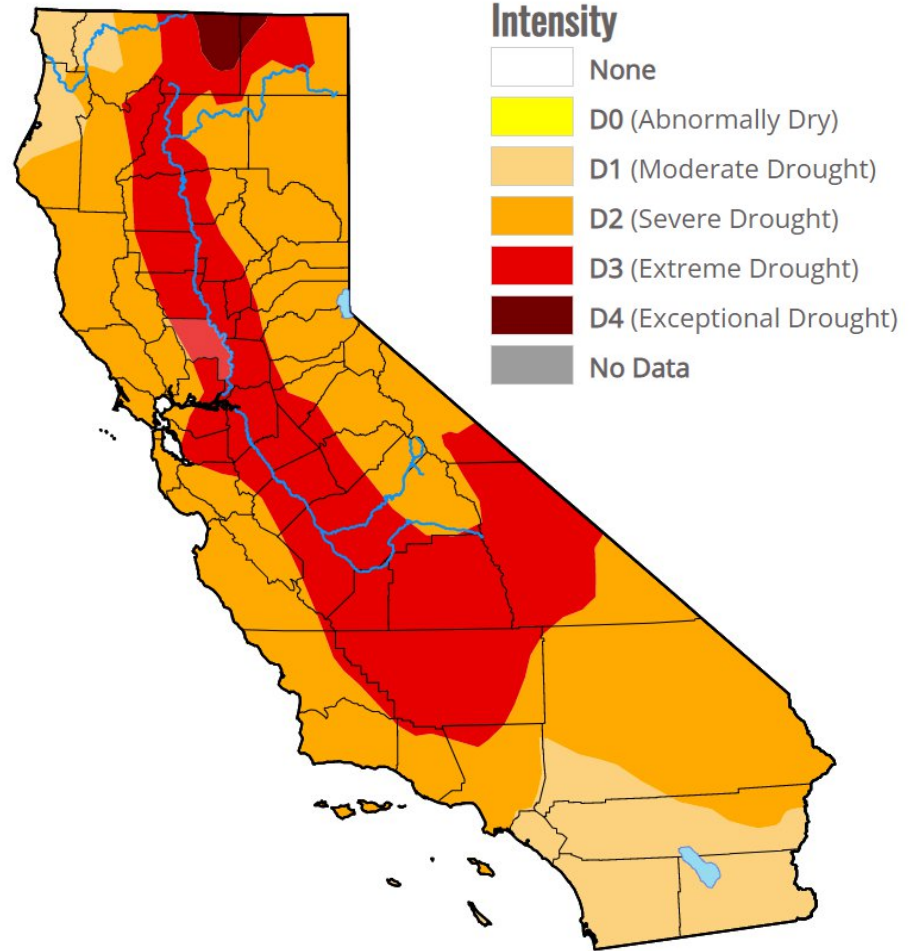
Presenter: Neeta Bijoor, Ph.D.



Drought Status

- Severe/Extreme drought
- Local reservoirs levels increased slightly
- State snowpack improved

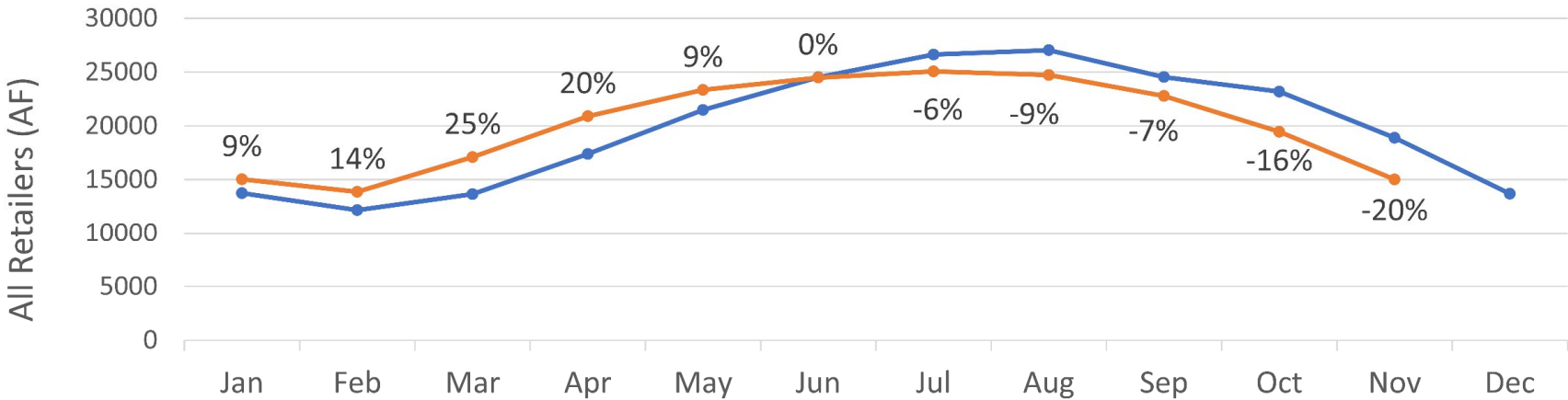
Data sources: U.S. Drought Monitor, California DWR



Valley Water's water savings call was achieved in November

— 2019 — 2021

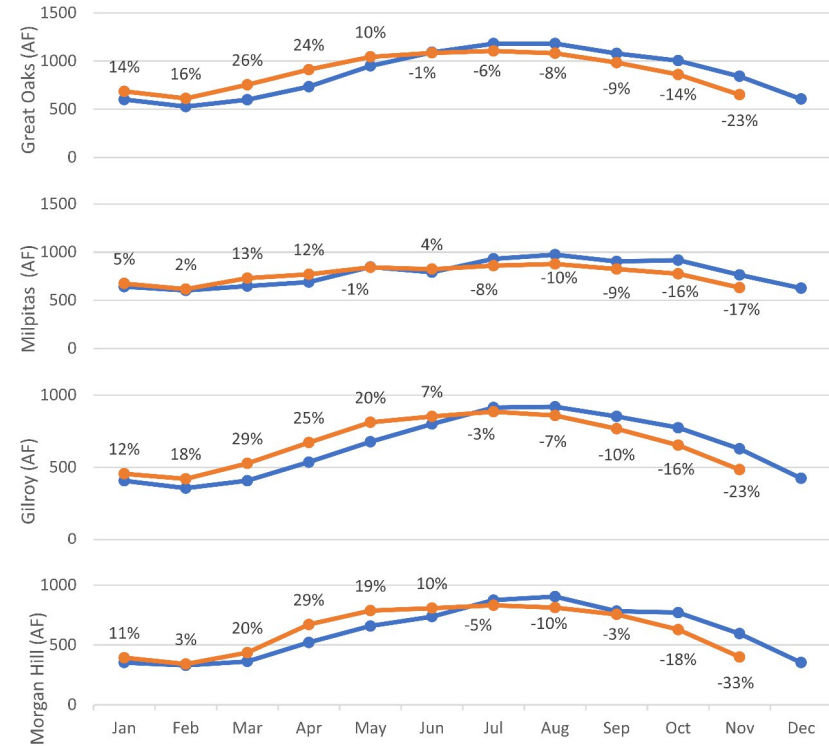
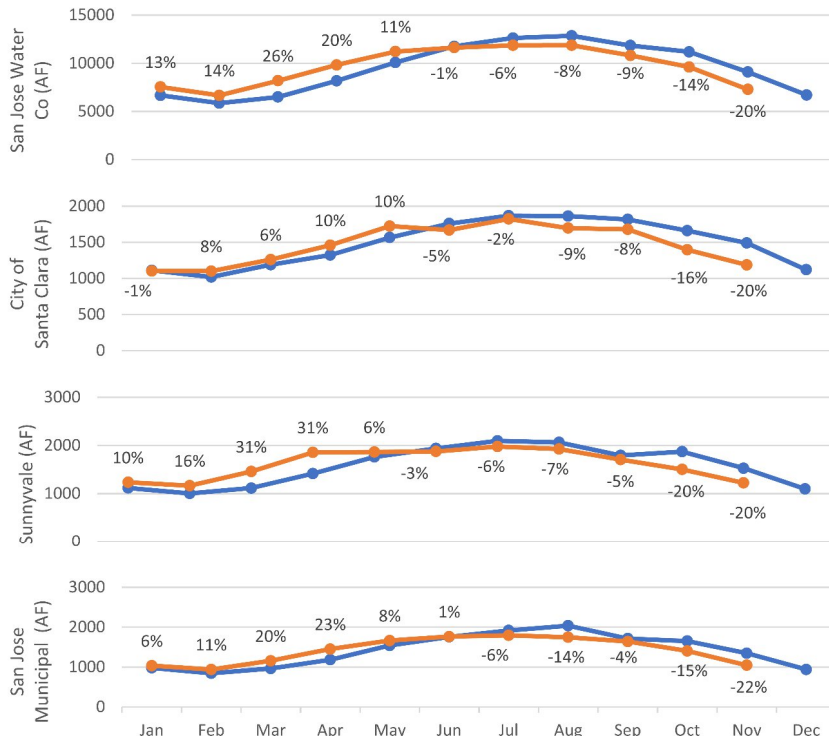
The percent increase (+) or percent decrease (-) in water use from 2019 to 2021 is shown for each month.



Retailer Progress in Water Use Reduction

2019 2021

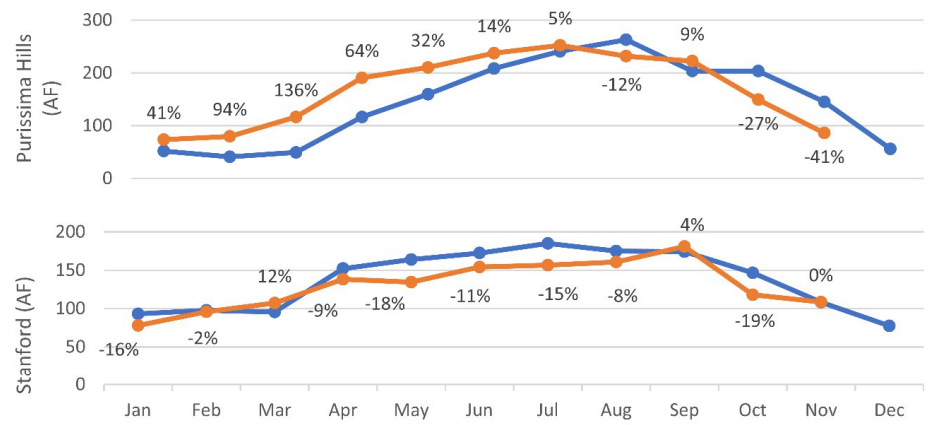
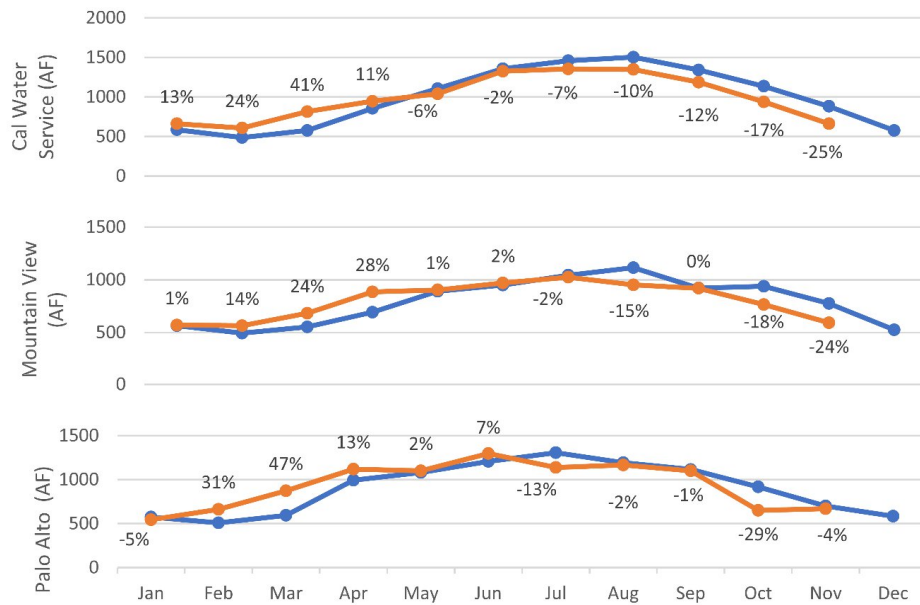
The percent increase (+) or percent decrease (-) in water use from 2019 to 2021 is shown for each month.



