

December 5, 2023

MEETING NOTICE

WATER CONSERVATION AND DEMAND MANAGEMENT COMMITTEE

Members of the Water Conservation and Demand Management Committee:

Director Nai Hsueh, Committee Chair

Director Barbara F. Keegan

Director Rebecca Eisenberg, Committee Vice 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

Joseph Aranda, Assistant District Counsel

Sam Bogale, Deputy Operating Officer, Treated Water Division

Vincent Gin, Deputy Operating Officer, Water Supply Division

Gregory Williams, Deputy Operating Officer, Raw Water Division

Bart Broome, Assistant Officer, Office of Government Relations

Marta Lugo, Deputy Administrative Officer, Office of Government Relations

Kirsten Struve, Assistant Officer, Water Supply Division

Antonio Alfaro, Government Relations Advocate, Office of Government Relations

Vanessa De La Piedra, Groundwater Management Manager, Groundwater Monitoring and Analysis Unit

Metra Richert, Unit Manager of the Water Supply Planning and Conservation Unit

Samantha Greene, Senior Water Resources Specialist, Water Supply Planning & Conservation Unit

Jing Wu, Senior Water Resources Specialist, Water Supply Planning & Conservation Unit

Ashley Shannon, Senior Water Conservation Specialist, Water Supply Planning & Conservation Unit

The special meeting of the Water Conservation and Demand Management Committee is scheduled to be held on **Monday, December 11, 2023, at 11:00 a.m., in the Headquarters Building Boardroom, 5700 Almaden Expressway, San Jose, CA 95118.**

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

Public and non-presenting staff Join Zoom Meeting
<https://valleywater.zoom.us/j/92597340524>

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Meeting ID: 925 9734 0524



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

**Headquarters Building Boardroom
5700 Almaden Expressway
San Jose CA 95118**

SPECIAL MEETING AGENDA

**Monday, December 11, 2023
11:00 AM**

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

Water Conservation and Demand
Management Committee
Director Rebecca Eisenberg, (District 7,
Committee Vice Chair)
Director Nai Hsueh (District 5,
Committee Chair)
Director Barbara F. Keegan (District 2)

All public records relating to an 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 for public inspection at the Office of the Clerk of the Board at the Santa Clara Valley Water District Headquarters Building, 5700 Almaden Expressway, San Jose, CA 95118, 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 attend Board of Directors' meeting. Please advise the Clerk of the Board Office of any special needs by calling (408) 265-2600.

Vincent Gin
Kirsten Struve
(Staff Liaisons)

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
SPECIAL MEETING
AGENDA

Monday, December 11, 2023

11:00 AM

Headquarters Building Boardroom

*****IMPORTANT NOTICES AND PARTICIPATION INSTRUCTIONS*****

Santa Clara Valley Water District (Valley Water) Board of Directors/Board Committee meetings are held as a “hybrid” meetings, conducted in-person as well as by telecommunication, and is compliant with the provisions of the Ralph M. Brown Act.

To maximize public safety while still maintaining transparency and public access, members of the public have an option to participate by teleconference/video conference or attend in-person. To observe and participate in the meeting by teleconference/video conference, please see the meeting link located at the top of the agenda. If attending in-person, you are required to comply with Ordinance 22-03 - AN ORDINANCE OF THE SANTA CLARA VALLEY WATER DISTRICT SPECIFYING RULES OF DECORUM FOR PARTICIPATION IN BOARD AND COMMITTEE MEETINGS located at <https://s3.us-west-2.amazonaws.com/valleywater.org.if-us-west-2/f2-live/s3fs-public/Ord.pdf>

In accordance with the requirements of Gov. Code Section 54954.3(a), members of the public wishing to address the Board/Committee during public comment or on any item listed on the agenda, may do so by filling out a Speaker Card and submitting it to the Clerk or using the “Raise Hand” tool located in the Zoom meeting application to identify yourself in order to speak, at the time the item is called. Speakers will be acknowledged by the Board/Committee Chair in the order requests are received and granted speaking access to address the Board.

- Members of the Public may test their connection to Zoom Meetings at: <https://zoom.us/test>
- Members of the Public are encouraged to review our overview on joining Valley Water Board Meetings at: <https://www.youtube.com/watch?v=TojJpYCxXm0>

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 Board of Directors/Board 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

Join by Phone:

1 (669) 900-9128, 92597340524#

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 Board/Committee on any item not listed on the agenda may do so by filling out a Speaker Card and submitting it to the Clerk or using the "Raise Hand" tool located in the Zoom meeting application to identify yourself to speak. Speakers will be acknowledged by the Board/Committee Chair in the order requests are received and granted speaking access to address the Board/Committee. Speakers' comments should be limited to two minutes or as set by the Chair. The law does not permit Board/Committee action on, or extended discussion of, any item not on the agenda except under special circumstances. If Board/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 Board/Committee may take action on any item of business appearing on the posted agenda.

3. APPROVAL OF MINUTES

3.1. Approval of Minutes.

[23-1192](#)

Recommendation: Approve the October 23, 2023, Meeting Minutes.

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

Attachments: [Attachment 1: 10232023 WCaDMC DRAFT Mins](#)

Est. Staff Time: 5 Minutes

4. REGULAR AGENDA:

4.1. Water Conservation Collaboration with Water Retailers.

[23-1193](#)

Recommendation: Receive an update on Valley Water's collaboration with water retailers on water conservation and demand management and provide staff feedback. This is a discussion item only.

Manager: Kirsten Struve, 408-630-3138

Attachments: [Attachment 1: PowerPoint Presentation](#)

Est. Staff Time: 15 Minutes

4.2. Potential Water Conservation Targets for inclusion in the 2050 Water Supply Master Plan.

[23-1194](#)

Recommendation: Receive information on the development of potential water conservation targets for inclusion in the 2050 Water Supply Master Plan.

Manager: Kirsten Struve, 408-630-3138

Attachments: [Attachment 1: PowerPoint Presentation](#)

[Attachment 2: Final 2050 Targets 2023](#)

[Attachment 3: Link Water Conservation Strategic Plan](#)

Est. Staff Time: 15 Minutes

4.3. Update on State Regulations related to Water Conservation.

[23-1195](#)

Recommendation: Receive an overview of AB 1572 and SB 676. This is a discussion item only.

Manager: Kirsten Struve, 408-630-3138

Attachments: [Attachment 1: PowerPoint Presentation](#)

[Attachment 2: Definitions of Functional and Non-Functional Turf](#)

[Attachment 3: Artificial Turf Fact Sheet](#)

Est. Staff Time: 15 Minutes

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

[23-1202](#)

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 2023 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 Special Meeting at 11:00 a.m., on Monday, January 29, 2024.

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Santa Clara Valley Water District

File No.: 23-1192

Agenda Date: 12/11/2023

Item No.: 3.1.

COMMITTEE AGENDA MEMORANDUM **Water Conservation and Demand Management Committee**

Government Code § 84308 Applies: Yes ☐ No ☒
(If "YES" Complete Attachment A - Gov. Code § 84308)

SUBJECT:

Approval of Minutes.

RECOMMENDATION:

Approve the October 23, 2023, 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 meetings.

ENVIRONMENTAL JUSTICE IMPACT:

There are no environmental Justice impacts associated with this item.

ATTACHMENTS:

Attachment 1: 10232023, WCaDMC Draft Meeting Mins.

UNCLASSIFIED MANAGER:

Candice Kwok-Smith, 408-630-3193



WATER CONSERVATION AND DEMAND MANAGEMENT COMMITTEE MEETING

DRAFT MINUTES

MONDAY, OCTOBER 23, 2023

A regular meeting of the Water Conservation and Demand Management Committee was held on October 23, 2023, at Santa Clara Valley Water District, Headquarters Building Boardroom, 5700 Almaden Expressway, in San Jose, California.

1. CALL TO ORDER

Committee Chair Director Nai Hsueh called the meeting to order at 11:03 a.m.

1.1. ROLL CALL

Committee Board Members in attendance were: Committee Member Director Barbara F. Keegan (District 2), Committee Chair, Director Nai Hsueh (District 5), and Committee Vice Chair Director Rebecca Eisenberg (District 7), establishing a quorum.

Valley Water Staff in attendance were: Antonio Alfaro, Joseph Aranda, Roseryn Bhudsabourg, John Bourgeois, Glenna Brambill, Theresa Chinte, Keila Cisneros, Vanessa De La Piedra, Phil Dolan, Rachael Gibson, Jason Gurdak, Linh Hoang, Matt Keller, Michele King, Candice Kwok-Smith, Jessica Lovering, Becky Manchester, Brian Mendenhall, Carlos Orellana, Angus Parton, Metra Richert, Don Rocha, Desiree Sausele, Ashley Shannon, Nicholas Simard, DeNarae Stewart, Kirsten Struve, Cindy Torres, Sana Wazit, and Jing Wu.

Public in attendance were: Diane Asuncion (City of Santa Clara), Brian Boyer (Cinnabar Hills Golf Club), Kurt Elvert (San Jose Water Company-SJWC), Julia Nussbaum, and Julia C. Schmitt.

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 AUGUST 28, 2023

Committee Chair Director Nai Hsueh reviewed the materials as outlined in the agenda items.

It was moved by Committee Member Director Barbara F. Keegan, seconded by Committee Vice Chair Director Rebecca Eisenberg, and unanimously approved, the minutes of the September 25, 2023, Water Conservation and Demand Management Committee regular meeting as presented.

Attachment 1

Page 1 of 3

4. REGULAR AGENDA ITEMS

4.1 RESOURCE NEEDS FOR THE WATER CONSERVATION PROGRAM

Metra Richert reviewed the materials as outlined in the agenda item and was available to answer questions as needed.

The Water Conservation and Demand Management Committee discussed the following: sustainability of work, conservation goals, capturing costs benefits of the program, public outreach county-wide, reaching landlords, giving renters assistance, carbon footprint, staffing needs, and the Climate Change Action Plan.

