



Santa Clara Valley Water District

File No.: 21-0315

Agenda Date: 3/19/2021

Item No.: 6.

BOARD AGENDA MEMORANDUM

SUBJECT:

Overview on Water Supply Planning and Water Charge Setting Processes.

RECOMMENDATION:

Receive information on the Santa Clara Valley Water District's (Valley Water's) water supply planning efforts and the Fiscal Year 2021-22 water charge setting.

SUMMARY:

Water Supply Planning Overview

The Santa Clara Valley Water District (Valley Water) serves all of Santa Clara County (County), providing groundwater management, wholesale water supply, flood protection, and stream stewardship services. Valley Water was originally formed in 1929 to manage groundwater in response to groundwater overdraft and land subsidence. Maintaining groundwater supplies and avoiding land subsidence continue to be the core function of the water supply program.

Originally, the County relied solely on local runoff patterns and natural recharge. However, these were insufficient to maintain groundwater levels. Between the 1930s and 1950s, Valley Water constructed 10 dams to store winter rains for use later in the year. Initially, these efforts were sufficient. However, the post-World War II development boom increased demands, and local supplies were no longer sufficient to meet the County's needs. Valley Water began importing water in the 1960s, first from the State Water Project through the South Bay Aqueduct from the north and then from the federal Central Valley Project via San Luis Reservoir in the 1980s.

Valley Water expanded its water conservation and recycled/ purified water programs in the 1990s in response to a prolonged drought and continued increases in water demands. Valley Water implements nearly 20 different ongoing water conservation programs that use a mix of incentives and rebates, free device installation, one-on-one home visits, site surveys, and educational outreach to reduce water consumption in homes, businesses and agriculture. These programs are designed to achieve sustainable, long-term water savings and are implemented regardless of water supply conditions.

Valley Water's water supply infrastructure system can deliver about 300 million gallons (about 900

acre-feet) of raw water and 200 million gallons (about 600 acre-feet) of treated drinking water every day. Valley Water's distribution system includes 10 reservoirs, 3 pump stations, 142 miles of pipelines, 3 water treatment plants, 1 water purification center, 393 acres of recharge ponds, and 275 miles of jurisdictional streams.

Currently, the County's water supply portfolio includes 50 percent imported water sources, 30 percent local water sources (groundwater, surface water), 15 percent conservation, and 5 percent recycled water. If Valley Water, water retailers and the community were not implementing aggressive water conservation programs, water use in the County would be more than 74,000 AFY (baseline year is 1992) higher. This includes reducing water use by 22 percent since 2015. Water use efficiency programs reduce demand on existing water and energy supplies, helping to lessen the cost and environmental impacts of developing additional supplies.

Current and Future Water Supply Planning

In 2019, the Board adopted the [Water Supply Master Plan <https://www.valleywater.org/your-water/water-supply-planning/water-supply-master-plan>](https://www.valleywater.org/your-water/water-supply-planning/water-supply-master-plan) (Master Plan), which outlines Valley Water's strategy for providing a reliable and sustainable future water supply in a cost-effective manner. It describes the new water supply investments Valley Water is planning to make, the anticipated schedule, and the associated costs and benefits based on Valley Water's "Ensure Sustainability" strategy:

1. Secure existing supplies and infrastructure;
2. Expand the water conservation and reuse; and
3. Optimize the use of existing supplies and infrastructure.

A critical piece of the Master Plan is a process to monitor and report to the Board on the demands, supplies, and status of projects and programs. This is conducted through the annual Monitoring and Assessment Plan (MAP). The MAP integrates new information and tracks changes forecasted for existing water supplies (e.g., imported contract supplies, local water supplies and infrastructure, etc.), potential future water supply projects, and forecasted demands. MAP helps ensure Valley Water is effectively and efficiently implementing the Master Plan and includes a report to the Board at least annually.

As part of the [2020 MAP <https://scvwd.legistar.com/LegislationDetail.aspx?ID=4675428&GUID=FB5FDC6D-CF1F-46ED-98A2-860F53697942&Options=&Search=>](https://scvwd.legistar.com/LegislationDetail.aspx?ID=4675428&GUID=FB5FDC6D-CF1F-46ED-98A2-860F53697942&Options=&Search=>) Board update, Valley Water presented the results of its new demand model which integrates the understanding of historic water use trends and water use rebounds after droughts. Valley Water experienced a small water use rebound in 2017 but water use has remained relatively stable since then. MAP recommended assuming a 50% water use rebound through 2025, resulting in a 2040 demand forecast of approximately 335,000 acre-foot (AF), approximately 54,000 AF lower than the forecast in the Master Plan. Valley Water is currently refining its climate change analysis and how each water supply project may perform under different future climate scenarios. The next MAP update will be brought to the Board in summer 2021. The Board uses the MAP report to support annual strategic planning that informs the annual water rate setting, Capital Improvement Program (CIP), and budget processes.