Retailer Progress in Water Use Reduction (cont'd)

2019 2021

The percent increase (+) or percent decrease (-) in water use from 2019 to 2021 is shown for each month.

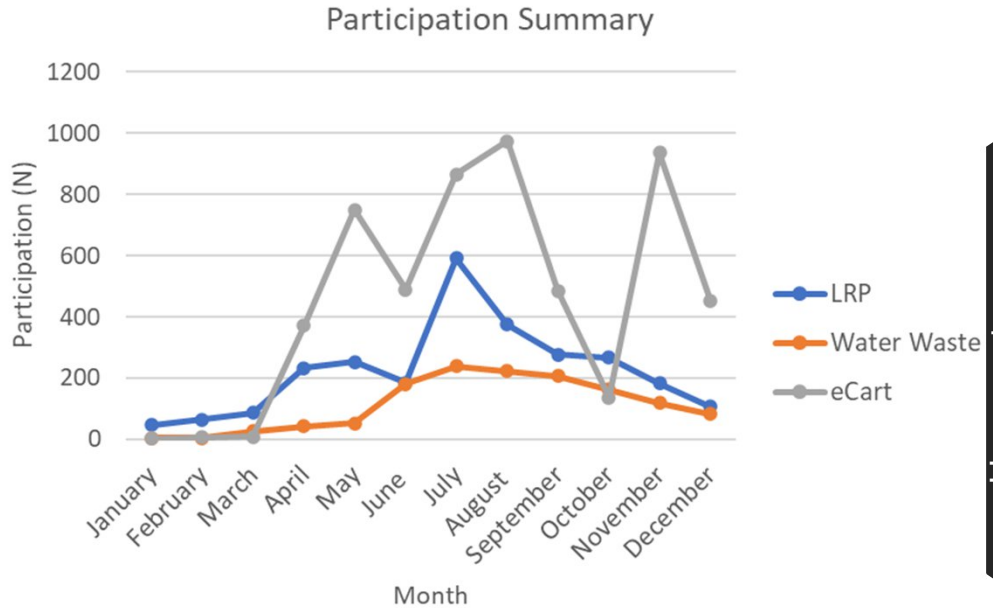


Collaboration

- Council action or administrative measures by County of Santa Clara and 13 cities
- Partnership with the County of Santa Clara and Office of Sustainability

Water Conservation

- Increased program participation
- Reduced application processing time
- Information on programs in Farm Bureau newsletters
- Meetings with Farm Bureau
- Letters to the agricultural community



Drought and Conservation Public Outreach

Media campaign and outreach

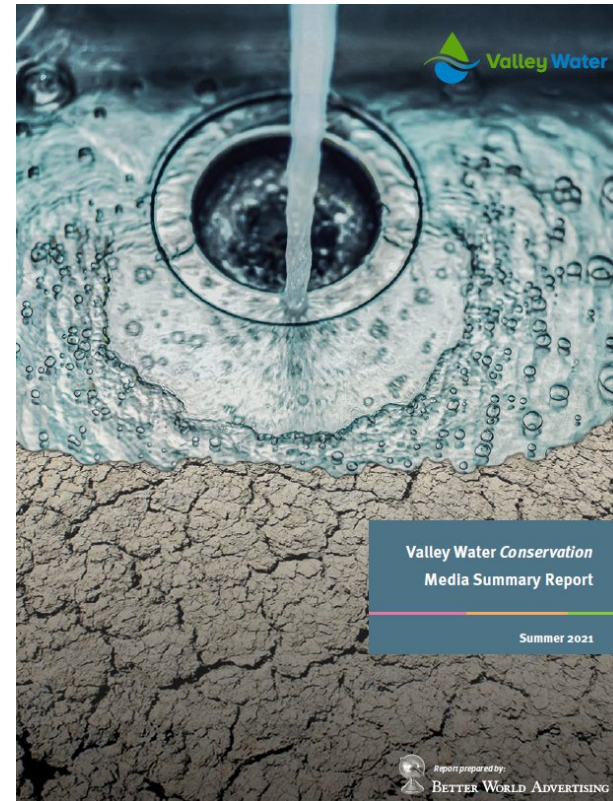
Summer 2021 Conservation Campaign Report

- 46,173,113 Impressions

Speakers Bureau outreach

Youth Commission

Education



Purified Water Campaign

- Retailer Partnership
- TV Commercials
(<https://beheard.valleywater.org/drought-information>)
- NBC and Telemundo Segments
(https://beheard.valleywater.org/purifiedwaterproject/news_feed/what-is-purified-water)
- Influencer Campaign



Purified Water Advertisement

10



valleywater.org



QUESTIONS



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Drought Emergency Response Report

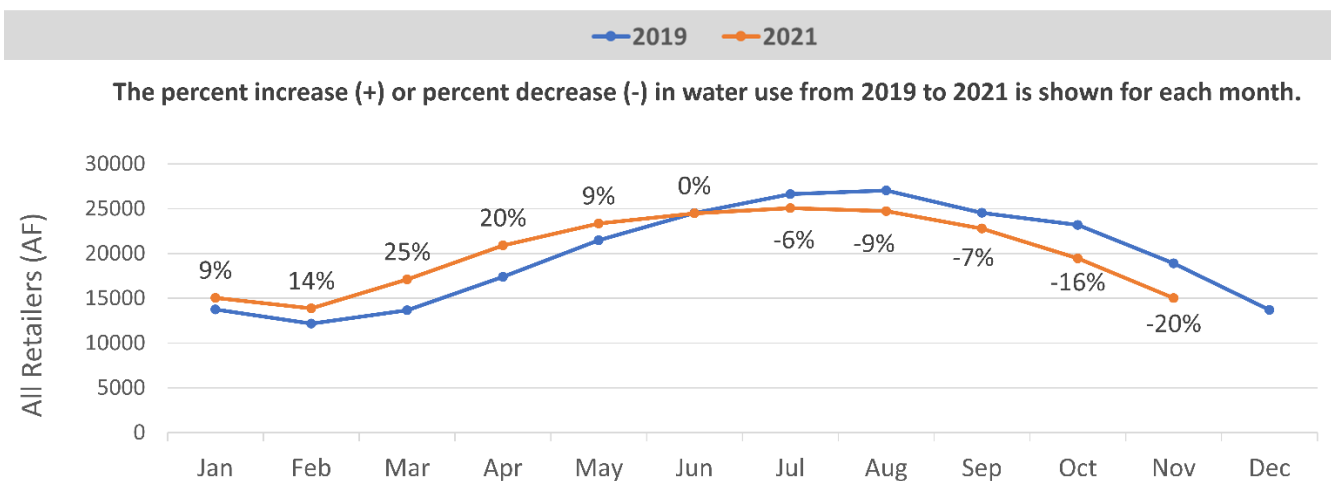
DECEMBER 2021

Resolution 21-68 Implementation

On June 9, 2021, the Board adopted Valley Water Resolution 21-68 which declared a water shortage emergency condition pursuant to California Water Code §350, called for water use reduction of 15% compared to 2019, and urged the County of Santa Clara (County) to proclaim a local emergency. The County adopted a Resolution ratifying the proclamation of a local emergency due to the drought on June 22, 2021. California’s Governor included Santa Clara County as part of a drought emergency proclamation on July 8, 2021, and this proclamation included all California counties on October 19, 2021. Valley Water activated its Emergency Operations Center (EOC) on June 16, 2021 to assist with resolution implementation and other drought-related efforts.

Retailer Water Use Reduction

The graph below depicts total water use from the 13 retailers in Santa Clara County to help track progress towards achieving Valley Water’s 15% call for water use reduction made in June 2021.



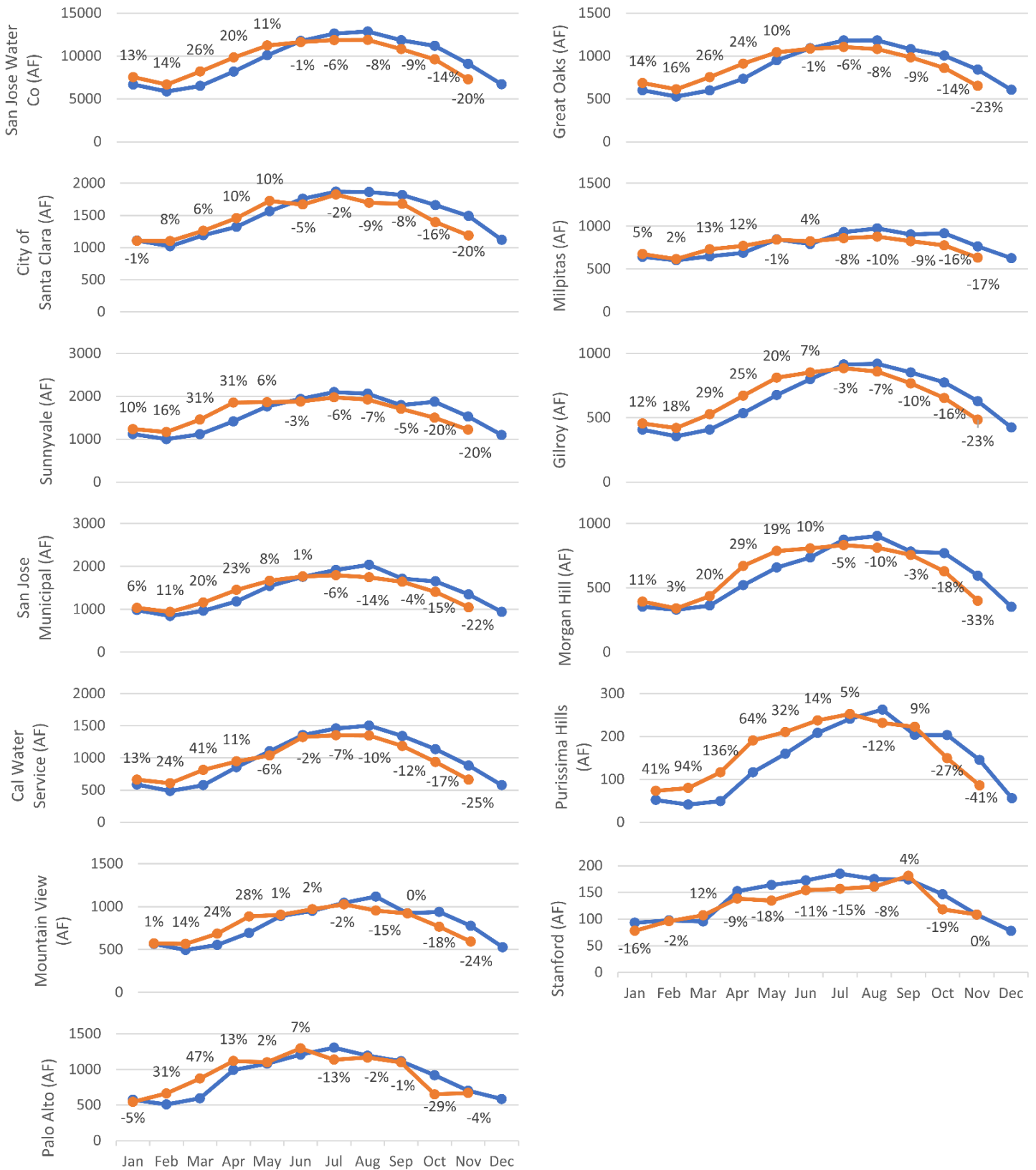
- After months of progress, Santa Clara County met Valley Water’s call to reduce water use by 15% compared to 2019. Valley Water’s retailers used 20% less water in November 2021 compared to November 2019.
- Valley Water’s retailers first met this call in October 2021. They used 16% less water in October 2021 compared to October 2019.
- We thank jurisdictions and the community for helping us achieve the goal of a 15% reduction in water use countywide.
- Rains received in October and November may have helped us reach our goal. Rain often results in a decrease in outdoor water use.
- Based on data from the past drought, we know that savings tend to fluctuate month to month and may be lower in winter months due to decreased irrigation, so we do anticipate that consistently maintaining a 15% reduction in water use each month will be challenging.
- We encourage our communities to keep up the great work in using less water during this drought.
- Valley Water continues its outreach to the media and community to encourage residents, businesses, farms, and others to save water in order to achieve a cumulative 15% reduction in water use in 2022.