Kirsten Struve was available to answer questions.

The Water Conservation and Demand Management Committee took no action.

4.2 COLLABORATION WITH LAND USE AGENCIES ON WATER RESOURCES MANAGEMENT

Jing Wu reviewed the materials as outlined in the agenda item and was available to answer questions as needed.

The Water Conservation and Demand Management Committee discussed the following: fostering relationships, ABAG, RHNA numbers, Open Space, sustainable growth, land development restrictions, improving messaging on guidelines, and attracting collaborators to play a more active role in land use.

Roseryn Bhudsabourg was available to answer questions

The Water Conservation and Demand Management Committee took no action.

4.3 SUSTAINABLE GROUNDWATER MANAGEMENT ACT (SGMA) UPDATE

Jason Gurdak reviewed the materials as outlined in the agenda item and was available to answer questions as needed.

The Water Conservation and Demand Management Committee discussed the following: sustainable groundwater, challenges, Valley Water being a leader in groundwater management, and connecting with agencies that have environmental mindsets.

Vanessa De La Piedra and Kirsten Struve were available to answer questions.

The Water Conservation and Demand Management Committee took no action.

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

Committee Chair Nai Hsueh and Kirsten Struve reviewed the materials as outlined in the agenda items.

December agenda items from the work plan:

1. 2.9 Collaboration with Retailers
2. 3.5 Review long-term goals as part of WSMP update
3. 2.4 Update on State Regulations

Combining the November and December meetings for early December 2023.

The next meeting will be December 11, 2023, 11:00 a.m.

The Water Conservation and Demand Management Committee took no action.

5. CLERK REVIEW AND CLARIFICATION OF COMMITTEE'S REQUESTS

Glenna Brambill stated there were no formal action items for Board consideration.

6. ADJOURNMENT

Committee Chair Director Nai Hsueh adjourned at 12:28 p.m.

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

Approved:



Santa Clara Valley Water District

File No.: 23-1193

Agenda Date: 12/11/2023

Item No.: 4.1.

COMMITTEE AGENDA MEMORANDUM Water Conservation and Demand Management Committee

Government Code § 84308 Applies: Yes ☐ No ☒
(If "YES" Complete Attachment A - Gov. Code § 84308)

SUBJECT:

Water Conservation Collaboration with Water Retailers.

RECOMMENDATION:

Receive an update on Valley Water's collaboration with water retailers on water conservation and demand management and provide staff feedback. This is a discussion item only.

SUMMARY:

Santa Clara Valley Water District's (Valley Water) partnerships with local water retailers play a crucial role in achieving our water conservation goals of 110,000 Acre Feet per Year (AFY) by 2040. By working closely together, we can leverage resources, coordinate funding for rebate programs, and ensure consistent messaging to the public, especially in times of drought. There are 13 major water retailers in our county that service the over 2 million people who live and work in Santa Clara County. Our [Find My Water Retailer <https://www.valleywater.org/find-my-retailer>](https://www.valleywater.org/find-my-retailer) tool (<https://www.valleywater.org/find-my-retailer>) provides a centralized location for customers in the county to not only identify who their water retailer is based on address but to also provide useful links to retailers' water conservation-related content.

Valley Water's partnerships with retailers to promote water conservation include:

- Cost-sharing agreements
- Outreach collaboration
- Committee engagement
- Reporting

Cost Sharing Agreements

To increase participation in Valley Water's rebate programs and to encourage water conservation through Advanced Metering Infrastructure (AMI) and Water Use Reports, Valley Water has entered into cost-sharing agreements with several cities and water retailers, currently including:

- City of Cupertino

- City of Gilroy
- City of Milpitas
- City of Morgan Hill
- City of Palo Alto
- City of Santa Clara
- San Jose Municipal Water System

Cost-sharing agreements include funding paid by retailers and cities to Valley Water and funding paid by Valley Water to retailers. Currently, we have agreements with six retailers and cities to increase the rebate rates for their customers participating in one or more of the following Valley Water rebate programs:

- Landscape Rebate Program
 - Landscape Conversion
 - Large Landscape Lawn to Mulch
 - Rainwater Capture
- Laundry-to-Landscape Graywater
- Submeters
- Water Efficient Technology (WET)

Cost-sharing contributions vary by retailer. For the Landscape Rebate Program, for example, cost-sharing partners increase available rebates for their customers by \$1,000-\$3,000 for single-family sites and \$10,000-\$35,000 for commercial, institutional, and multi-family sites.

As identified in Valley Water's No Regrets Package, AMI is an important tool for reaching our water conservation goals. Valley Water provides cost-sharing funding to public agencies in the county to implement AMI in their service area and helps fund Water Use Reports, which provide customized water consumption information, messaging, and water-saving recommendations to customers. As of July 2023, Valley Water has cost-sharing agreements for AMI in the following service areas:

- City of Morgan Hill (approx. 17,000 AMI meters funded),
- City of Milpitas (approx. 16,700 AMI meters funded), and
- City of Palo Alto (approx. 21,000 AMI meters funded).

Outreach Collaboration

Valley Water's Office of Communications works with water retailers to cross-promote our water conservation programs in English, Spanish, Chinese and Vietnamese. Our multilingual advertising campaigns target diverse populations through digital and social media channels, including ethnic newspapers, radio and TV stations. In FY22, we offered retailers co-branded SAY YES water conservation materials (such as restaurant "water-on-demand" tabletop tents), water conservation videos, banners, and bill inserts. During FY23, we worked with various cities to distribute Yards Have Evolved bill inserts, handouts and door hangers. Valley Water also shares a partner toolkit for our water conservation campaigns, featuring our ads, digital banners, animations and suggested messaging for social media platforms. This summer, we mailed a postcard to every business in the county featuring our Commercial, Industrial, and Institutional (CII) rebates and cost share amounts

per city/retailer. We launched an email campaign directed to business managers and community associations and worked with cities/retailers to distribute CII messaging via customized emails. Our Office of Government Relations sent emails to city councils, countywide elected officials, federal elected offices and districts staff as well as business associations and chambers of commerce highlighting the CII outdoor watering ban and offering resources for compliance. Ads showcasing business rebate case studies were placed on LinkedIn, Facebook and the Silicon Valley Business Journal linked to an interest form offering 1:1 meetings with CII entities. Billboards, radio and TV ads supplemented the campaign, launched with a multi-agency press conference at Google's water-efficient campus.

Committee Engagement

To collaborate and coordinate with water retailers, Valley Water facilitates a Quarterly Water Retailer Meeting and several corresponding Subcommittees. Through the Water Conservation and Communications retailer subcommittees specifically, Valley Water staff works with retailers to promote water conservation programs, develop consistent conservation and drought messaging, discuss local and state regulations and reporting requirements, and build inter-agency relationships.

Reporting

Valley Water works closely with retailers to provide them with water conservation program participation data and to receive data needed for demand forecast modeling. To assist retailers with their various reporting needs, including retailers in our county who are required to do year-end reporting to the Bay Area Water Supply & Conservation Agency, Valley Water provides detailed water conservation program participation data to all retailers in the county.

Valley Water has developed an econometric-based water demand model built with the data and support of Santa Clara County water retailers and cities to support its water supply planning and investment decisions. The model is built using statistical relationships among historical datasets, such as water use, economic data, development data, and climate data.

In summary, working with retailers as collaborative partners has been successful and will continue to be essential in making water conservation a way of life in our county.

ENVIRONMENTAL JUSTICE IMPACT:

Water conservation offers a range of environmental justice benefits by promoting equitable access to clean water, reducing pollution, protecting ecosystems, mitigating climate change, saving costs for vulnerable communities, enhancing drought resilience, and empowering residents with knowledge and skills for sustainable water use. Valley Water provides such water conservation information in multiple languages and via various outreach techniques to reach all members of our community. Valley Water acknowledges that during drought, disadvantaged communities may be disproportionately impacted. To address these impacts, Valley Water promotes access to equitable and affordable water supplies (Water Supply Goal 2.6). Valley Water offers specific programs, such

as the Lawn Busters program to provide water-efficient landscapes to low-income, elderly, disabled or veteran homeowners and schools within disadvantaged communities.

ATTACHMENTS:

Attachment 1: PowerPoint Presentation

UNCLASSIFIED MANAGER:

Kirsten Struve, 408-630-3138



Water Conservation Collaboration with Water Retailers

Water Conservation and Demand Management Committee, December 11, 2023
Presented by: Ashley Shannon, Senior Water Conservation Specialist



Water Conservation Collaboration with Water Retailers

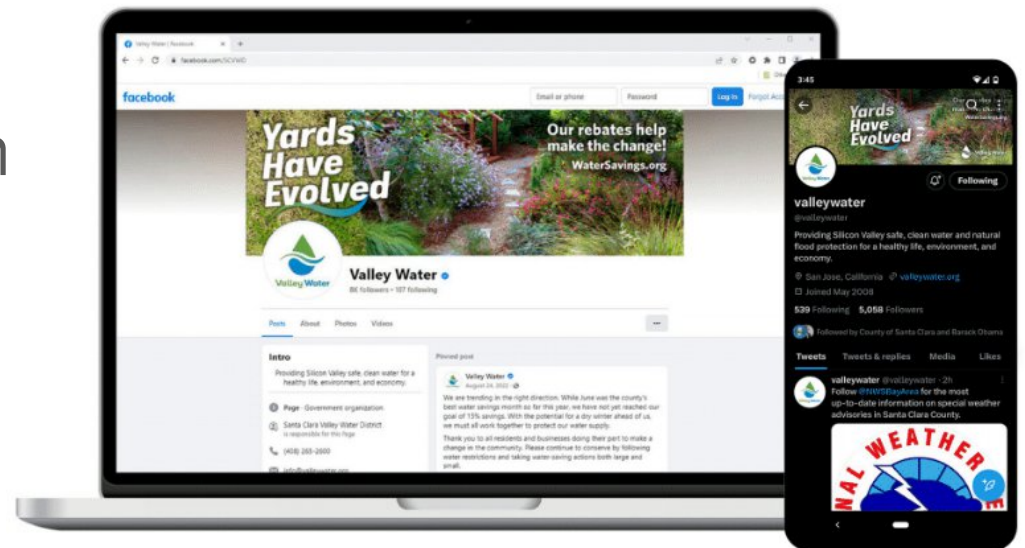
- Partnerships essential to reaching water conservation goals of 110,000 AFY by 2040
- Partnerships include:
 - Cost-sharing agreements
 - Outreach collaboration
 - Committee engagement
 - Reporting