Drought Monitor

Santa Clara County is in its second year of below normal precipitation and to date has received below average State Water Project and Central Valley Project water supply allocations. Due to Valley Water's strong groundwater recharge program, our current groundwater conditions are in the normal range¹ but water levels have declined because of the recent dry conditions (Attachment 1). To be proactive and agile to water supply conditions, Valley Water staff are holding biweekly water supply outlook and operations meetings, launching a water conservation outreach campaign, coordinating with cities and retailers on drought communication collateral, and securing additional supplemental water supplies.

Next Steps

Valley Water will present on its current water supply conditions and future water supply outlook under different precipitation scenarios in April. As part of this presentation, the Board may contemplate modifying the current 20% voluntary call for water conservation or establishing a new mandatory call for water rationing. Opportunities for cities to support Valley Water's campaign to making conservation a California way of life include:

- Partnering to promote water conservation programs and rebates, and
- Consider/evaluate ordinances that promote water conservation (i.e., Model Water Efficient New Development Ordinance (MWENDO)).

Additionally, the next annual MAP update to the Board is scheduled for summer 2021.

Water Charge Setting Process Overview

This overview will focus on the North County Zone W-2 groundwater benefit zone, which is generally defined as the portion of the county north of Metcalf Road and includes the majority of the City of San Jose.

As a reminder, the Board elected to forego rate increases for FY 2020-21 due to the impact of COVID-19 on our community. For FY 2021-22 (FY 22), staff has proposed an increase of up to 9.6% in the North County (Zone W-2) Municipal and Industrial groundwater production charge from \$1,374/AF to \$1,506/AF. The proposal equates to a monthly bill increase for the average household of \$4.55 or about 15 cents a day. This impact does not include any increase that a retail water provider may add.

The recommended increases in water charges are necessary to pay for supplemental water purchases in preparation for drought, investments in water supply infrastructure rehabilitation and upgrades, and new water supply reliability investments. The need to purchase supplemental water is driven by the fact that the next drought appears to be on our doorstep, coupled with the recent lowering of water levels at Anderson Reservoir.

¹ Stage 1 of the Water Shortage Contingency Plan, Chapter 8 of "Valley Waters Urban Water Management Plan" <<https://www.valleywater.org/your-water/water-supply-planning/urban-water-management-plan>>.

Key infrastructure rehabilitation investments include the Anderson Dam Seismic Retrofit, which is a \$650 million project that will help ensure public safety and bolster future water supply reliability, and the \$360 million Rinconada Water Treatment Plant upgrade, which is more than halfway complete and will extend the plant's service life for the next 50 years as well as increase production capacity by up to 25%. Also, roughly \$66 million is planned to be spent over the next 10 years to solve the statewide issue of the Bay Delta, where 40% of the county's current water supply travels through. A key water supply reliability investment is Valley Water's effort to forge its first public-private partnership (P3) on a roughly \$600 million investment for expanded recycled and purified water that would bring up to 12,000 AF of new water supply to the County each year. Additionally, the Pacheco Reservoir Expansion project, estimated to cost roughly \$2.5 billion, would provide an additional 80,000 acre-feet of water storage capacity.

For reference purposes, given the size of the Pacheco Reservoir Expansion project investment, staff has also prepared an alternative rate projection scenario that shows the impact to the water rate projection if the Pacheco Reservoir Expansion Project were excluded. Under that scenario, the increase to the North County (Zone W-2) Municipal and Industrial groundwater production charge would be 8.5% instead of 9.6% for FY 22 and the next 7 years into the future. In this case, the increase to the monthly bill for the average household in FY 22 would be \$4.02.

In summary, the proposed maximum groundwater production charge for FY 22 is driven by drought preparation, water supply infrastructure rehabilitation investments and water supply reliability investments.

FINANCIAL IMPACT:

There is no direct financial impact associated with this item at this time; however, if proposed water charges are adopted, the Water Utility Enterprise should have sufficient funding for planned operations and capital improvement projects for FY 2021-22

CEQA:

The recommended action does not constitute a project under CEQA because it does not have the potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

ATTACHMENTS:

Attachment 1: March Water Tracker

Attachment 2: Power Point, Water Supply Planning

Attachment 3: Power Point, FY22 Water Charge Setting Process

UNCLASSIFIED MANAGER:

Aaron Baker, SCVWD COO, 408-630-2135

Darin Taylor, SCVWD CFO, 408-630-3068

Outlook as of March 1, 2021

We began calendar year 2021 with groundwater storage within Stage 1 (Normal) of the Water Shortage Contingency Plan of Valley Water. Despite well below-normal local rainfall and statewide snowpack, end of year groundwater storage for 2021 is currently projected to be within Stage 1 by supplementing our normal supplies with additional imported water. Anderson Reservoir storage has been at deadpool since December 2020 in compliance with the Federal Energy Regulatory Commission (FERC) order. Water released from Anderson Reservoir went to beneficial use.