These graphs depict water use by each of Valley Water’s 13 retailers to help track progress towards achieving the 15% call for water use reduction made in June 2021. Note that City of Palo Alto Utilities (Palo Alto) and Purissima Hills Water District (Purissima) normally do not use Valley Water sources of water. A large proportion of water used by the City of Mountain View Public Works (Mountain View) and Stanford Utilities (Stanford) is not from Valley Water sources.

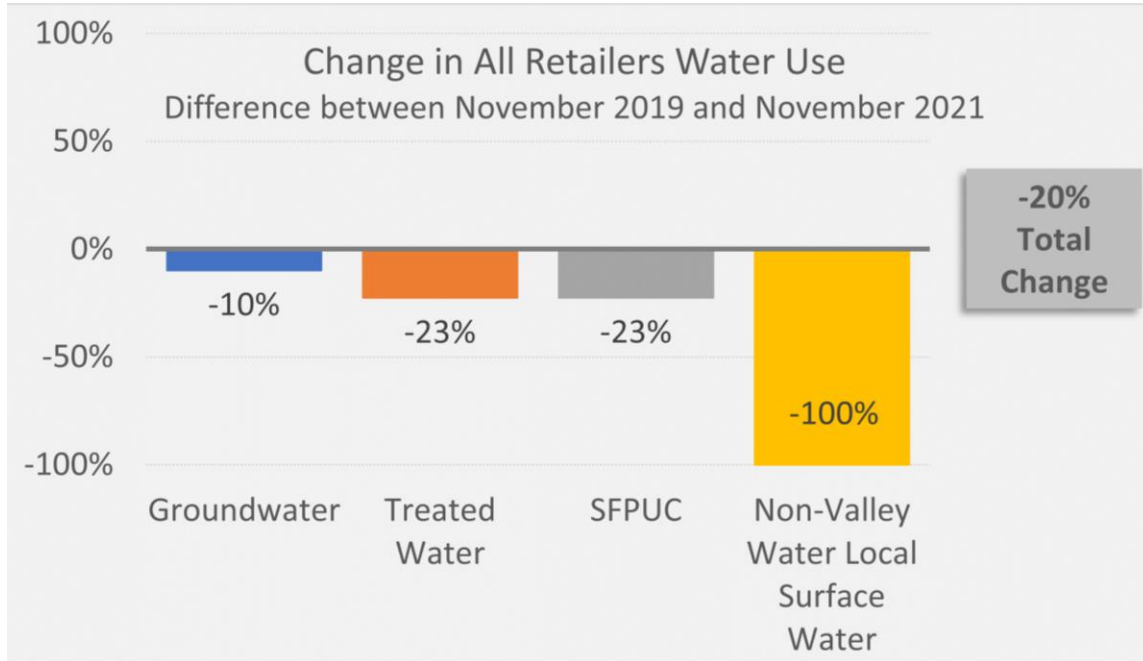
Monthly Water Use by Retailer (AF)

— 2019 — 2021

The percent increase (+) or percent decrease (-) in water use from 2019 to 2021 is shown for each month.



The graph below depicts changes between the retailers' different types of water use and shows that Valley Water retailers' total water use in November 2021 was 20% lower than in November 2019. As expected, the proportion of groundwater use tends to increase during drought.



The table below shows Valley Water retailers' water usage volumes by type.

Water Retailer	Total Water Use in Acre-Feet (Jan - Nov 2019)					Total Water Use in Acre-Feet (Jan - Nov 2021)				
	Groundwater	Treated Water	SFPUC	Non-Valley Water Local Surface Water	SUM	Groundwater	Treated Water	SFPUC	Non-Valley Water Local Surface Water	SUM
San Jose Water Company	28,800	61,900	-	16,000	106,600	50,000	55,700	-	800	106,500
Santa Clara, City	9,300	4,100	3,200	-	16,700	9,200	3,500	3,400	-	16,100
Sunnyvale	100	7,400	10,200	-	17,700	100	8,200	9,500	-	17,800
San Jose Municipal Water	900	10,600	4,500	-	15,900	1,000	10,400	4,200	-	15,600
California Water Service	2,300	9,000	-	-	11,300	4,000	6,900	-	-	10,900
Palo Alto	-	-	10,200	-	10,200	-	-	10,300	-	10,300
Mountain View	200	1,000	7,800	-	8,900	100	900	7,800	-	8,800
Great Oaks	9,800	-	-	-	9,800	9,800	-	-	-	9,800
Milpitas	-	3,000	5,700	-	8,700	-	3,200	5,200	-	8,400
Gilroy	7,300	-	-	-	7,300	7,400	-	-	-	7,400
Morgan Hill	6,900	-	-	-	6,900	6,900	-	-	-	6,900
Purissima Hills Water	-	-	1,700	-	1,700	-	-	1,900	-	1,900
Stanford	-	-	1,600	-	1,600	-	-	1,400	-	1,400
Total	65,600	97,000	44,900	16,000	223,300	88,500	88,800	43,700	800	221,800

Collaboration with the County, Retailers, and Cities

- As of December 31, 2021, the County of Santa Clara and 13 cities in Santa Clara County have taken formal action to their elected boards in response to the drought conditions and to Valley Water's call to reduce water use by 15% compared to 2019 levels.
- At the December 9, 2021, Housing, Land Use, Environment and Transportation Committee (HLUET) Committee for the County of Santa Clara, the HLUET Committee unanimously adopted the Drought and Water Conservation Report presented by the Office of Sustainability and provided direction for the Administration to develop a programmatic and infrastructure plan for water conservation. County staff will explore opportunities and partnerships with agencies like Valley Water for expanded County conservation measures. Valley Water staff is working closely with County staff on this effort, and on December 15, 2021, staff from the County Office of Sustainability participated in Valley Water's Drought Response Plan Task Force meeting.
- As of December 14, 2021, Cal Water's Stage 2 water use restrictions are in place.

Water Conservation Programs

Valley Water is actively promoting ways people can save water through rebates, free water-saving devices, and behaviors. The Landscape Rebate Program provides rebates for converting high-water use landscape to low-water use landscape, as well as retrofitting existing irrigation equipment with approved high-efficiency irrigation equipment. The Shopping Cart (eCart) Program offers free water-saving devices to homes and businesses. The Water Waste Program

enables callers to confidentially report water waste and leaks, which Valley Water addresses by providing educational assistance to the owner of the leak.

- Valley Water has received a significant increase in applications for our landscape rebates, requests for water-saving devices, and reports of water waste in 2021. The table below shows monthly participation data available from 2021. In December, Valley Water received 106 applications for the Landscape Rebate Program (LRP), 452 orders for water-efficient devices from our website, and 82 water waste reports. These are signs that people are taking this drought seriously and are taking actions to support water use reduction.

Program	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Landscape Rebate Program Applications¹	47	64	87	233	252	185	592	376	278	268	182	106	2,670
Water-saving Device Orders²	2	7	9	372	748	488	865	974	485	175	935	452	5,512
Water Waste Reports	5	4	26	42	53	180	238	223	206	163	118	82	1,340

¹Starting July 1, 2021, the landscape rebate was increased from \$1 to \$2 per square foot and the maximum rebate was increased from \$2,000 to \$3,000 for single-family homes.

²The eCart Program, launched in April, led to an increase in conservation device orders.

Drought and Water Conservation Outreach

- In December, multi-language radio, TV, digital and social media ads highlighted Valley Water’s effort to increase conservation and expand our county’s use of purified water.
- Media continues to be interested in the drought and recent storms. Valley Water board members and staff highlighted to the media the importance of continuing to conserve water despite substantial rainfall from recent storms.
- Valley Water partnered with the City of Sunnyvale to run an ad from our Purified Water & Conservation campaign in two movie theaters. Based on availability, Sunnyvale would like to continue this same form of advertising in March using our “Is your yard drought ready?” and “Is your home drought ready?” commercials. Staff is exploring partnerships with other cities to run similar ads in their movie theaters.
- On social media, Valley Water continued to provide drought and conservation messaging. Efforts included a series of posts to remind people to turn off their outdoor irrigation before, during and after storms, and an animation with outdoor watering tips. Valley Water also shared a social media graphic to share the news that Santa Clara County reached its conservation goal of 15% reduction in water use in October and November. This post saw the highest engagement of all posts in December without additional monetary boosting.
- There were two Speakers Bureau Program presentations focused on the drought, water conservation, and water supply in December 2021. On Dec. 10, Vice Chair Kremen and staff presented to Leadership Sunnyvale as part of that group’s Special District Day. On Dec. 16, Director Varela and staff provided an in-person presentation to the Sons in Retirement group in Gilroy.
- Director Kremen presented to the Evergreen Islamic Center on December 11, 2021 on Valley Water’s conservation efforts. The seminar was funded through Valley Water’s Mini-Grants Program.
- Valley Water continues to share water conservation tips, tools, rebates, and programs on our social media pages, including the Sustainable Landscape Guide.

Statistics for public outreach efforts are shown below.

Outreach Type	December 2021
Social Media¹	
Impressions ²	2,420,642
Engagements ³	22,306
Link Clicks	13,626
Video Views	210,032
Website Page Views	
Water conservation webpages	17,116
BeHeard.ValleyWater.org/drought-information	179
Media	
Media Mentions ⁴	705

Speakers Bureau	
Presentations ⁵	2

¹Includes Facebook, Twitter, Instagram, and LinkedIn

²Impressions are the number of times a post is displayed in a newsfeed.

³Engagements are the number of times a user interacts with a post, such a retweet, click, and more.

⁴Includes TV, radio, social media, online and print

⁵ Office of Communications and Government Relations

Drought and Water Conservation Education

- In December, the Education Outreach team reached 295 students through 15 virtual classroom presentations. The team also supported 15 educators this month. The team engaged 67 members of the public through three Wonders of Water Wednesdays after-school enrichment programs and two public library programs.

Program	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Educators/Teachers	52	19	93	8	20	24	37	15
Classes/Groups	58	18	27	8	11	24	45	15
Students	1,483	415	499	99	292	586	770	295

- Additionally, in December, staff worked with the Valley Water Youth Commission to develop a “Youth Drought Messaging Toolkit” to promote the importance of water conservation to Santa Clara County youth.

Committee Updates

- Drought-related updates are being provided regularly at Committee meetings to receive feedback and guidance. These updates were provided to the Water Conservation and Demand Management Committee on December 20, 2021.