Cost Sharing Agreements

- Cost-sharing agreements with 7 local water retailers and cities
 - Water Conservation Rebate Programs
 - Landscape Rebate Program
 - Laundry-to-Landscape Graywater
 - Submeters
 - Water Efficient Technology (WET)
 - Advanced Metering Infrastructure (AMI)
 - Water Use Reports

Outreach Collaboration

- Coordination with Office of Communications to cross-promote water conservation programs and messaging
 - SAY YES campaign
 - Yards Have Evolved
 - Co-branding
 - Partner Toolkits



Retailer Committee Engagement & Reporting

- Committee engagement to coordinate messaging and outreach, promote water conservation programs and build inter-agency relationships
 - Quarterly Water Retailer Meeting
 - Water Conservation Subcommittee
 - Communication Subcommittee
- Reporting
 - Water Conservation Program participation
 - Water Demand Modeling

QUESTIONS





Santa Clara Valley Water District

File No.: 23-1194

Agenda Date: 12/11/2023

Item No.: 4.2.

COMMITTEE AGENDA MEMORANDUM **Water Conservation and Demand Management Committee**

Government Code § 84308 Applies: Yes ☐ No ☒
(If "YES" Complete Attachment A - Gov. Code § 84308)

SUBJECT:

Potential Water Conservation Targets for inclusion in the 2050 Water Supply Master Plan.

RECOMMENDATION:

Receive information on the development of potential water conservation targets for inclusion in the 2050 Water Supply Master Plan.

SUMMARY:

Santa Clara Valley Water District (Valley Water) is the primary water resources agency in Santa Clara County, California, and serves about 2 million residents, primarily through 13 water retailers. Valley Water has been providing water conservation programs to its retail agencies' customers since 1992 and offers over 20 programs to reach all customer sectors to achieve the Board's long-term 2030 and 2040 water conservation targets.

Valley Water is currently developing its 2050 Water Supply Master Plan (Master Plan) and seeks to identify conservation targets for potential inclusion in the Master Plan. The conservation targets will provide options to maintain or achieve additional savings beyond Valley Water's currently planned water conservation activities (i.e., the activities and anticipated savings through 2040 as identified in Valley Water's 2021 Water Conservation Strategic Plan [2021 Strategic Plan]).

This memorandum provides a summary of three (3) potential 2050 Conservation Targets (2050 Targets) for the Master Plan and the menu of conservation programs being considered. Modeling is underway to determine the cost-effectiveness of achieving the portfolios, the associated staffing resources, as well as staff's recommendation for the Water Conservation and Demand Management Committee's (Committee) consideration at the January meeting.

Potential Conservation Savings Targets

The 2050 Targets would be fulfilled by leaning into Valley Water's existing program while still providing flexibility to enhance existing and add new programs. Three (3) potential 2050 Targets have

been identified and are described below:

1. *Option A Savings Target* - This target assumes future conservation savings through 2050 at recent average rates of implementation that are consistent with the water savings projected to be achieved from the implementation of Valley Water's existing mix of conservation programs by 2040 (from the 2021 Strategic Plan) while accounting for a reduced future active conservation savings potential due to demand hardening. This represents maintaining an active savings rate of seven (7) thousand-acre feet per year (TAFY) (i.e., median implementation rate for 2018 to 2020). This option would likely require a slight increase in resources and is achievable.
2. *Option B Savings Target* - This target assumes future conservation savings through 2050 at recent drought rates of implementation that are consistent with the water savings projected to be achieved through the implementation of the Broad Program Mix portfolio by 2040 (from the 2021 Strategic Plan) while accounting for a reduced future active conservation savings potential due to demand hardening. This represents maintaining an active savings rate of 14 TAFY (i.e., drought implementation rates). This option would likely require increases in resource needs and be very challenging to achieve.
3. *Option C Savings Target* - This target assumes future conservation savings to achieve a goal of an additional 25% reduction in outdoor water use within Valley Water's service area by 2050 compared to estimated outdoor water use in 2020, which includes water savings achieved through implementation of Valley Water's existing programs. This represents an active savings rate of 22 TAFY. This option would likely significantly increase resource needs and be extremely challenging to achieve.

Figure 1 summarizes the: (1) passive savings achieved as of 2020 within the Valley Water service area, (2) the active savings from past implementation as of 2020, (3) projected additional passive savings estimated to occur in the future, and (4) the additional active savings to be achieved from program implementation that would be required to achieve 2050 Targets.

Figure 1. Potential 2050 Conservation Savings Targets - Active and Passive Savings

Conservation Measures

As discussed above, to leverage the past and current investments in the water conservation program, the 2050 Targets aim to lean into Valley Water's existing programs while still providing flexibility to enhance existing and add new programs. A preliminary list of 15 conservation measures for inclusion in developing the Master Plan water conservation portfolio was developed:

1. Large Landscape Water Budget
2. Rain Sensors
3. Large Land Irrigation Controller
4. Flow Sensor with Automatic Shutoffs/Dedicated Irrigation Meter
5. Agriculture Mobile Lab
6. Water Efficient Technologies (WET)
7. Advance Metering Infrastructure (AMI) Leak Alert & Home Water Report
8. Large Landscape Program
9. Residential Irrigation Controller for Single Family Home (SFH)
10. Turf Replacement Rebate
11. Whole House Graywater/Reuse
12. Leak Assistance Program
13. Direct Install Turf Replacement (SFH, Multifamily Housing [MFH])
14. Pool Covers
15. Submetering (MFH & Accessory Dwelling Unit [ADU])

Ten (10) conservation measures were selected for further analysis in developing the three Conservation Portfolios (e.g., one for each of the 2050 Targets) each with a different combination of

four to six conservation measures.

Next Steps

Modeling is underway to determine the cost-effectiveness of achieving the portfolios and the associated staffing and other resources. The additional information will inform staff's recommendation regarding the Master Plan target for the Committee's consideration at the January meeting. Staff will then bring the Committee's recommendation to the full Board.

ENVIRONMENTAL JUSTICE IMPACT:

Water conservation offers a range of environmental justice benefits by promoting equitable access to clean water, reducing pollution, protecting ecosystems, mitigating climate change, saving costs for vulnerable communities, enhancing drought resilience, and empowering residents with knowledge and skills for sustainable water use. Valley Water provides such water conservation information in multiple languages and via various outreach techniques to reach all members of our community. Valley Water acknowledges that during drought, disadvantaged communities may be disproportionately impacted. To address these impacts, Valley Water promotes access to equitable and affordable water supplies (Water Supply Goal 2.6). Valley Water offers specific programs, such as the Lawn Busters program to provide water-efficient landscapes to low-income, elderly, disabled or veteran homeowners and schools within disadvantaged communities.

ATTACHMENTS:

Attachment 1: PowerPoint presentation

Attachment 2: 2050 Master Plan Potential Savings Target Memorandum

Attachment 3: Link to 2021 Water Conservation Strategic Plan

UNCLASSIFIED MANAGER:

Kirsten Struve, 408-630-3138



Potential Water Conservation Targets for inclusion in 2050 Water Supply Master Plan

Water Conservation and Demand Management Committee, December 11, 2023
Presented by: Metra Richert, Water Supply Planning & Conservation Manager



Water Supply Master Plan Background

Guiding document for long-term water supply investments

Major update every five years

Current Targets of 99 TAFY by 2030 and 110 TAFY by 2040 guided by 2021 Strategic Plan

Develop 2050 Conservation Targets for inclusion in Water Supply Master Plan

Potential Savings Targets

Option A: assumes recent average rates of implementation, achieving 7 TAFY by 2050.

Option B: assumes recent drought rates of implementation, achieving 14 TAFY by 2050.

Option C: assumes to achieve an additional 25% reduction in outdoor water use, achieving 22 TAFY by 2050.

Potential Savings Targets



Conservation Measures

1. Large Landscape Water Budget
2. Rain Sensors
3. Large Land Irrigation Controller
4. Flow Sensor with Automatic Shutoffs/Dedicated Irrigation Meter
5. Agriculture Mobile Lab
6. WET
7. AMI Leak Alert & Home Water Report
8. Large Landscape Program
9. Residential Irrigation Controller for SFH
10. Turf Replacement Rebate
11. Whole House Graywater/Reuse
12. Leak Assistance Program
13. Direct Install Turf Replacement (SFH, MFH)
14. Pool Covers
15. Submetering (MFH & ADU)

Next Steps

Modeling underway to establish cost/benefit and staffing/resource needs

Return in January with the staff's recommendation for Committees' consideration

Bring the Committee's recommendation to the Board for approval

QUESTIONS



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Final - 6 November 2023

MEMORANDUM

To: Ashley Shannon (Valley Water)
Metra Richert (Valley Water)

From: Andree Lee (EKI)
Anona Dutton (EKI)

Subject: 2050 Master Plan Potential Savings Targets
Valley Water
(EKI C00054.00)

Valley Water is currently developing its 2050 Master Plan (Master Plan) and seeks to identify Conservation Portfolio(s) for potential inclusion in the Master Plan. The Conservation Portfolio(s) will provide options to maintain or achieve additional savings beyond Valley Water's currently planned water conservation activities (i.e., the activities and anticipated savings through 2040 as identified in Valley Water's 2021 Water Conservation Strategic Plan [2021 Strategic Plan]).