Water Supply Operations and Outlook

On December 28, 2021, the U.S. Drought Monitor indicated an improvement in drought status for Santa Clara County, with the majority of the county in Severe drought and the northeastern portion in Extreme drought. Following rainfall from October - December 2021, local reservoir storage increased by 16%. Local reservoir storage was 28% of capacity on December 31, 2021 and remains below average (66% of the 20-year average).

Imported Water

- State Water Project (SWP) and Central Valley Project (CVP) allocations for 2021 remained stable at the following:
 - SWP – 5%
 - CVP Agricultural - 0%
 - CVP Municipal and Industrial (M&I) – 25%
- An additional CVP M&I Public Health and Safety increment of 28,500 AF was delivered by the end of December 2021.
- In 2021, Valley Water secured agreements for about 58,000 AF of emergency transfer supplies, before taking into account conveyance losses across the Delta. The California Department of Water Resources (DWR) and the U.S Bureau of Reclamation (Reclamation) successfully conveyed all of Valley Water’s emergency transfer supplies in September and October 2021. Some of this water is currently being delivered to Valley Water and a portion is being stored in San Luis Reservoir for delivery in 2022. Valley Water is now exploring opportunities to secure additional emergency transfer supplies in 2022, if necessary.
- In addition, recovery of Valley Water’s supplies at the Semitropic Groundwater Storage Bank continue as scheduled with Valley Water regularly coordinating with DWR to secure reliable delivery of this supply, about 35,000 AF, in 2021. Valley Water is coordinating with DWR and other Semitropic banking partners on delivery of Valley Water’s banked water next year if 2022 is a dry year.
- On December 1, 2021, DWR issued a Notice to State Water Project Contractors stating that the initial 2022 State Water Project allocation will be based on unmet minimum human health and safety needs. Exceptions to the minimum health and safety need of 55 gallons per capita per day may be requested for DWR's consideration and

approval. Valley Water submitted a request for human health and safety water on December 16, 2021 and is currently working with DWR to confirm the specific quantity allocated.

- Reclamation has indicated that it will prioritize deliveries for public health and safety if 2022 is dry but is not expected to make its initial CVP allocations until late February 2022. Valley Water submitted its request for 2022 PHS water on December 29th to ensure water supply reliability and operational continuity until water supply conditions are better known.
- As of December 29, 2021, the Sierra Nevada snowpack, a primary source of imported water, is at 145% of normal for this date and 50% of the April 1 average, which is the date at which snowpack has historically been at its maximum. While storms have increased inflows to major reservoirs, much of the precipitation fell as snow and storage levels are still below normal compared to historical averages. In December, Shasta Reservoir has gained approximately 201 TAF and storage levels are 50% of normal for this date, while Oroville gained 282 TAF and storage is at 73% of normal. Folsom Reservoir, which is much smaller, has gained 226 TAF and is at 146% of normal. However, storage levels in these reservoirs are still quite low, and are only at 29%, 38%, and 60% of capacity, respectively.
- As of December 29th, total storage in San Luis Reservoir is approximately 603,000 AF, which is an increase of approximately 120,000 AF since the end of November. As a result, Valley Water does not anticipate any additional water quality impacts this winter. Valley Water will continue to monitor the water quality at the reservoir and will adjust the treatment process as needed to mitigate water quality impacts if low storage conditions resume in 2022.

Treated Water

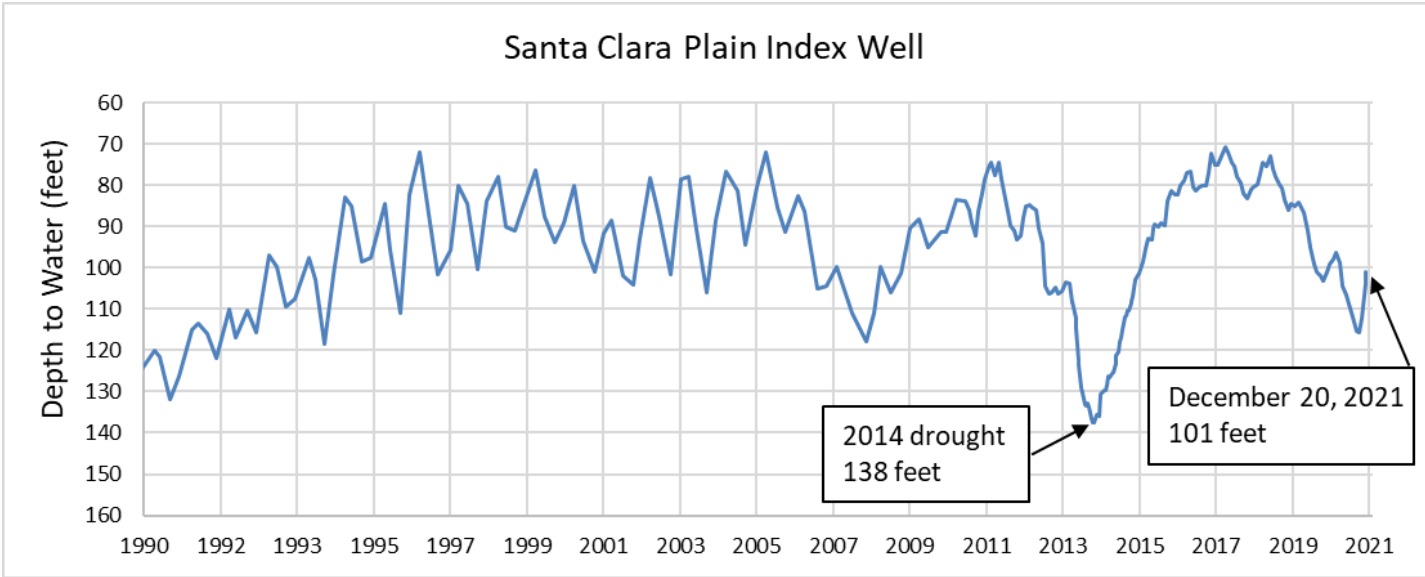
- San Luis Reservoir water level continued to increase.
- Taste and odor and cyanotoxins compounds have been relatively low for all source water.
- There were no reports of water quality issues for the treated water in December 2021 and no complaints were received from retailers.

Groundwater Recharge

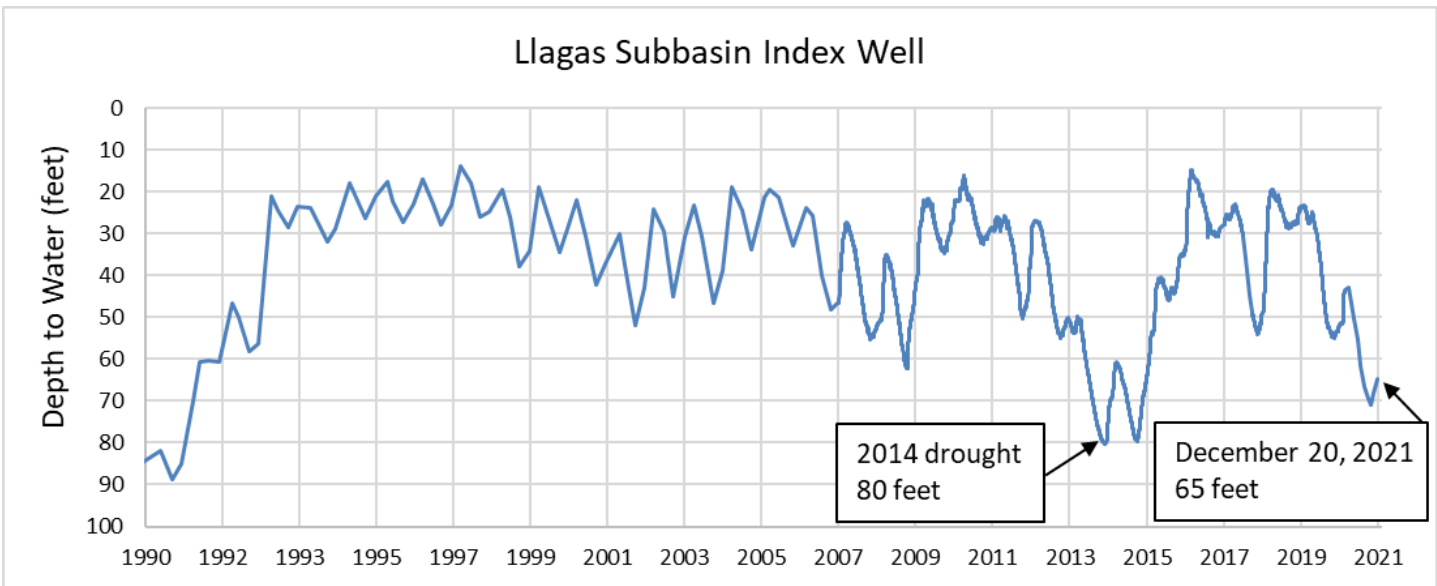
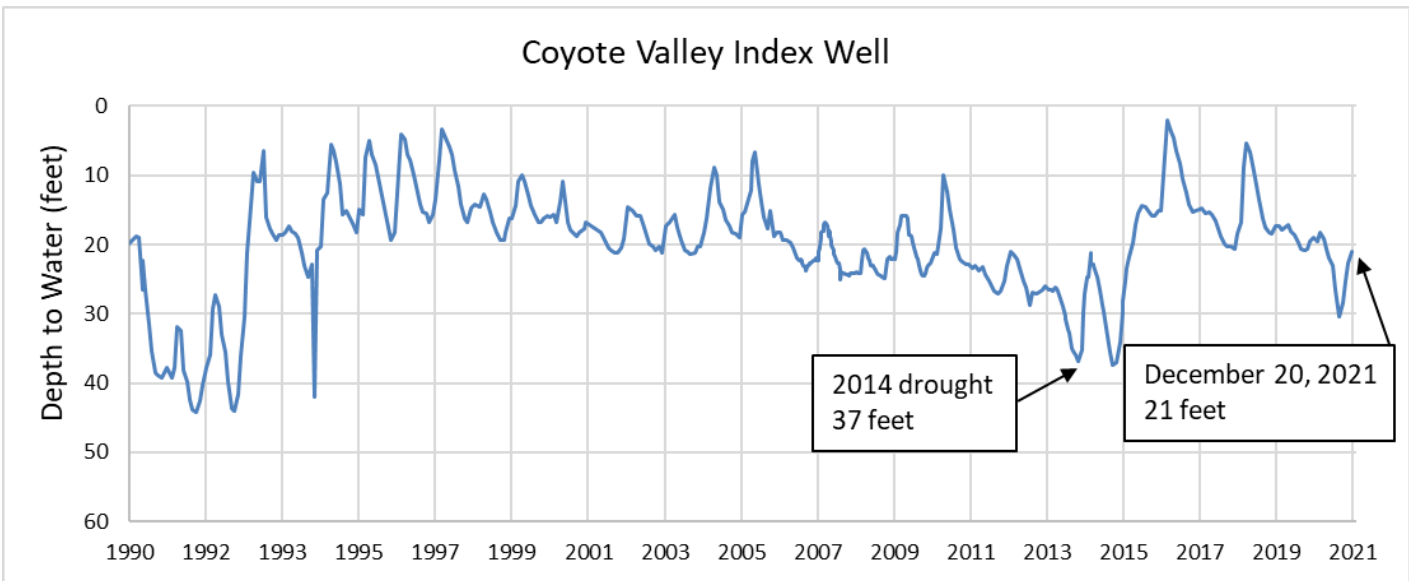
- Releases for managed groundwater recharge in December 2021 are similar to August - November 2021 and higher relative to May-June 2021.
- The increase in imported water releases during the second half of 2021 relative to the first half of 2021 was possible due to additional Public Health and Safety supplies received in 2021.
- Despite the increased groundwater recharge in August - December 2021, recharge in 2021 is below that of an average year.

Groundwater Conditions:

- While the seasonal recovery has begun to stabilize or increase groundwater levels in many areas of the county, groundwater levels continue to decline due to the drought in some areas. Emergency imported water supplies and water use reduction by the community have begun to help slow groundwater level declines. However, if dry conditions continue and the Board's water use reduction target is not met consistently, projected 2022 groundwater storage is similar to what was observed in 2014. This would increase the risk in 2022 of resumed subsidence in North County and wells going dry, particularly in South County. Current conditions in both areas are described below.
- North County Conditions
 - Groundwater pumping is 122% of the five-year average.
 - As shown below, groundwater levels in the Santa Clara Plain index well have declined due to dry conditions, with a similar pattern as the 2012–2016 drought. However, the current water level has increased by three feet since last month and is about 37 feet above the minimum water level in 2014. The water level at this well is about two feet lower compared to this time last year.
 - Groundwater levels are more than about 60 to 100 feet above thresholds established to minimize the risk of permanent subsidence.
 - No reports of dry wells have been received.



- South County Conditions
 - Groundwater pumping is 124% to 103% of the five-year average in the Coyote Valley and Llagas Subbasin, respectively.
 - Groundwater levels in the Coyote Valley and Llagas Subbasin index wells have dropped about 2 to 13 feet, respectively, compared to this time last year. However, the Coyote Valley index well water level has risen about two feet since last month. The current water level in the Coyote Valley and Llagas Subbasin index wells is about 16 and 15 feet above the respective minimum water levels in 2014.
 - One report of a dry well has been received. The well is in unincorporated area within the southwestern Coyote Valley and is close to the foothills where well yield is generally less reliable.



State Coordination

- In early December, Valley Water provided a drought status update to each office of the Santa Clara County state legislative delegation. The updates included a review of conditions that led to the Valley Water Board’s declaration of a Water Shortage Emergency Condition in June, the efforts to procure and deliver emergency

water transfers and exchanges, the challenges with salinity intrusion in the Delta, and the critical need to maintain groundwater levels to prevent subsidence.

- The State Water Resources Control Board (State Water Board), which had reimposed many water rights curtailments in November, suspended the curtailments in advance of the series of December storms which both increased reservoir storage and significantly increased the Sierra snowpack.
- State Water Board curtailments are based on the revised Water Unavailability Methodology for the Delta Watershed, together with consideration of water supply forecasts from the California Nevada River Forecast Center. The imposition or suspension of water right curtailments is being assessed by the State Water Board on a weekly basis.

Federal Coordination

- Valley Water participated in the fall Association of California Water Agencies (ACWA) conference and met with Reclamation and other water agencies to discuss the 2022 water outlook and drought coordination.
- Valley Water will meet again with Reclamation in mid-January at the Mid-Pacific Water Users' Conference to continue its regular check-ins and coordination with the agency.

Staffing and Resources

- Drought emergency expenses are expenditures supplemental to the regular budget that would have been adopted had there been no drought. The only expenses for drought emergency costs included in the FY 2021-22 Adopted Budget are \$20 million for supplemental water and an additional \$3.3 million for water banking expenses to bring approximately 32,000 acre-feet of water banked at Semitropic Water Storage District into the county. Budget adjustments will be brought to the Board for any additional expenses incurred during the year.
- Expenses through the month of November FY22 totaled approximately \$23.89 million spent or encumbered primarily for supplemental water tied to contracts executed in FY21, a relatively small draw of water from Semitropic Water Storage District in August, and labor expenses for staff time bringing together Valley Water's drought response program.
- In December 2021, Valley Water authorized a Cooperative Purchase Agreement with WaterWise Consulting to take on the onsite field surveys for a number of our water conservation programs, including pre-inspections for the Landscape Rebate Program. Onboarding will begin in January and this contract is expected to help significantly reduce wait time for Landscape Rebate Program project approval. The contract will allow for shifting Valley Water intern hours away from onsite pre-inspections and toward customer service, reducing voicemail and email response times and increasing the rate of application processing.

Expanded Opportunities

Agricultural Water Use Baseline Study

Valley Water is conducting an Agricultural Water Use Baseline Study expected to be completed in 2022. The study aims to better understand current agricultural water use practices and identify opportunities to expand water conservation programs offered to the agricultural community.

- The University of California - Merced team (UCM) performing the study has continued to make progress in using a remote-sensing based evaluation approach to determine patterns in crop distribution and irrigation technology verification.
- UCM has completed gathering spatial datasets and ground-truthing spatial data by driving by farms throughout Santa Clara County.
- Next steps include analyzing the spatial datasets and developing recommendations.
- In January 2022, Valley Water and UCM will provide a study update to the Water Conservation and Demand Management Committee and the Agricultural Water Advisory Committee.

Purified Water Project

The Purified Water Project will replenish groundwater supplies with purified water and expand usage of recycled and purified water, a drought-resilient, locally-controlled water source.

- In December, the Board directed staff to finalize agreements and develop the Public-Private Partnership (P3) Request for Proposal for the Palo Alto Site while continuing discussions with the Cities of San José and Santa Clara for a potential future project to expand the Silicon Valley Advanced Water Purification Center.

Leak Assistance Program Pilot

Valley Water and the Bay Area Water Supply and Conservation Agency (BAWSCA) are conducting a pilot leak detection certification program for professionals. California Water Efficiency Partnership (CalWEP) is the contractor for this pilot.

- In December, Valley Water and the Bay Area Water Supply and Conservation Agency (BAWSCA) held the kick-off meeting to launch development of a pilot to create a leak detection certification program for professionals. The first phase of the pilot will include research and focus groups to determine general interest in the training program, identify motivators and barriers to participation, and identify gaps related to leak detection and repair in existing professional training programs. California Water Efficiency Partnership (CalWEP) is the contractor for this pilot.

Flood-Managed Aquifer Recharge (Flood-MAR) Study

Valley Water is collaborating with a team of water resources researchers from the University of California system (referred to as UC Water) to complete a reconnaissance study for Flood-MAR implementation in Santa Clara County. The study aims to develop a GIS-based tool to identify potential sites for Flood-MAR projects in Santa Clara County and to evaluate institutional/regulatory requirements for implementing Flood-MAR projects.

- Valley Water completed the first year of work with the UC Water team in December 2021.
- UC Water has compiled and processed all needed spatial datasets related to soils, groundwater, land use, and hydrology.
- UC Water held three workshops with Valley Water staff to better understand how Valley Water can implement Flood-MAR.
- Continued work over 2022 includes detailed evaluations of institutional needs and potential participation incentives for Flood-MAR implementation projects in Santa Clara County and the completion of the GIS-based tool, including the identification of potential pilot site locations.
- Valley Water and UC Water will provide a Flood-MAR project update to the Water Conservation and Demand Management Committee and the Agricultural Water Advisory Committee in spring 2022.



Santa Clara Valley Water District

File No.: 22-0077

Agenda Date: 1/24/2022

Item No.: 4.2.

COMMITTEE AGENDA MEMORANDUM

Water Conservation and Demand Management Committee

SUBJECT:

Agricultural Water Use Baseline Study Update.

RECOMMENDATION:

This is an information only item and no action is required, however, the committee may provide recommendations to the Board related to the Agricultural Water Use Baseline Study.

SUMMARY:

In 2019, the Santa Clara Valley District (Valley Water) began the process of developing the Agricultural Water Use Baseline Study (Study) at the request of the Water Conservation and Demand Management Committee and with the support of the Agricultural Water Advisory Committee. The goal of the Study is to better understand current agricultural water use practices and identify opportunities for water use efficiency. Through this, Valley Water aims to support the agricultural community as they look for approaches to reduce water costs in their operations.

Due to complications created by the COVID-19 pandemic, the original contractor had to leave the project. In early 2021, Valley Water began collaborating with researchers from University of California -Merced (UCM). The UCM team is also part of the UC Water team that is supporting Valley Water's Flood-Managed Aquifer Recharge (Flood-MAR) study. Their experience with the Flood-MAR study provides them excellent background knowledge of Valley Water and Santa Clara County land use. Moreover, the UCM team brings to this project excellent applied and technical skills.

Study components that UCM will address include:

- 1) Types of crops and associated acres of crops
- 2) Types of irrigation systems used, by crop type
- 3) Evaluation of crop rotation and fallowing practices
- 4) Water use by crop type and irrigation method, including comparing to crops' water budgets
- 5) Geographical trends/distribution of agricultural practices and crop types in the County (e.g., north vs. south, foothills vs. valley, position relative to a creek)
- 6) Factors that determine farmer crop choice
- 7) Recommendation of projects or programs to increase agricultural water use efficiency.

Progress to Date

The UCM team has compiled all data needed to complete the analysis, which includes datasets related to land use, water use, and water supply. Data has been integrated from public sources, Valley Water records, and satellite imagery. Where applicable, the UCM team has created maps to

help show spatial trends and findings. Spatial datasets were validated in-person during the summer of 2021 (referred to as windshield surveys). The windshield survey covered Coyote Valley to the southern boundary of Santa Clara County. Preliminary observations from the data collected thus far indicate the highest variation in irrigation technology was observed in annual crops, particularly truck crops such as salad greens, peppers, and tomatoes. In addition, the UCM team identified a high number of low intensity pasture/fallow sites, particularly in the San Martin and Morgan Hill regions.

Valley Water and the project team presented this item to the Agricultural Water Advisory Committee on January 3, 2022. The committee discussed the project team's definition and application of the terms pasture and fallow. The project team will refine their analysis given the feedback provided by the committee on pasture and fallow characteristics in Santa Clara County.

Next Steps

Now that the preliminary data is collected and validated, the UCM team will move on to the data analysis step to address the requested study components. Using the findings from the analysis, the UCM team will develop agricultural water-related recommendations. UCM aims to complete the study by the end of 2022. Valley Water staff will continue to provide updates to this committee as the study progresses.

ATTACHMENTS:

Attachment 1: PowerPoint Presentation.