This memorandum provides a summary of: (1) the potential 2050 Conservation Savings Targets (2050 Targets) for the Master Plan, and (2) the preliminary Conservation Measures List. Following Valley Water's review and confirmation of each potential 2050 Target and selection of up to ten Conservation Measures¹, EKI will identify up to three Conservation Portfolios (e.g., one for each of the 2050 Targets), each with a different combination of four to six measures.² EKI will evaluate the cost-effectiveness of achieving each 2050 Target through implementation of the associated measures. Valley Water may select one or more 2050 Targets and accompanying portfolios for inclusion in the Master Plan.

1. EXISTING 2040 CONSERVATION SAVINGS TARGET

EKI recently completed Valley Water's 2021 Strategic Plan that included, among other things, water use profiles for each Valley Water retail agency, a detailed analysis of the water conservation programs offered within Valley Water's service area, and recommendations to Valley Water on how to increase its long-term conservation savings from about 80 thousand acre-feet per year (TAFY) in 2022 to about 99 TAFY by 2030 and 109 TAFY by 2040 relative to a baseline of 1992. **Figure 1** shows the projected water savings to reach the 2040 Targets from achieved passive savings, active savings from past implementation, projected additional passive savings, and remaining savings needed from additional active programs.³ Passive savings come from plumbing codes, appliance water use standards, and other regulations that improve water use efficiency over time. These passive savings would be realized over time regardless of Valley Water or retail agency conservation programs. Active savings come from water conservation

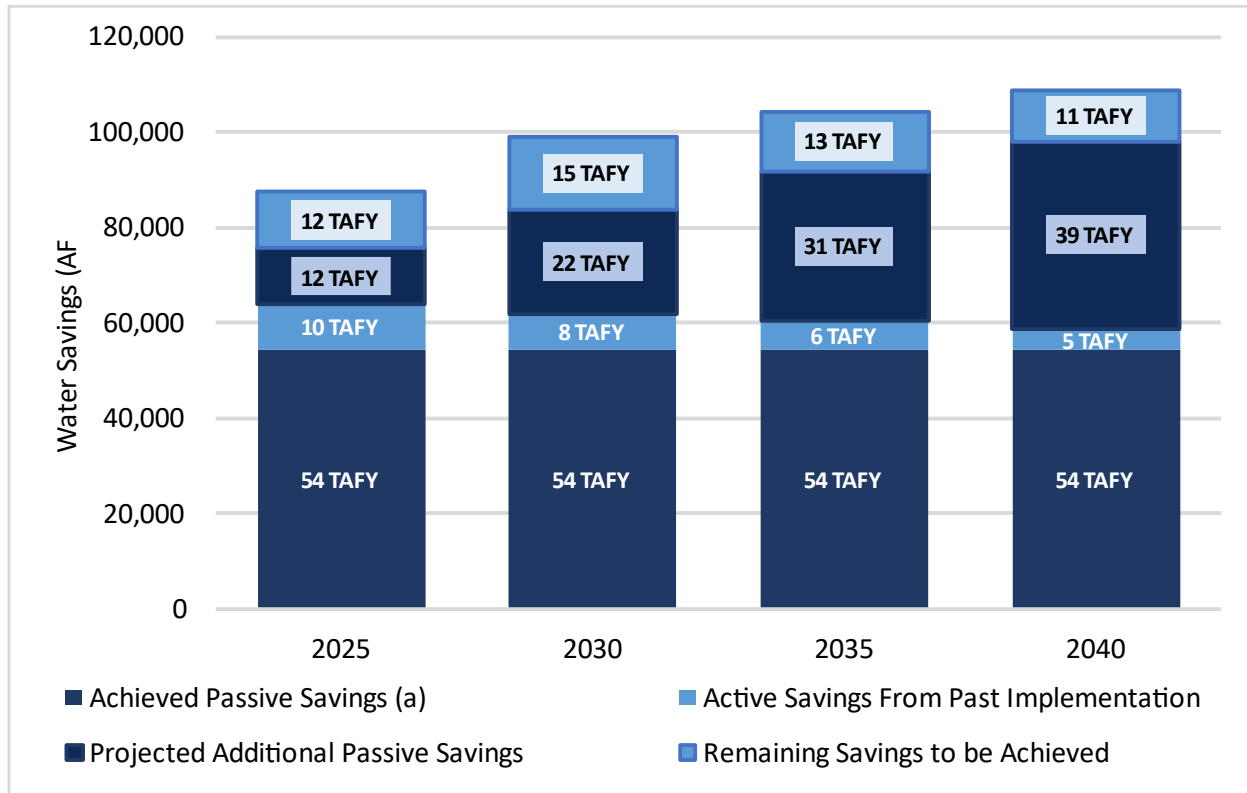
¹ Up to 10 conservation measures will be selected from the preliminary 15 Conservation Measures considered in the detailed analysis.

² It is important to note that measures not selected for inclusion in a portfolio may still be offered by Valley Water in the future.

³ Valley Water, 2021. Adapted from Figure 4-6.

programs run by Valley Water or its retail agencies, such as plumbing fixture rebates, turf replacement rebates, and home water use reports and surveys.

Figure 1. Projected Water Savings to Reach 2040 Targets



Note:

(a) Achieved Passive Savings are estimated from 1992 onward, with 1992 as the first year that passive savings are accrued. Appendix D of Valley Water's 2021 Strategic Plan provides greater detail on the calculations and assumptions used to project water savings.

2. POTENTIAL CONSERVATION SAVINGS TARGETS

EKI has identified three potential 2050 Targets, described below, for consideration.

1. *Option A Savings Target:* This target assumes future conservation savings through 2050 at rates that are consistent with the water savings projected to be achieved from implementation of Valley Water's existing mix of conservation programs by 2040 (from the 2021 Strategic Plan), while accounting for a reduced future active conservation savings potential due to demand hardening. This target assumes existing conservation programs at recent average rates of implementation (i.e., median implementation rate for 2018 to 2020).
2. *Option B Savings Target:* This target assumes future conservation savings through 2050 at the rates projected to be achieved through implementation of the Broad Program Mix portfolio by 2040 (from the 2021 Strategic Plan), while accounting for a reduced future active conservation savings potential due to demand hardening. This target assumes that implementation rates are

scaled to achieve the 2030 and 2040 conservation targets in the 2021 Strategic Plan, then savings rates are sustained through the new 2050 target.

3. *Option C Savings Target*: This target assumes future conservation savings to achieve a goal of an additional 25% reduction in outdoor water use within Valley Water’s service area by 2050 compared to estimated outdoor water use in 2020, which includes water savings achieved through implementation of Valley Water’s existing programs. This target does not build upon the Option A or Option B targets.

The potential 2050 Targets for only active savings are provided in **Figure 2** below, and for both passive and active savings are provided in **Figure 3**. The methodology and assumptions are summarized in **Table 1** and further described below.

Figure 2. Potential 2050 Conservation Savings Targets – Active Savings

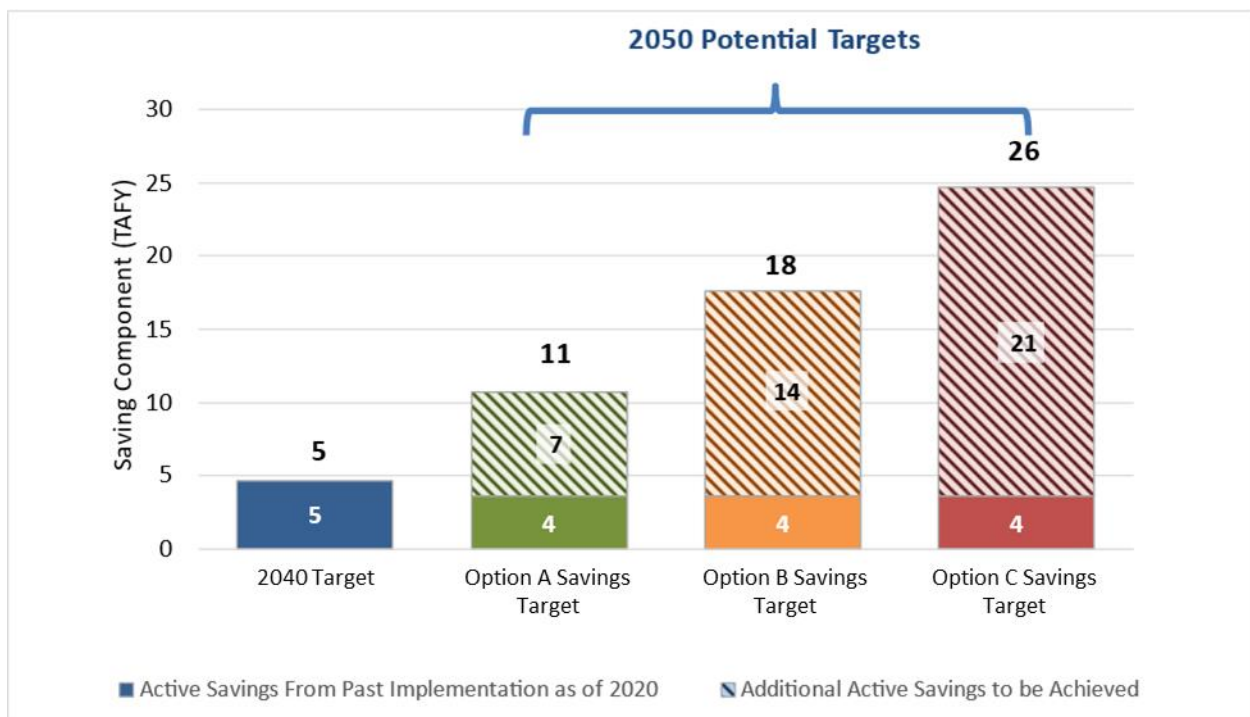


Figure 3. Potential 2050 Conservation Savings Targets – Active and Passive Savings