UNCLASSIFIED MANAGER:

Kirsten Struve, 408-630-3138



Agricultural Water Use Baseline Study

Presented by: Samantha Greene, Ph.D., Water Supply Planning and Conservation Unit
Anna Rallings, Joshua Viers, and Josue Medellin-Azuara, UC-Merced

Photo courtesy of the Santa Clara Valley Open Space Authority



Agricultural Water Use Baseline Study



GOALS

Support agricultural community in reducing water costs by:

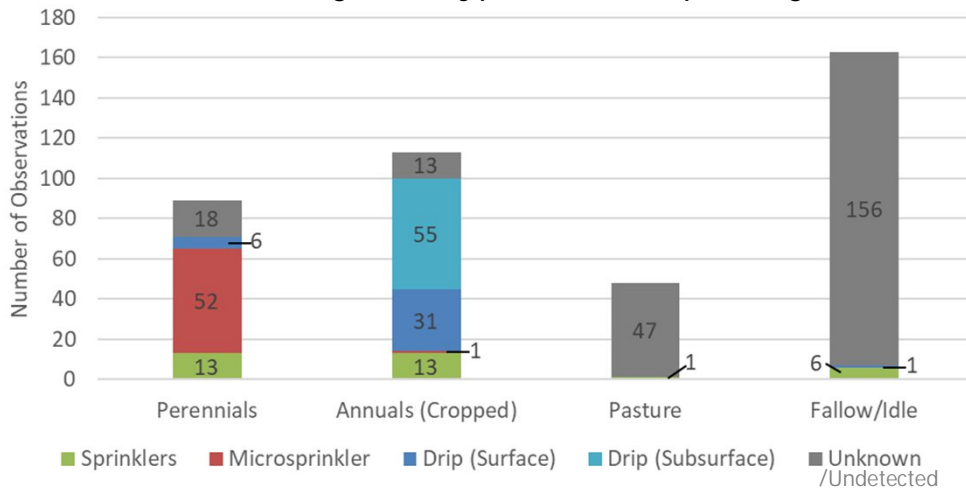
- 1) Better understand current agricultural water use practices
- 2) Identify opportunities for water use efficiency



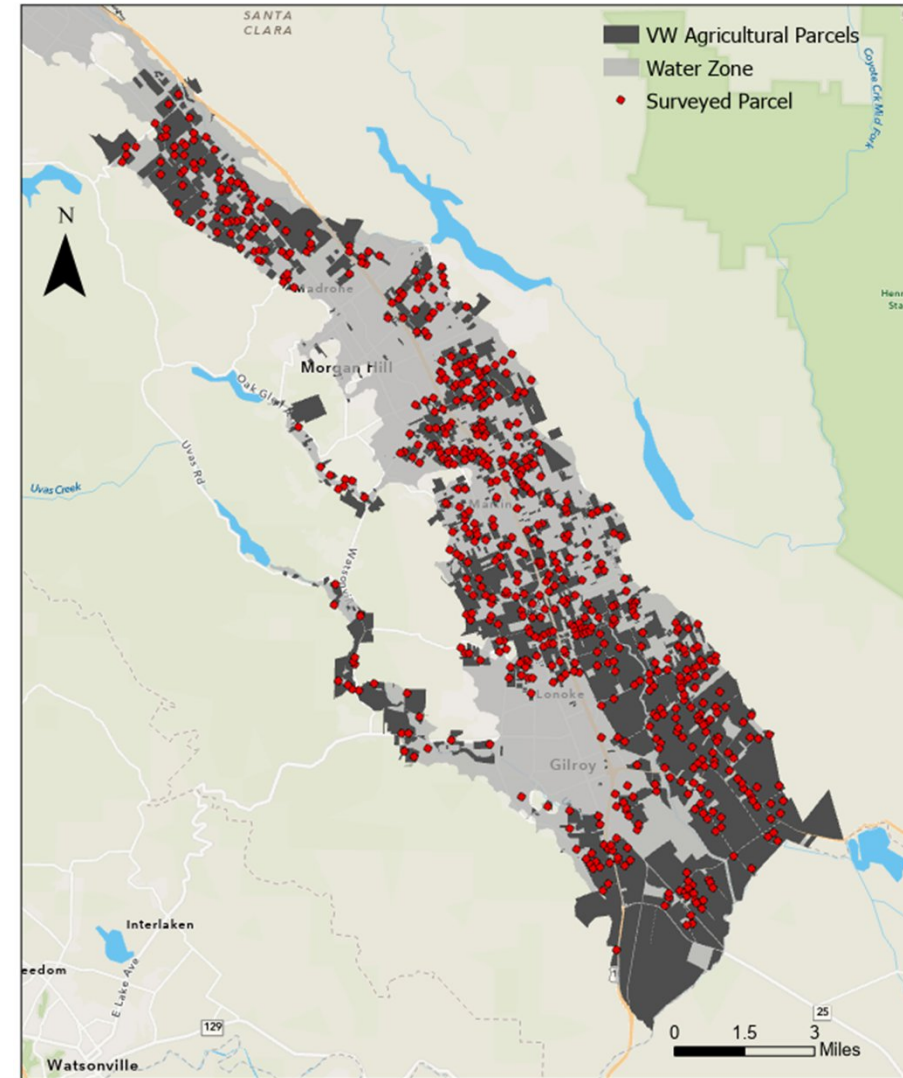
Data Collection

- Complete mapping the district agriculture & interviews
- Windshield survey conducted mid-Aug
 - Visited 675 unique parcels across service area
 - Surveyed: Crop types, irrigation, site conditions
 - High variability in truck crops, high rate of fallow
 - Data will be used for verifying irrigation technologies, validating crop distributions, providing data for the analysis

Distribution of Irrigation Types over Crop Categories

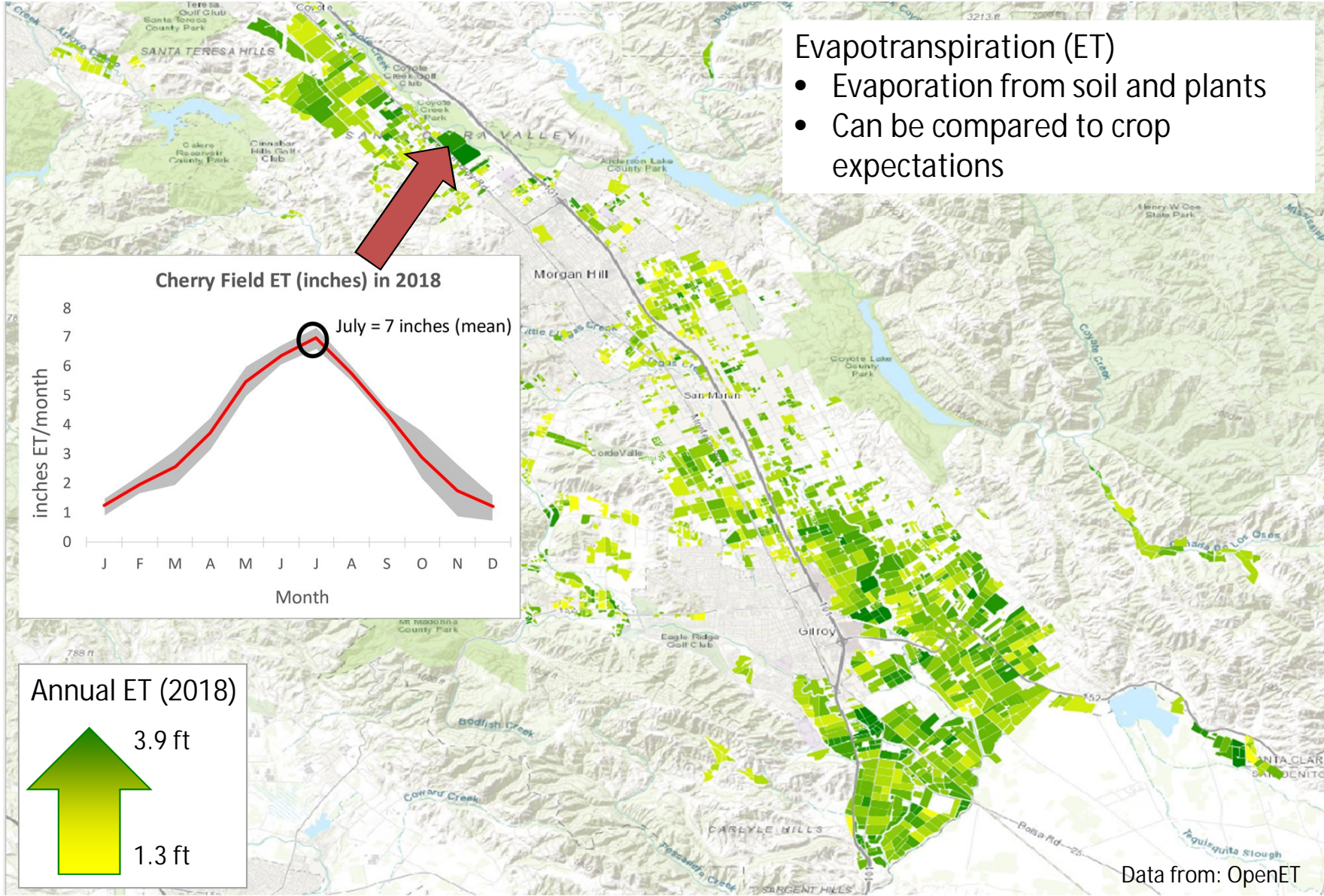


Distribution of Survey Points Collected Aug. 2021



Evapotranspiration (ET)

- Evaporation from soil and plants
- Can be compared to crop expectations



Fallowing Analysis

- Example of preliminary fallow land estimates
- Use satellite imagery to predict fallow land
- Helps anticipate grower behavior & impacts



Remote Sensing Fallow Analysis
Fallow Unlikely fallow
Likely Fallow Not fallow or previously fallow

Surveyed Fallow
Survey Non-Fallow

0 0.1 0.2 Miles

Next steps

- Complete classification of agricultural land parcels
- Integrate economic data and expert stakeholder input into analysis
- Provide recommendations to Valley Water based on outcomes

If you have any questions or you'd like to get in touch, please contact
Anna Rallings: arallings@ucmerced.edu



Santa Clara Valley Water District

File No.: 22-0078

Agenda Date: 1/24/2022

Item No.: 4.3.

COMMITTEE AGENDA MEMORANDUM

Water Conservation and Demand Management Committee

SUBJECT:

Flood-Managed Aquifer Recharge Preliminary Feasibility Study for Santa Clara County.

RECOMMENDATION:

This is an information only item and no action is required.

SUMMARY:

The Santa Clara Valley Water District (Valley Water) Board of Directors directed staff to evaluate implementing a Flood-Managed Aquifer Recharge (Flood-MAR) program in Santa Clara County when they approved Valley Water's Water Supply Master Plan 2040 "No Regrets Package" of stormwater capture and water conservation projects in 2018. Valley Water is interested in Flood-MAR as a decentralized approach to groundwater recharge that would recharge groundwater using local stormwater at suitable sites in Santa Clara County. Unlike Valley Water's centralized managed aquifer recharge program, Flood-MAR sites may be located on private or public lands not owned by Valley Water.

In November 2020, Valley Water commenced a partnership with researchers from the University of California Water Security and Sustainability Research Initiative (UC Water) to complete a Flood-MAR preliminary feasibility study in Santa Clara County. The preliminary feasibility study is expected to take two years, with an estimated completion date of December 2022.

The Flood-MAR preliminary feasibility study aims to:

- 1) Evaluate options for implementing Flood-MAR projects in Santa Clara County, including assessing technical approaches, regulatory requirements, and incentive programs, and
- 2) Develop GIS-based tools to quantify Flood-MAR suitability for the Valley Water region, including the assessment of properties and processes that influence Flood-MAR performance.

During the first year of the preliminary feasibility study, the project team collected important background information to inform the evaluation of Flood-MAR options and made significant progress with spatial datasets needed to develop the GIS-based tool. UC Water acquired and processed datasets relating to soils, groundwater, land use, and hydrology, and successfully completed an initial "proof of concept" test for the GIS-based tool.

Three workshops were held with Valley Water staff to benchmark the current state of Flood-MAR science and implementation in California and to understand how it may fit into Valley Water's water

supply and operations system. Given the County's watershed and land use characteristics, the project team agrees that smaller, decentralized projects that capture hillside stormwater flows or creek flood flows are most promising for initial development.

Over the final year of the preliminary feasibility study, the project team will begin detailed evaluations of the institutional needs for implementing Flood-MAR in Santa Clara County, including regulatory requirements and incentive programs. In addition, the project team will complete the development of the GIS-based tool for identifying potential sites for Flood-MAR implementation in Santa Clara County. Once the preliminary feasibility study is completed, Valley Water should be able to determine whether and how to implement a pilot Flood-MAR program.

ATTACHMENTS:

Attachment 1: PowerPoint

UNCLASSIFIED MANAGER:

Kirsten Struve, 408-630-3138

Flood Managed Aquifer Recharge Study in Santa Clara County

Presented by: Samantha Greene, Ph.D., Senior Water Resources Specialist
Andrew Fisher, Ph.D., UC Santa Cruz Professor



Water Supply “Ensure Sustainability” Strategy



1.

Secure existing supplies and infrastructure

2.