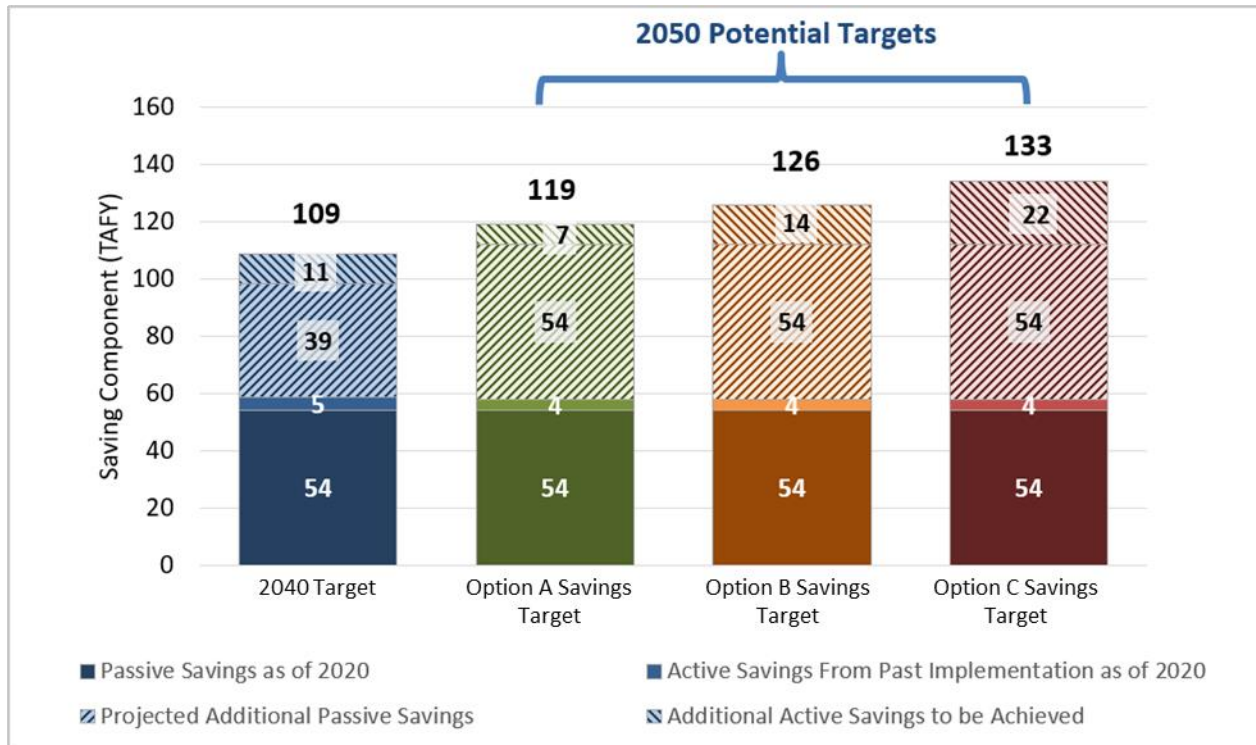


Table 1. Methodology and Assumptions for Calculating Savings Targets

	Option A Savings Target	Option B Savings Target	Option C Savings Target
Approach	Beyond the projected passive savings in 2050, maintaining a consistent active savings rate of 7 TAFY, which is consistent with the trend of active savings from 2020 through 2040 without the MWENDO ⁴ Scenario shown in the 2021 Strategic Plan (Figure 1).	Beyond the projected passive savings in 2050, maintaining a consistent active savings rate of 14 TAFY from program implementation, which is consistent with the active savings from the “Broad Program Mix” without MWENDO Scenario shown in the 2021 Strategic Plan.	Beyond the projected passive savings in 2050, targeting further outdoor water demand reduction in addition to the 2050 active savings from past programs targeting outdoor water use. This target does not specifically consider the MWENDO Scenario shown in the 2021 Strategic Plan.
Passive Savings as of 2020	54 TAFY as documented in the 2021 Strategic Plan.		
Active Savings From Past Implementation as of 2020	4 TAFY of active savings (residual savings ⁵) is estimated to be available in 2050 from the past program implementation as of 2020 per the M.Cubed Model output.		
Future Additional Passive Savings	54 TAFY obtained by subtracting the 2020 estimated passive savings from the 2050 estimated passive saving per the M.Cubed Model dated 1 May 2021.		
Additional Savings to be Achieved	The identified additional savings to be achieved reduces from 15 TAFY in 2030 to 11 TAFY in 2040, as shown in Figure 1 . Thus, assuming a linearly decreasing trend as a result of demand hardening, the active savings to be achieved in 2050 would be 7 TAFY.	Extend the “Broad Program Mix” without MWENDO Scenario saving rates in 2040 (i.e., 18 TAFY) to 2050. The savings rate is further adjusted by 4 TAFY to account for active savings from implementation through 2040. Thus, 14 TAFY of additional savings are needed to achieve a similar savings rate.	Reduce the estimated outdoor water demand in Valley Water’s 11 urban retailers by 25% from the estimated outdoor water demand in 2020, for an additional 21 TAFY of savings.
2050 Target⁶	119 TAFY	126 TAFY	133 TAFY

2.1 Option A Savings Target

The Option A Savings Target assumes that Valley Water will seek to maintain a consistent trend of active conservation savings from 2040 through 2050 as planned from 2020 through 2040. Consistent with the savings trends from 2020 through 2040 without the MWENDO Scenario projected in the 2021 Strategic Plan and M.Cubed Model output, the Option A Savings Targets anticipates that passive conservation will continue to increase in the Valley Water service area through 2050, totaling 54 TAFY of additional passive

savings from 2020 to 2050 in addition to the 54 TAF of passive savings achieved as of 2020. This target also assumes that 4 TAFY of residual active savings from past implementation of active conservation programs will be maintained in 2050. In addition to the passive savings and residual active savings, the Option A Savings Target aims to achieve an additional active savings of 7 TAFY in 2050. This is consistent with the trend of declining active savings from 2020 through 2040 shown in the 2021 Strategic Plan for the “Business as Usual” scenario without the MWENDO Scenario as a result of demand hardening.

2.2 Option B Savings Target

The Option B Savings Target assumes that Valley Water will achieve a consistent savings rate of 14 TAFY from program implementation beyond the residual active savings. This level of savings is consistent with the active savings from the “Broad Program Mix” without MWENDO Scenario shown in the 2021 Strategic Plan. Consistent with the savings trends projected in the 2021 Strategic Plan and M.Cubed Model output, the Option B Savings Targets anticipates that passive conservation will continue to increase in the Valley Water service area through 2050, totaling 54 TAFY of additional passive savings from 2020 to 2050 in addition to the 54 TAF of passive savings achieved as of 2020. This target also assumes that 4 TAFY of residual active savings from past implementation of active conservation programs will be maintained in 2050. In addition to the passive savings and residual active savings, the Option B Savings Target aims to achieve an additional active savings of 14 TAFY in 2050. This is consistent with the “Broad Program Mix” without MWENDO Scenario in the 2021 Strategic Plan, reduced by 4 TAFY to account for the residential active savings.

2.3 Option C Savings Target

The Option C Savings Target assumes that Valley Water will aim to reduce outdoor water use within the service area by 25% by 2050, compared to the estimated outdoor water use in 2020. Consistent with the other savings targets, the Option C Savings Targets anticipates that passive conservation will continue to increase through 2050, totaling 54 TAFY of additional passive savings from 2020 to 2050 in addition to the 54 TAF of passive savings achieved as of 2020. This target also assumes that 4 TAFY of residual active savings from past implementation of active conservation programs will be maintained in 2050. In addition to the passive savings and residual active savings, the Option C Savings Target aims to achieve an additional active savings of 21 TAFY in 2050. It is anticipated that the savings would be achieved through aggressive implementation of conservation measures primarily targeting outdoor water use. Further details on the methodology for estimating outdoor water use in the Valley Water service area are provided below.

2.3.1 Estimated Outdoor Water Demand within Valley Water

To establish the Option C Savings Target, current outdoor water use was estimated within the Valley Water service area using monthly production data for the Valley Water retail agencies. The potable water

⁴ The Model Water Efficient New Development Ordinance (MWENDO) represents a new conservation initiative being pursued by Valley Water. The model ordinance is intended to be adopted by all cities within Santa Clara County. MWENDO savings are assumed will occur gradually increase over time, from 100 AFY in 2025 to 4,200 AFY in 2040.

⁵ Active savings refers to savings generated by water conservation programs currently funded by Valley Water, whereas residual savings are savings refers to savings generated by water conservation programs previously funded by Valley Water.

⁶ Total may not sum due to rounding.

production for 13 Valley Water retail agencies⁷ is shown in **Table 2**. Red shading is used to highlight years where the agency's annual demand was higher than average, while blue shading indicates years where the demand was lower than the average demand from 2015 to 2022.

2.3.2 Methodologies and Assumptions of the Outdoor Water Demand Estimate

Table 3 presents the estimated proportion of outdoor water demand for each Valley Water retail agency. Red shading is used to highlight years where the annual outdoor demand proportion was higher than average, while blue shading indicates years where the proportion was lower than the average. In order to calculate the outdoor water demand, it is assumed that the minimum water production month represents indoor water usage exclusively and remains consistent throughout the year.⁸ The remaining water production is then assumed to be allocated for outdoor water use. The minimum production month may vary by supplier, as shown in **Table 4**.

2.3.3 Outdoor Water Demand Estimate Results

Table 5 presents the estimated outdoor water demand for each Valley Water retail agency. The 2020 water demand was selected as the base year for outdoor water use reduction because it reflects the recent developments within Valley Water and is not constrained by drought restrictions. Similarly, red shading is used to highlight years where the annual outdoor demand was higher than average, while blue shading indicates years where the demand was lower than the average.

⁷ DWR defines an "urban water supplier" as "a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually." Retail agencies that meet this definition are required to report their monthly water demand to the State Water Resources Control Board (SWRCB). Purissima Hills Water District and Stanford University do not meet this definition and thus do not report their monthly water demand to SWRCB. However, these suppliers do report their water demand to the Bay Area Supply and Conservation Agency (BAWSCA).