Expand conservation and reuse

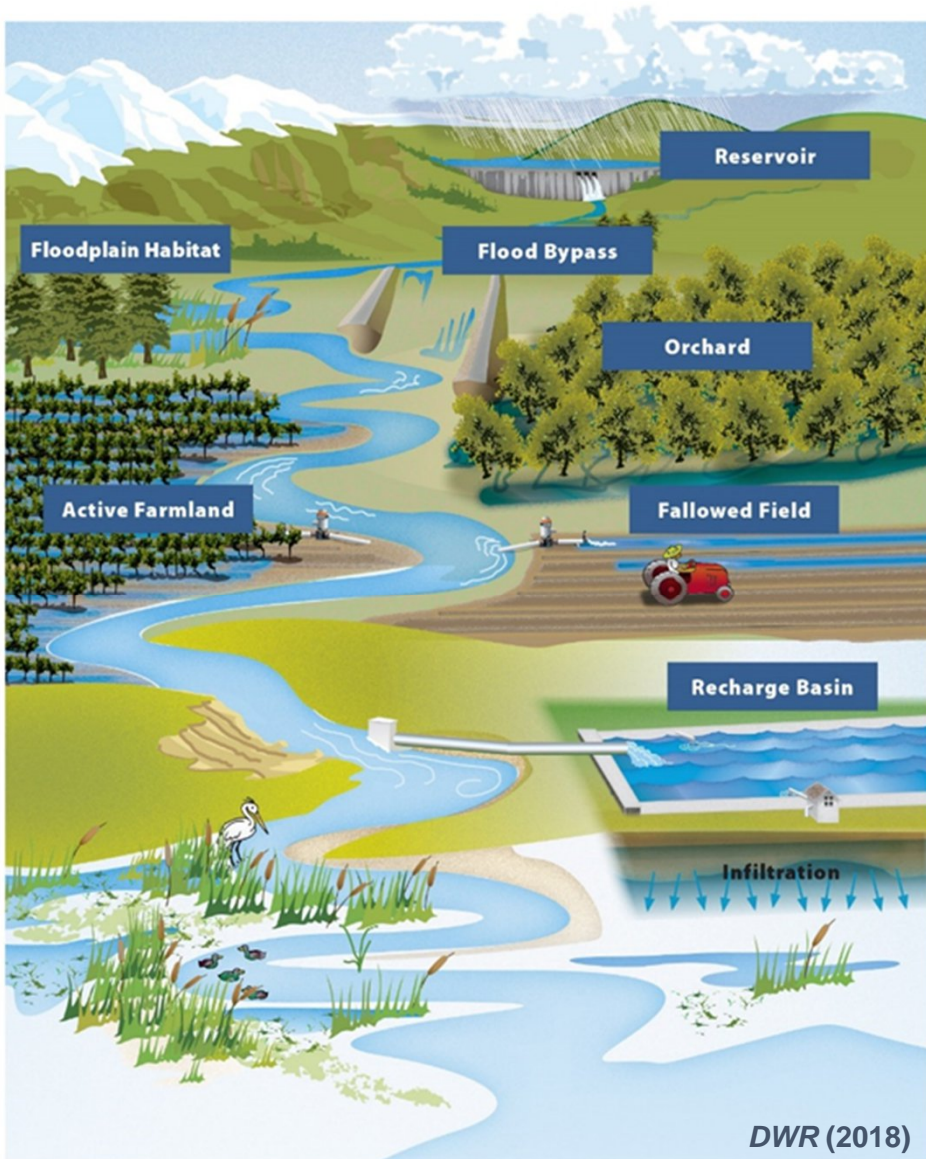
3.

Optimize the system

- “No Regrets” Package of conservation and stormwater capture projects
 - Includes Flood-Managed Aquifer Recharge (Flood-MAR)
- Flood-MAR “secures” recharge on open lands, expands local stormwater capture and use

Flood-MAR

- Uses high flows for aquifer recharge on open space.
- Components:
 - Site selection
 - Stormwater collection/routing/infiltration
 - Regulatory requirements
 - Participation incentives
 - Water accounting
- Key considerations:
 - Water quality
 - Recharge effectiveness
 - Implementation costs



Water Resources Innovation Partnership

(Jan 2021 to Dec 2022)

- Collaboration with researchers from several University of California campuses
- Partnership Goal: complete a preliminary feasibility study on Flood-MAR implementation in Santa Clara County
 - Develop GIS tool to determine the potential availability of Flood-MAR sites – potential sites that are of interest will then require field assessment to confirm feasibility
 - Evaluate ways to incentivize a Flood-MAR program (if it involves private landowners)
 - Determine regulatory requirements and evaluate potentially needed policy decisions related to Flood-MAR



Water Resources Innovation Partnership

(Jan 2021 to Dec 2022)

- Task 1: Evaluate options and challenges for a Flood-MAR program in Santa Clara County
 - Technical implementation
 - Regulatory requirements
 - Incentives for program participation
- Task 2: Develop GIS-based tools to quantify Flood-MAR suitability for Valley Water
 - Acquire, process, and analyze datasets
 - Prepare datasets for tool development
 - Generate maps of Flood MAR suitability

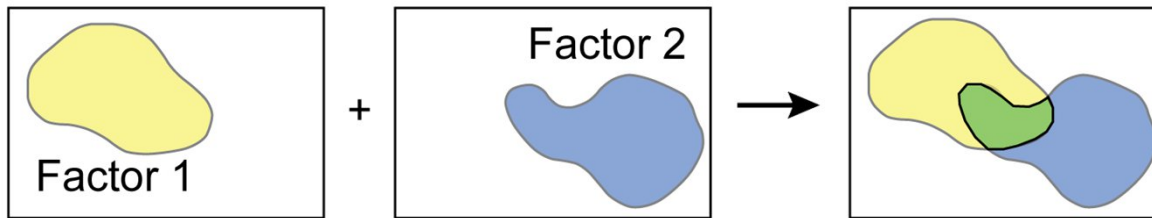
NOTE: This is a preliminary feasibility study. This study determines whether Valley Water can continue into a feasibility study, which will ultimately indicate whether a Flood-MAR is feasible in Santa Clara County.



Task 1: Institutional Considerations

- Held three internal stakeholder workshops on Flood-MAR implementation
- Potential implementation options for Valley Water include:
 - Collect hillside runoff
 - Divert creek flood flows

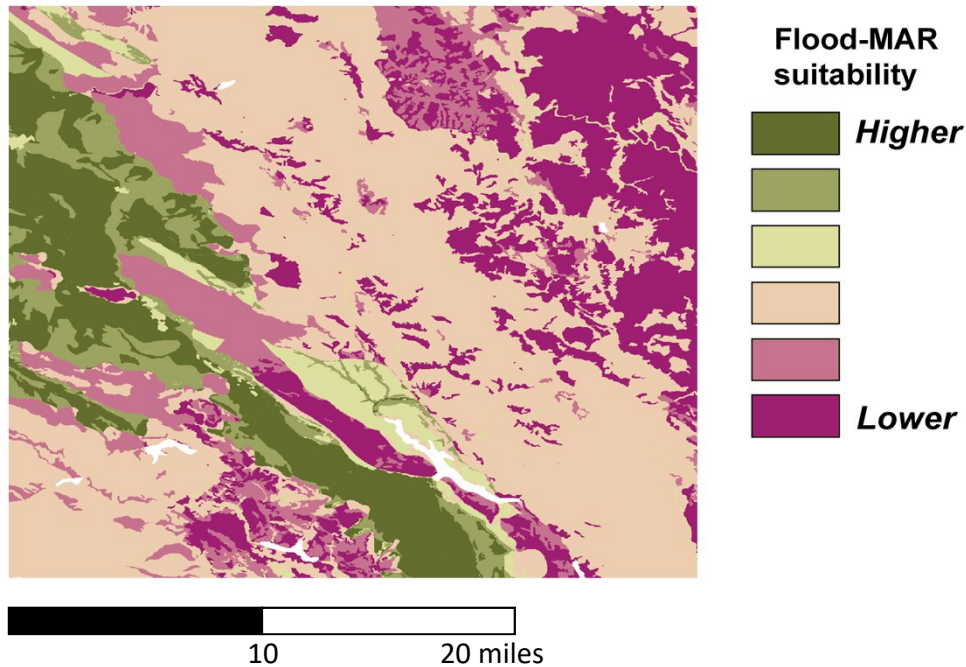
Task 2: Develop GIS-Based Tools



General goal: Identify areas where factors beneficial to Flood-MAR (blue and yellow) overlap (green area) – indicates increased potential for Flood-MAR success in that region.

- UC team worked with Valley Water to identify and acquire numerous data sets:
 - Land surface elevation
 - Soils
 - Land use/land cover
 - Geology
 - Groundwater conditions
- Selected datasets incorporated into GIS and delivered to VW for assessment

Task 2: Example product



- Illustration of concept; not a final product
- Example based on three surface datasets: elevation (slope), soil properties, geology

Complete analysis will have more datasets, greater detail, and will highlight site options

Next Steps

- Task 1 (Institutional Considerations): Evaluate regulatory, incentive, and policy needs for implementing Flood-MAR
- Task 2 (Tool Development): Complete GIS-based tool
 - Continue acquiring, processing, and analyzing datasets
 - Identify potential project sites
- If task 1 and 2 results are positive, begin a feasibility study that may include a pilot program

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Santa Clara Valley Water District

File No.: 22-0079

Agenda Date: 1/24/2022

Item No.: 4.4.

COMMITTEE AGENDA MEMORANDUM

Water Conservation and Demand Management Committee

SUBJECT:

Standing Items Report.

RECOMMENDATION:

- A. This agenda item allows the Committee to receive verbal or written updates and discuss the below subjects. These items are generally informational; however, the Committee may request additional information from staff:

 - B. This is informational only and no action is required.
Staff may provide a verbal update at the 1/24/2022, meeting if there is reportable/updated information.
1. Sustainable Groundwater Management Act (SGMA)
 2. Flood MAR (*separate agenda item 1/24/2022*)
 3. Agricultural Water Use Baseline Study (*separate agenda item 1/24/2022*)

SUMMARY:

Standing Items will allow regular reports from staff on subjects that may be of interest to the committee members.

ATTACHMENTS:

None.

UNCLASSIFIED MANAGER:

Candice Kwok-Smith, 408-630-3193



Santa Clara Valley Water District

File No.: 22-0080

Agenda Date: 1/24/2022

Item No.: 4.5.

COMMITTEE AGENDA MEMORANDUM

Water Conservation and Demand Management Committee

SUBJECT:

Review Water Conservation and Demand Management Committee Work Plan, the Outcomes of Board Action of Committee Requests; and the Committee's Next Meeting Agenda.

RECOMMENDATION:

Review the Committee work plan to guide the committee's discussions regarding policy alternatives and implications for Board deliberation.

SUMMARY:

The attached Work Plan outlines the approved topics for discussion to be able to prepare policy alternatives and implications for Board deliberation. The work plan is agendaized at each meeting as accomplishments are updated and to review additional work plan assignments by the Board.

BACKGROUND:

Governance Process Policy-8:

The District Act provides for the creation of advisory boards, committees, or commissions by resolution to serve at the pleasure of the Board.

Accordingly, the Board has established Advisory Committees, which bring respective expertise and community interest, to advise the Board, when requested, in a capacity as defined: prepare Board policy alternatives and provide comment on activities in the implementation of the District's mission for Board consideration. In keeping with the Board's broader focus, Advisory Committees will not direct the implementation of District programs and projects, other than to receive information and provide comment.

Further, in accordance with Governance Process Policy-3, when requested by the Board, the Advisory Committees may help the Board produce the link between the District and the public through information sharing to the communities they represent.

ATTACHMENTS:

Attachment 1: WCaDMC Work Plan

UNCLASSIFIED MANAGER:

Candice Kwok-Smith, 408-630-3193

Water Conservation and Demand Management Committee Work Plan 2022

Item No.	Work Plan Item	Meeting Date	Discussion/Action Item	Accomplishment Date and Outcome
Water Supply Master Plan Strategy 1: Secure Existing Supplies Goal: 99,000 AF conservation by 2030				
1	Monitor progress in achieving water conservation goal: <ul style="list-style-type: none"> • Amount of water conserved • Water conservation program success metrics (participation, lawn conversion, etc.) • Water conservation outreach success metrics • Collaboration with retailers • Communicating about water waste • Engage and support private-sector stakeholders, local, state, and federal agencies that promote water conservation. • Drought Updates – progress toward 15% reduction compared to 2019, specific actions 	Annually (April) August 2021 November 2021 August 2021 October Monthly	Discussion/Action Items	<p style="background-color: yellow;">Accomplished March 30, 2021:</p> <p>The Committee reviewed and discussed voluntary call for conservation and took the following action: The Committee voted unanimously to increase the Landscape Rebate Program to \$2.00 a square foot. <i>Board approved at its meeting on April 27, 2021.</i></p> <p style="background-color: yellow;">Accomplished April 12, 2021:</p> <p>The Committee received updated information on the 2021 Water Supply Conditions and Water Conservation Program and took the following action: The Committee by a roll call vote unanimously approved</p> <ol style="list-style-type: none"> 1. Support maintaining current voluntary call for conservation 2. Recommends the Board direct staff to increase water conservation messaging, programs to inspire additional water savings, and 3. The Committee also recommended the outreach messaging include the following

Water Conservation and Demand Management Committee Work Plan 2022

Item No.	Work Plan Item	Meeting Date	Discussion/Action Item	Accomplishment Date and Outcome
				<p>suggestions since the messaging is being developed to tailor the message:</p> <ul style="list-style-type: none"> • To those that are conserving vs those that are not, (what should be done if someone is not conserving), • Encourage those that are already conserving and what tools/suggestions for them to continue, • To be user-friendly, • That the 20% water conservation message mention the base year (2013 or other year) • Conservation goal objective be clear—whether a number of 15% or 20% is going to be used (or not). <p><i>Board approved at its meeting on April 27, 2021, with a recommended conservation goal objective of 25%.</i></p> <p>Accomplished May 10, 2021: The Committee received an update on the Water Conservation Program and Spring and Summer Outreach Campaigns and took no action.</p>

Water Conservation and Demand Management Committee Work Plan 2022

Item No.	Work Plan Item	Meeting Date	Discussion/Action Item	Accomplishment Date and Outcome
				<p><u>Accomplished June 21, 2021:</u> The Committee received an update on the Water Conservation Programs and activities following the Board’s adoption of a resolution declaring a water shortage emergency condition calling for water use restrictions and urging the County of Santa Clara to proclaim a local emergency and took no action.</p> <p><u>Accomplished July 26, 2021:</u> The Committee received the monthly update on progress towards Valley Water Resolution 21-68’s water use reduction target and drought-related water conservation efforts and took no action.</p> <p><u>Accomplished August 30, 2021:</u> The Committee received the monthly update on progress towards Valley Water Resolution 21-68’s water use reduction target and drought-related water conservation efforts and took no action.</p> <p><u>Accomplished September 27, 2021:</u> The Committee received the monthly update on progress towards Valley Water Resolution 21-68’s water use reduction target and</p>

Water Conservation and Demand Management Committee Work Plan 2022

Item No.	Work Plan Item	Meeting Date	Discussion/Action Item	Accomplishment Date and Outcome
				<p>drought-related water conservation efforts and took no action.</p> <p>Accomplished October 25, 2021: The Committee received the monthly update on progress towards Valley Water Resolution 21-68's water use reduction target and drought-related water conservation efforts and took no action.</p> <p>Accomplished November 22, 2021: The Committee received the monthly update on progress towards Valley Water Resolution 21-68's water use reduction target and drought-related water conservation efforts and took no action.</p> <p>Accomplished December 20, 2021: The Committee received the monthly update on progress towards Valley Water Resolution 21-68's water use reduction target and drought-related water conservation efforts and took no action.</p>
2	<p>Recommend policies towards water conservation goal:</p> <ul style="list-style-type: none"> • Water Conservation Strategic Plan • Making Water Conservation a Way of Life 	<p>October 2021</p> <p>September 2021</p>	<p>Discussion/Action Items</p>	<p>Accomplished October 25, 2021: The Committee received the information on the 2021 Water Conservation Strategic Plan and took no action.</p>

Water Conservation and Demand Management Committee Work Plan 2022

Item No.	Work Plan Item	Meeting Date	Discussion/Action Item	Accomplishment Date and Outcome
	<ul style="list-style-type: none"> • Review the current 15% call for water use reduction compared to 2019 water use • New programs • SCW funding 			
Water Supply Master Plan Strategy 2: Increase Water Conservation and Stormwater Capture Goal: Increase water conservation to 109,000 AF/year and increase stormwater capture to 1,000 AF/year by 2040.				
3	Monitor progress in achieving the long-term water conservation and stormwater capture goal: <ul style="list-style-type: none"> • Investments in no-regrets package/stormwater resource plan implementation • Ag Water Use Baseline study • Collaboration with UC Water on Flood Managed Aquifer Recharge (Flood MAR) 	August 2021 January 2022 August 2021 January 2022	Discussion/Action Items	<p style="background-color: yellow;">Accomplished August 30, 2021: The Committee received verbal updates on the Flood MAR and Agricultural Water Use Baseline Study and took no action.</p> <p style="background-color: yellow;">Accomplished December 20, 2021: The Committee received verbal updates on the Flood MAR and Agricultural Water Use Baseline Study and took no action.</p>
4	Recommend policies towards achieving long-term water conservation goal <ul style="list-style-type: none"> • Collaboration on ordinances 	2022	Discussion/Action Items	

Water Conservation and Demand Management Committee Work Plan 2022

Item No.	Work Plan Item	Meeting Date	Discussion/Action Item	Accomplishment Date and Outcome
Water Supply Master Plan Strategy 3: Optimize the Use of existing supplies and infrastructure				
5	South County Recharge	TBD	Discussion/Action Items	
6	Sustainable Groundwater Management Plan (SGMA) <ul style="list-style-type: none"> • Updates on our 2021 Groundwater Management Plan • New Groundwater Sustainability Plan (GSP) for North San Benito Subbasin 	Monthly	Discussion/Action Items	<p><u>Accomplished May 10, 2021:</u> The Committee received an update on the Sustainable Groundwater Management Act and took no action.</p> <p><u>Accomplished July 26, 2021:</u> The Committee received a verbal update on the Sustainable Groundwater Management Act and took no action.</p> <p><u>Accomplished August 30, 2021:</u> The Committee received a verbal update on the Sustainable Groundwater Management Act and took no action.</p> <p><u>Accomplished September 27, 2021:</u> The Committee received a verbal update on the Sustainable Groundwater Management Act and took no action.</p> <p><u>Accomplished October 25, 2021:</u> The Committee received a report on the 2021 Groundwater Management</p>

Water Conservation and Demand Management Committee Work Plan 2022

Item No.	Work Plan Item	Meeting Date	Discussion/Action Item	Accomplishment Date and Outcome
				<p>Plan Update (Alternative Sustainable Groundwater Management Act Plan) and took no action.</p> <p>Accomplished November 22, 2021: The Committee received an Overview of the North San Benito Groundwater Sustainability Plan and unanimously approved recommending bringing the plan to the December 14, 2021, Board of Directors meeting for public hearing and plan adoption. <i>Board approved at its meeting on December 14, 2021.</i></p> <p>Accomplished December 20, 2021: The Committee received a verbal update on the Groundwater Sustainability Plans and took no action.</p>
Future Demand Projections				
7	Monitor progress and recommend policies <ul style="list-style-type: none"> ● Monitoring and Assessment Program Risk Assessment and Climate Analysis 	Done	Discussion/Action Items	<p>Accomplished May 10, 2021: The Committee received a presentation on the Monitoring Assessment Program Update: Risk</p>

Water Conservation and Demand Management Committee Work Plan 2022

Item No.	Work Plan Item	Meeting Date	Discussion/Action Item	Accomplishment Date and Outcome
	<ul style="list-style-type: none"> • Urban Water Management Plan • CCAP water supply portion • Water Shortage Contingency Plan update 	<p>Done</p> <p>January 2022</p>		<p>Assessment and Climate Analysis and took no action.</p> <p>The Committee received an update on the 2020 Urban Water Management Plan and took the following action: By unanimous roll call vote the Committee approved staff's recommendation to take the 2020 Urban Water Management plan to the Board on June 8th for the Board to consider a public hearing and adoption of the Plan.</p>
Work Plan Updates				
8	Review Water Conservation and Demand Management Committee Work Plan, the Outcomes of Board Action of Committee Requests; and the Committee's Next Meeting Agenda.	monthly	Discussion/Action Items	<p><u>Accomplished March 30, 2021:</u> The Committee reviewed and discussed the Water Conservation and Demand Management Committee Work Plan and took no action, however, the Committee would like to connect items to the 2040 Water Supply Master Plan.</p> <p><u>Accomplished April 12, 2021:</u> The Committee reviewed and discussed the Water Conservation and Demand Management</p>

Water Conservation and Demand Management Committee Work Plan 2022

Item No.	Work Plan Item	Meeting Date	Discussion/Action Item	Accomplishment Date and Outcome
				<p>Committee Work Plan and took no action, however, Committee Vice Chair Nai Hsueh will work on the Committee's work plan since meeting with the Chair would constitute a quorum.</p> <p>Accomplished May 10, 2021: The Committee reviewed and discussed the Water Conservation and Demand Management Committee Work Plan and took no action, however, Committee Vice Chair Nai Hsueh will work on the Committee's newly revised work plan with staff for future meetings</p> <p>Accomplished June 21, 2021: The Committee reviewed and discussed the Water Conservation and Demand Management Committee Work Plan and took no action, will use the new work plan and making assignments.</p> <p>Accomplished July 26, 2021: The Committee reviewed and discussed the Water Conservation and Demand Management Committee Work Plan and took no action, however, Director LeZotte will meet with staff on meeting agendas.</p>

Water Conservation and Demand Management Committee Work Plan 2022

Item No.	Work Plan Item	Meeting Date	Discussion/Action Item	Accomplishment Date and Outcome
				<p><u>Accomplished August 30, 2021:</u> The Committee reviewed and discussed the Water Conservation and Demand Management Committee Work Plan and took no action.</p> <p><u>Accomplished September 27, 2021:</u> The Committee reviewed and discussed the Water Conservation and Demand Management Committee Work Plan and took no action.</p> <p><u>Accomplished October 25, 2021:</u> The Committee reviewed and discussed the Water Conservation and Demand Management Committee Work Plan and took no action.</p> <p><u>Accomplished November 22, 2021:</u> The Committee reviewed and discussed the Water Conservation and Demand Management Committee Work Plan and took no action, however, the additional items (#9) need to be separated work plan items.</p>
Additional Items:				

Water Conservation and Demand Management Committee Work Plan 2022

Item No.	Work Plan Item	Meeting Date	Discussion/Action Item	Accomplishment Date and Outcome
9	Outreach messaging for water-wise concerns.			
10	Find opportunities to ensure new development have improved water wise features <ul style="list-style-type: none"> • Proactively engage to ensure new development have improved water wise features and review major developments within the county • Work on contacting the building trades about water conservation practices. • Work on contacting Planning Commissions on adopting the model ordinances 			

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