⁸ It is important to note that some outdoor irrigation still occurs during the minimum water production month. However, for the purposes of this analysis, outdoor irrigation during the minimum water production month is assumed to be negligible.

Table 2. Total Potable Water Production (AFY)

Agencies (a)	2015	2016	2017	2018	2019	2020	2021	2022	Avg.
City of Gilroy	6,870	6,983	7,813	7,854	7,691	8,219	7,822	7,411	7,583
City of Milpitas	8,665	8,589	8,742	7,808	9,319	9,366	9,006	8,628	8,765
City of Morgan Hill	(b)	6,280	7,079	7,272	7,235	7,809	7,182	6,884	7,106
City of Mountain View	8,871	8,741	9,202	9,526	9,474	10,033	9,412	8,992	9,281
City of Palo Alto	9,539	9,901	10,921	10,918	10,775	11,222	10,922	11,282	10,685
City of Santa Clara	17,621	17,160	18,681	18,481	17,789	18,301	17,317	16,913	17,783
City of Sunnyvale	15,387	16,507	18,639	18,573	18,771	19,811	18,840	18,243	18,096
CWS - Los Altos	10,189	10,265	11,656	12,438	11,863	13,024	11,440	10,761	11,454
Great Oaks Water Company	8,943	8,911	9,996	10,277	10,393	(b)	10,379	9,389	9,755
Purissima Hills Water District	(b)	(b)	(b)	(b)	(b)	2,060	(b)	(b)	2,060
San José Municipal Water	16,072	15,740	16,563	17,069	16,860	17,545	16,636	15,989	16,559
San Jose Water Company	105,713	103,676	111,543	115,123	113,928	121,454	113,455	105,291	111,273
Stanford University	(b)	(b)	(b)	(b)	(b)	2,712	(b)	(b)	2,712

Abbreviations:

AFY = Acre-feet per year

CWS = California Water Service

Notes:

(a) Production data was obtained from the SWRCB for urban water suppliers as defined by DWR. Production data for suppliers that do not meet the definition of an urban water supplier was obtained from BAWSCA. This analysis only includes data starting in 2015 as this is the first year in which reliable data is available.

(b) Production data was not available.

Sources:

(1) SWRCB monthly reporting data dated 15 May 2023, accessed online via: https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.html.

(2) BAWSCA monthly reporting data, provided on 28 June 2023.

Table 3. Estimated Outdoor Water Use Proportion

VW Agencies	2015	2016	2017	2018	2019	2020	2021	2022
City of Gilroy	29%	34%	40%	36%	40%	41%	34%	33%
City of Milpitas	17%	19%	22%	22%	21%	20%	24%	21%
City of Morgan Hill	(a)A	42%	48%	45%	43%	49%	40%	38%
City of Mountain View	27%	39%	37%	32%	35%	33%	29%	33%
City of Palo Alto	34%	37%	47%	40%	39%	36%	41%	40%
City of Santa Clara	22%	28%	33%	26%	27%	28%	25%	23%
City of Sunnyvale	25%	30%	34%	30%	31%	30%	28%	28%
CWS Los Altos	42%	46%	53%	45%	46%	50%	42%	45%
Great Oaks Water Company	28%	30%	35%	31%	34%	(a)	31%	27%
Purissima Hills Water District	(a)	(a)	(a)	(a)	(a)	67%	(a)	(a)
San José Municipal Water	26%	29%	35%	35%	35%	34%	30%	30%
San Jose Water Company	26%	27%	33%	30%	33%	34%	28%	26%
Stanford University	(a)	(a)	(a)	(a)	(a)	55%	(a)	(a)

Abbreviations:

AFY = Acre-feet per year

CWS = California Water Service

Note:

(a) Production data were not available.

Table 4. Minimum Water Production Month by Agency

Agencies	Month (a)						
	2015	2016	2017	2018	2019	2020	2021
City of Gilroy	Dec	Jan	Feb	Dec	Feb	Jan	Dec
City of Milpitas	Dec	Jan	Jan	Mar	Dec	Jan	Dec
City of Morgan Hill	Dec	Jan	Feb	Mar	Dec	Jan	Dec
City of Mountain View	Nov	Jan	Apr	Jan	Dec	Jan	Jan
City of Palo Alto	Nov	Jan	Jan	Dec	Feb	Jan	Jan
City of Santa Clara	Nov	Jan	Jan	Dec	Jan	Jan	Jan
City of Sunnyvale	Oct	Jan	Feb	Jan	Dec	Jan	Dec
CWS Los Altos	Dec	Jan	Feb	Dec	Feb	Jan	Dec
Great Oaks Water Company	Dec	Jan	Feb	Jan	Feb	Jan	Dec
Purissima Hills Water District	(b)	(b)	(b)	(b)	(b)	Jan	(b)
San José Municipal Water	Dec	Dec	Feb	Dec	Feb	Jan	Dec
San Jose Water Company	Dec	Jan	Feb	Jan	Feb	Jan	Dec
Stanford University	(b)	(b)	(b)	(b)	(b)	Apr	(b)

Note:

(a) Monthly water production was normalized by the number of days in a month.

(b) Production data were not available

Table 5. Estimated Total Potable Water Production for Outdoor Use (AFY)

Agencies	2015	2016	2017	2018	2019	2020	2021	2022	Avg.
City of Gilroy	2,015	2,346	3,119	2,857	3,061	3,354	2,647	2,467	2,733
City of Milpitas	1,471	1,610	1,946	1,706	1,941	1,886	2,175	1,828	1,820
City of Morgan Hill	(a)	2,666	3,426	3,300	3,089	3,796	2,875	2,588	3,106
City of Mountain View	2,386	3,381	3,399	3,050	3,269	3,292	2,689	2,928	3,049
City of Palo Alto	3,287	3,648	5,093	4,363	4,161	4,072	4,516	4,507	4,206
City of Santa Clara	3,881	4,790	6,117	4,750	4,719	5,174	4,316	3,933	4,710
City of Sunnyvale	3,907	4,995	6,346	5,480	5,862	5,969	5,240	5,182	5,373
CWS Los Altos	4,296	4,691	6,174	5,544	5,505	6,558	4,802	4,869	5,305
Great Oaks Water Company	2,470	2,638	3,488	3,193	3,527	3,527 (b)	3,183	2,582	3,076
Purissima Hills Water District	(a)	(a)	(a)	(a)	(a)	1,382	(a)	(a)	1,382
San Jose Municipal Water	4,220	4,581	5,841	5,904	5,899	5,914	4,929	4,860	5,268
San Jose Water Company	27,158	28,457	36,802	34,707	37,542	41,825	31,645	27,503	33,205
Stanford University	(a)	(a)	(a)	(a)	(a)	1,500	(a)	(a)	1,500
Total	55,092	63,804	81,751	74,854	78,575	86,750	69,018	63,247	71,636

Abbreviations:

AFY = Acre-feet per year

CWS = California Water Service

Notes:

(a) Production data were not available.

(b) The estimated outdoor water demand of Great Oaks Water Company in 2020 is assumed to be similar to what it was in 2019.

As shown in **Table 5**, the total estimated outdoor water demand in the Valley Water service area in 2020 was approximately 85.4 TAFY. Assuming a 25% reduction after adjusting for the residual active savings from program implementation through 2040 for the irrigation sector⁹, the outdoor water reduction target would be 21 TAFY, as shown in **Table 6**.

⁹ The residual active savings in 2050 from program implementation through 2040 is estimated to be 0.433 TAFY per the "Business-As-Usual" without MWENDO Scenario.

Table 6. Outdoor Water Demand Reduction Target (TAFY)

	(a)	Values (b)	Unit
2020 Estimated Outdoor Demand	[A]	85.4	TAFY
2050 Active savings from past irrigation program implementation	[B]	0.4	TAFY
25% Reduction	[C]	21	TAFY

Notes:

(a) Values shown above are obtained by: $[C] = ([A] - [B]) * 25\%$.

(b) Total may not sum due to rounding.

3. PRELIMINARY LIST OF CONSERVATION MEASURES

As shown in **Attachment A**, a comprehensive list of potential Conservation measures were evaluated using the following criteria:

- Measures that were previously identified in the 2021 Strategic Plan as having high water savings potential (e.g., savings potential above the median of 90 AF of water savings in 2030).
- Measures that target key end uses (irrigation, cooling tower, pool, etc.), in particular end uses that will not be impacted by passive conservation savings.
- Measures provide alternative supplies (e.g., rainwater, graywater, etc.).
- Measures that break down known customer barriers to participation (e.g., direct install turf, Water Efficient Technologies [WET] program, and leak repair assistance) or benefit a potentially underserved segment of Valley Water's customer base, such as renters and/or low-income residential customers.
- Measures that leverage and/or maintain the benefits of Valley Water's investment in Advanced Metering Infrastructure (AMI).
- Previously considered and new measures of interest to Valley Water and/or that have been successfully implemented by other agencies.

As shown in **Table 6**, EKI then developed a preliminary list of 15 Conservation Measures for potential inclusion in the Master Plan Conservation Portfolio(s) that met the following criteria:

1. Existing measures with estimated water savings above the median water savings in 2030 that meets at least one of the additional criteria described above; or
2. Potential new measures, for which estimated water savings have not yet been calculated, that meet at least two of the additional criteria described above.

Table 7. Preliminary List of Conservation Measures

Measure	Sector	Current Program	Previously Evaluated	Estimated Savings in 2030 (AF) (a)
Large Landscape Water Budgets	IRR	Yes	Yes	5,197
Rain Sensors	IRR	Yes	Yes	110
Large Land. Irrigation Controller	IRR	Yes	Yes	255
Flow Sensor with Automatic Shutoffs/Dedicated Irrigation Meter	IRR	Yes	Yes	219
Agriculture Mobile Lab	OTH	Yes	Yes	2,000
WET	CII	Yes	Yes	154
AMI Leak Alert & Home Water Report	SFR	Yes	Yes	811
Large Landscape Program	IRR	Yes	Yes	104
Residential Irrigation Controller, SFR	IRR	Yes	Yes	358
Turf Replacement Rebate	IRR	Yes	Yes	396
Whole House Graywater/Reuse	SFR	No	No	TBD
Leak Assistance Program	SFR	No	No	TBD
Direct Install Turf Replacement, SRF/MFR	IRR	No	No	TBD
Pool Covers	IRR	No	No	TBD
Submetering (Multi-family and ADU)	MFR	No	No	18,615
<p>Abbreviations:</p> <p>ADU = additional dwelling unit AF = acre-feet AMI = Advanced Metering Infrastructure CCF = hundred cubic feet CII = Commercial, Industrial, and Institutional</p> <p>Notes:</p> <p>(a) The estimated savings in 2030 are provided for informational purposes, based on Table 6-8 of the 2021 Strategic Plan and studies conducted by Valley Water to evaluate savings generated for submetering. These values will be re-evaluated, or developed where not currently available, in the subsequent modeling effort.</p> <p>IRR = irrigation MFR = Multi-Family Residential OTH = other SFR = Single-Family Residential WET = Water Efficient Technologies</p>				

4. NEXT STEPS

Following Valley Water’s approval of the 2050 Targets and selection of ten Conservation Measures for further analysis, EKI will identify up to three Conservation Portfolios (e.g., one for each of the 2050 Targets) each with a different combination of four to six programs. Modeling will be completed, in coordination with M.Cubed, to assess the magnitude of implementation of the selected measures that would be required to achieve the level of savings required for each target, as well as the overall cost per acre-foot saved for each portfolio.

ATTACHMENTS

Tables

Table 1. Methodology and Assumptions for Calculating Savings Targets

Table 2. Total Potable Water Production (AFY)

Table 3. Estimated Outdoor Water Use Proportion

Table 4. Minimum Water Production Month by Agency

Table 5. Total Potable Water Production for Outdoor Use (AFY)

Table 6. Outdoor Water Demand Reduction Target

Table 7. Preliminary List of Conservation Measures

Figures

Figure 1. Projected Water Savings to Reach 2040 Targets

Figure 2. Potential 2050 Conservation Savings Targets – Active Savings

Figure 3. Potential 2050 Conservation Savings Targets – Active and Passive Savings

References

Valley Water, 2021. Water Conservation Strategic Plan, Valley Water, dated July 2021.



July 2021

Water Conservation Strategic Plan



Water Conservation Strategic Plan

Valley Water

July 2021
(EKI C00054.00)

Attachment 3
Page 2 of 2



Santa Clara Valley Water District

File No.: 23-1195

Agenda Date: 12/11/2023

Item No.: 4.3.

COMMITTEE AGENDA MEMORANDUM **Water Conservation and Demand Management Committee**

Government Code § 84308 Applies: Yes ☐ No ☒
(If "YES" Complete Attachment A - Gov. Code § 84308)

SUBJECT:

Update on State Regulations related to Water Conservation.

RECOMMENDATION:

Receive an overview of AB 1572 and SB 676. This is a discussion item only.

SUMMARY:

Governor Newsom recently signed into law two pieces of legislation, AB 1572 and SB 676, that relate to water conservation and residential landscaping. This item will summarize these two new bills which support Santa Clara Valley Water District's (Valley Water) water conservation goals and programs.

AB 1572

AB 1572 prohibits the use of potable water for the irrigation of non-functional turf (NFT) on commercial, industrial, and institutional (CII) properties. AB 1572 declares the use of potable water to irrigate NFT to be wasteful and incompatible with state policy relating to climate change, water conservation, and reduced reliance on the Sacramento-San Joaquin Delta ecosystem.

NFT is turf grass areas that are decorative and have no other functions, such as recreation. In addition to CII properties, the ban on irrigating NFT applies to common areas of homeowners' associations, common interest developments, and community service organizations or similar entities. AB 1572 does not affect residential lawns, parks, sports fields, cemeteries, or golf courses, nor does it prohibit the use of potable water necessary to ensure the health of trees and other perennial non-turf plantings, or to address an immediate health and safety need.

AB 1572 makes permanent a temporary drought-related emergency regulation banning the irrigation of NFT at CII properties that was put in place in June 2022 and set to expire in June 2024. The ban will take effect in a phased approach between 2027 through 2031. State and local government buildings must comply by January 2027; other institutional, commercial, and industrial sites must comply by January 2028; homeowners' associations and similar entities must comply by January

2029; lastly, NFT at local government buildings in disadvantaged communities must comply by January 2031, to the extent that state funding is available to support the conversion of NFT. Owners of large irrigated parcels will have to certify their compliance to the State Water Resources Control Board beginning in 2030.

AB 1572 authorizes a public water system, city, county, or city and county to enforce the new law. Primary enforcement authority is provided for Urban Retail Water Suppliers, with noncompliance subject to civil liability and penalties of up to \$500, or those imposed by a local ordinance. In the event an Urban Retail Water Supplier is not enforcing the provisions of the new law, Public Water Systems may also take enforcement action upon notifying the appropriate retail public water system 30 days prior to enforcement. Therefore, as a "Public Water System," Valley Water can take action where appropriate.

A ban on irrigating NFT is already included in Valley Water ordinance No. 23-02, which lists water waste prohibitions and defines enforcement measures for water conservation in Santa Clara County. The provisions of AB 1572 align with Valley Water's ordinance. Valley Water staff collaborated with our water retailers to interpret the ordinance language and develop a standalone resource document that outlines examples of NFT and property types the ban applies to (Attachment 2).

SB 676

SB 676 allows local government, including cities and counties, to prohibit the installation of artificial turf on residential properties. Prior legislation, enacted in 2015 as a drought response measure, prohibited local government from enacting or enforcing any ordinance or regulation that prohibits the installation of drought-tolerant landscaping, synthetic grass, or artificial turf; this new law removes the reference to synthetic grass and artificial turf. The driving force behind this change is due to the environmental and health concerns associated with the carcinogenic chemicals commonly found in artificial turf.

SB 676 does not apply to common areas of homeowners' associations, commercial properties, or recreational sites such as parks and playing fields.

The installation of artificial turf is not permitted as part of Valley Water's Landscape Rebate Program, which helps properties convert their turf to drought-tolerant landscaping. Staff developed an artificial turf fact sheet to help educate customers who inquire about artificial turf as a means of conserving water (Attachment 3).

Conclusion

AB 1572 and SB 676 support Valley Water's goals of water conservation, environmental stewardship, and are expected to lead to increased participation in our water conservation programs.

ENVIRONMENTAL JUSTICE IMPACT:

Water conservation offers a range of environmental justice benefits by promoting equitable access to clean water, reducing pollution, protecting ecosystems, mitigating climate change, saving costs for

vulnerable communities, enhancing drought resilience, and empowering residents with knowledge and skills for sustainable water use. Valley Water provides such water conservation information in multiple languages and via various outreach techniques to reach all members of our community. Valley Water acknowledges that during drought, disadvantaged communities may be disproportionately impacted. To address these impacts, Valley Water promotes access to equitable and affordable water supplies (Water Supply Goal 2.6). Valley Water offers specific programs, such as the Lawn Busters program to provide water-efficient landscapes to low-income, elderly, disabled or veteran homeowners and schools within disadvantaged communities.

ATTACHMENTS:

Attachment 1: Power Point Presentation

Attachment 2: Definitions of Functional and Non-Functional Turf

Attachment 3: Artificial Turf Fact Sheet

UNCLASSIFIED MANAGER:

Kirsten Struve, 408-630-3138



Update on State Regulations

Water Conservation and Demand Management Committee, December 11, 2023
Presented by: Phil Dolan, Water Conservation Specialist III



State Regulations

- AB 1572 – ban on irrigating non-functional turf
- SB 676 – allows local ban on installing artificial turf

AB 1572

- Prohibits irrigation of non-functional turf at CII sites
- Phased approach between 2027-2031
- Primary enforcement through water retailers



AB 1572 & Valley Water Ordinance

4

- NFT prohibition included in Valley Water ordinance No. 23-02
- Collaborated with water retailers to develop a resource document with examples of NFT and applicable properties

SB 676

- Allows local government to prohibit installation of artificial turf on residential properties
- Health concerns associated with artificial turf
- Aligns with Landscape Rebate Program requirements



Conclusion

- AB 1572 and SB 676 support our goals of water conservation and environmental stewardship
- Conservation programs available to provide incentives and resources for compliance
- Expect to see increase in program participation

QUESTIONS



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Definitions of Functional and Non-Functional Turf



Under the Executive Order N-7-22, to prevent the unreasonable use of water and to promote water conservation, **the use of potable water is prohibited for the irrigation of non-functional turf at commercial, industrial, and institutional sites (CII)**. Non-functional turf cannot be watered with potable water unless watering occurs directly under the canopy of a tree or shrub.



Example of functional turf.

Functional turf is defined as turf grass that is:

- Needed to serve a human function, including, use for recreational purposes, civic or community events.
- On the property of a single-family home.
- On the property of a park used for sport, gathering, or recreation.
- On a golf course used directly for sport (driving ranges, chipping, and putting greens, tee boxes, greens, fairways and rough).
- On a school field used for sport, gathering, or recreation.
- On a sports field.
- Needed for pet relief at veterinarian offices, boarding facilities and animal shelters.
- Within cemeteries used for visitation and gathering.
- A species of turf that has a plant factor ≤ 0.3 per the California Code of Regulations Section 491 Title 23.
- Watered directly beneath tree canopies and shrubs.



Example of non-functional turf.

Non-functional turf is irrigated lawn grass area not meeting the definition of functional turf.














Non-functional turf includes, but is not limited to:

- Streetscape turf:
 - » Along private or public streets, including turf that is owned and maintained by the city/ municipality (e.g., mow strips on either side of street).
 - » Along streetscape sidewalks (narrow spaces of turf that line the sidewalk).
 - » Along driveways and parking lots.
 - » Within community, and business streetscape frontage areas.
 - » Within medians and roundabouts.
- Turf that is solely ornamental.
- Other turf that is not functional turf, as defined on the left.



Example of CII non-functional lawn.

CII properties include, but are not limited to:

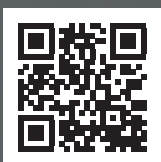
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|  | Homeowner association owned properties, common areas of mobile home parks, and apartment, condominium, and townhome complexes. |  | Restaurants |
|  | Manufacturing plants and facilities |  | Grocery stores |
|  | Industrial and commercial construction sites |  | Educational institutions |
|  | Retail and shopping malls |  | Sporting arenas |
|  | Hospitals |  | Office buildings |
|  | Religious institutions |  | Other properties that provide commercial, industrial, and institutional services. |
|  | Government facilities (including parks but not sports fields). | | |

Questions?

Please contact us via email at **WaterWise@valleywater.org** or by calling **408-630-2000**.

CONTACT US

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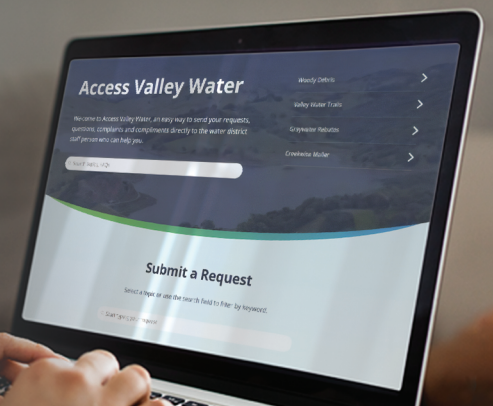
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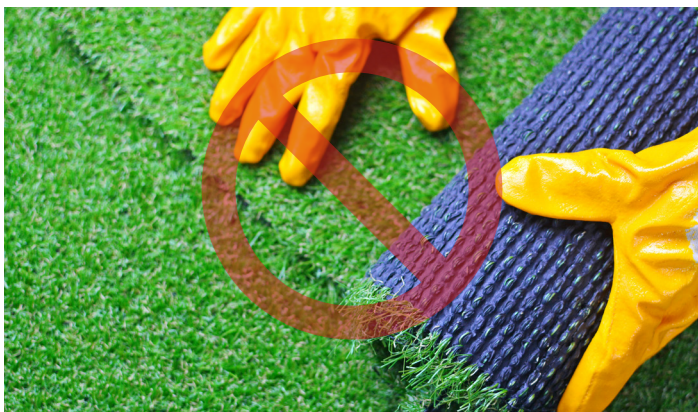


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Artificial grass lawn turf does not meet goals set forth by Valley Water's Landscape Rebate Program.

Through the Landscape Rebate Program, Valley Water promotes water conservation and encourages the installation of sustainable landscapes that enhance our local environment. As stewards of our entire watershed, we have designed our program to go beyond saving water. While **artificial turf** may require less water than natural turf, it does not meet the Landscape Rebate Program's sustainability goals and **will not qualify** for the following reasons:

Artificial turf is not a living landscape and does not:

- Increase biodiversity of plant, animal and insect populations.
- Provide habitat for local fauna.
- Foster healthy soils, which increase moisture-holding capacity, support healthy microbes/insects and improve water quality.
- Sequester carbon or produce oxygen like living plants.

Artificial turf has potential environmental concerns:

- Runoff from artificial turf may contain heavy metals, chemicals and other pollutants that can reach surface water or groundwater and potentially harm wildlife.
- Artificial turf, a plastic product, has a relatively short

lifespan of approximately 10 to 20 years and may eventually end up in landfills.

- Artificial turf can get significantly hotter than surrounding air temperatures, contributing to the urban heat island effect by increasing air temperatures in urban settings.

Artificial turf is not water free:

- It must be cleaned periodically with water and sometimes harsher chemicals.
- Artificial turf used as playing fields in direct sunlight can reach temperatures over 160° F may require frequent, heavy irrigation to cool it down.

Artificial Turf has potential health and safety concerns:

- The temperature of artificial turf playing fields on hot sunny days averages over 140° F, making heat-related injuries such as burns and heat illnesses a risk.
- Heat safety concerns may limit playing field usage to cooler early mornings and evenings to avoid peak-high temperatures.
- Studies show an increased rate of injury on artificial turf playing fields compared to natural turf playing fields.



Transformed native garden of a Landscape Rebate Program recipient in San Jose's Alum Rock neighborhood.

Fortunately, the Landscape Rebate Program allows for many beautiful, low water using options that result in sustainable and beneficial landscapes. For additional information about the program or our extensive Qualifying Plant List, please call the Water Conservation Hotline at **408-630-2554** or visit **watersavings.org**.



Transformed native garden of a Landscape Rebate Program recipient in San Jose's Willow Glen neighborhood.

Sources

1. *Artificial Turf: Environment & Human Health, inc.* Environment & Human Health, Inc. EHHL. (n.d.). Retrieved April 4, 2022, from <http://www.ehhi.org/reports/turf/>
2. Paliobeis, A., Sivasundaram, L., Knapik, D. M., Labelle, M. W., Olson, M., Karns, M. R., Salata, M. J., & Voos, J. E. (2021, July). *Injury incidence is higher on artificial turf compared with natural grass in high school athletes: A retrospective cohort study*. Research Profiles at Washington University School of Medicine. Retrieved April 4, 2022, from <https://profiles.wustl.edu/en/publications/injury-incidence-is-higher-on-artificial-turf-compared-with-natur>
3. *STC Guidelines for Minimizing the Risk of Heat-Related Illness* (2013). Synthetic Turf Council. (n.d.). Retrieved April 4, 2022, from <https://www.syntheticurfCouncil.org/store/viewproduct.aspx?id=17587509>
4. *Studies and reports*. Santa Clara Valley Water. (n.d.). Retrieved April 4, 2022, from <https://www.valleywater.org/droughtsaving-water/studies-and-reports>
5. *Synthetic Turf Heat Evaluation – Progress Report*. (2012, January). Penn State Center for Sports Surface Research. Retrieved April 7, 2022, from <https://plantscience.psu.edu/research/centers/ssrc/documents/heat-progress-report.pdf>
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7. *A ubiquitous tire rubber-derived chemical induces acute mortality in coho salmon*. Science. (2020, December 5). Retrieved April 4, 2022, from <https://www.science.org/doi/10.1126/science.abd6951>

Questions?

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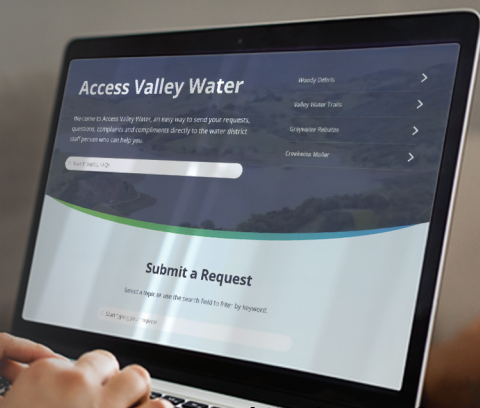
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Santa Clara Valley Water District

File No.: 23-1202

Agenda Date: 12/11/2023

Item No.: 4.4.

COMMITTEE AGENDA MEMORANDUM **Water Conservation and Demand Management Committee**

Government Code § 84308 Applies: Yes ☐ No ☒
(If "YES" Complete Attachment A - Gov. Code § 84308)

SUBJECT:

Review the Water Conservation and Demand Management Committee (WCaDMC) 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.

ENVIRONMENTAL JUSTICE IMPACT:

There are no Environmental Justice impacts associated with this item.

ATTACHMENTS:

Attachment 1: WCaDMC 2023 Work Plan

UNCLASSIFIED MANAGER:

Candice Kwok-Smith, 408-630-3193

WCaDMC 2023 WORKPLAN

Task	Agenda Item	January	February	March	April	May	June	July-Aug. meeting	August	September	October	November	December
FY 23 Drought Response													
1.1	Monthly Drought Status			X	X	X							
1.2	Drought Response Plan						X						
1.3	Outreach Efforts.			X									
FY 23 WSMP Strategy 1: Secure Existing Supplies - 99,000 AF Conservation by 2030													
2.1	Annual Water Conservation Savings				X								
2.2	Water Conservation Strategic Plan			X									
2.3	Water Conservation Savings Model			X									
2.4	Water Conservation as a Way of Life recommendations (including water waste restrictions)						X						X
2.5	New Programs (Lawn Busters, Pilot programs, landscape design assistance)				X					X			
2.6	Outreach (including to Renters/Landlords)									X			
2.7	SCW funding (Safe Clean Water Conservation Program - Project A2: Water Conservation Rebates and Programs Update)								X				
2.8	Affordability discussion/supporting underserved communities									X			
2.9	Collaboration with retailers												X
2.1	Demand Model and water use data								X				
FY 23 WSMP Strategy 2: Increase Water Conservation (109,000 AF) and Stormwater Capture (1,000 AF) by 2040													
3.1	Investments in no-regrets package/stormwater resource plan implementation								X				
3.2	Collaboration with UC Water on Flood Managed Aquifer Recharge (Flood MAR)								X				
3.3	Find opportunities to ensure new development has improved water wise features (MWENDO, land use coordination)										X		
3.4	Resource Needs										X		
3.5	Review long-term goals as part of WSMP update												X
FY 23 WSMP Strategy 3 Optimize the Use of Existing Supplies and Infrastructure													
4.1	Sustainable Groundwater Management Act (SGMA) - annual update										X		
4.2	South County Recharge												
4.3	Well control zone for Purified Water Project												
FY 23 Other Demand Management Items													
5.1													
5.2													

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