Weather

Rainfall in San José:

- Month of February, City of San José = 0.36 inches
- Rainfall year total = 4.61 inches or 45% of average to date (rainfall year is July 1 to June 30)

Snowfall in the Northern Sierra:

- March 2 snowpack was 62% of normal for this date and 56% of April 1 average

Local Reservoirs

- Total March 1 storage = 27,675 acre-feet
 - » 30% of 20-year average for that date
 - » 17% of total unrestricted capacity
 - » 44% of restricted capacity (166,140 acre-feet total storage capacity limited by seismic restrictions to 62,362 acre-feet. The restricted capacity includes the added FERC dam safety restriction on Anderson Reservoir effective October 1, 2020)
- Approximately 480 acre-feet of imported water delivered into Calero Reservoir during February 2021.
- Approximately 310 acre-feet of water released from Anderson Reservoir during February 2021. Since the FERC order to drawdown Anderson Reservoir was issued on February 20, 2020, cumulative release from Anderson is approximately 29,340 acre-feet. Anderson has reached deadpool. Majority of released water was used for groundwater recharge and delivery to water treatment plants (based on preliminary hydrologic data). Current releases are for water supply and environmental purposes
- Total estimated releases to streams (local and imported water) during February was 4,340 acre-feet (based on preliminary hydrologic data)

Groundwater

- Current groundwater conditions are in the normal range, but water levels and storage have declined because of recent dry conditions. Total storage at the end of 2021 is projected to be in Stage 1 (Normal) of Valley Water's Water Shortage Contingency Plan with the projected purchase of additional supplemental imported water

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
February 2021 managed recharge estimate (AF)	3,300	950	1,000
January to February 2021 managed recharge estimate (AF)	7,150	2,100	2,350
January to February 2021 managed recharge as % of 5-year average	103%	87%	109%
January 2021 pumping estimate (AF)	5,500	550	2,000
January 2021 pumping as % of 5-year average	138%	75%	114%
Current groundwater index levels compared to last February	Lower	Lower	Lower

AF = acre-feet

Imported Water

- Initial 2021 State Water Project (SWP) and Central Valley Project (CVP) allocations:
 - » 2021 SWP allocation of 10%, which provides 10,000 acre-feet to Valley Water
 - » 2021 South-of-Delta CVP allocations are 55% for M&I and 5% for Agriculture, which provides 73,155 acre-feet to Valley Water
- Statewide reservoir storage information, as of March 1, 2021:
 - » Shasta Reservoir at 50% of capacity (68% of average for this date)
 - » Oroville Reservoir at 38% of capacity (55% of average for this date)
 - » San Luis Reservoir at 58% of capacity (68% of average for this date)
- Valley Water's Semitropic groundwater bank reserves are at 95% of capacity, or 333,170 acre-feet, as of January 31, 2021
- Estimated SFPUC deliveries to Santa Clara County:
 - » Month of January = 2,903 acre-feet
 - » Five-year annual average = 48,700 acre-feet
- Board Governance Policy No. EL-5.3.3 includes keeping the Board informed of imported water management activities on an ongoing basis. Three imported water agreements were executed under EL-5.3.3 since the last Water Tracker update

Treated Water

- Below average demands of 4,942 acre-feet delivered in February
- This total is 94% of the five-year average for the month of February
- Year-to-date estimated deliveries are 10,446 acre-feet or 97% of the five-year average

Conserved Water

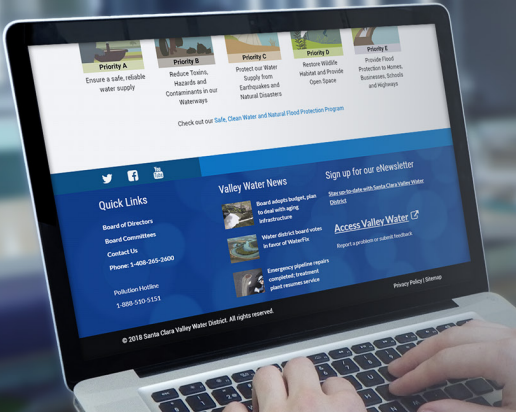
- Saved 74,198 acre-feet in FY20 from long-term program (baseline year is 1992)
- Long-term program goal is to save nearly 100,000 acre-feet by 2030 and 110,000 acre-feet by 2040
- The Board continues its call for a 20% reduction and a limit of three days per week for irrigation of ornamental landscape with potable water
- Through January, achieved a 2% reduction in water use in calendar year 2021, compared to 2013

Recycled Water

- Estimated February 2021 production = 814 acre-feet
- Estimated year-to-date through February = 1,574 acre-feet or 99% of the five-year average
- Silicon Valley Advanced Water Purification Center produced an estimated 1.6 billion gallons (4,864 acre-feet) of purified water in 2020. Since the beginning of 2021, about 442 acre-feet of purified water has been produced. The purified water is blended with existing tertiary recycled water for South Bay Water Recycling Program customers

Alternative Sources

- As of December 10, 2019, Valley Water's wastewater contract right from Palo Alto/Mountain View remains at 10,000 acre-feet/year



CONTACT US

For more information, contact **Customer Relations** at **(408) 630-2880**, or visit our website at valleywater.org and use our **Access Valley Water** customer request and information system. With three easy steps, you can use this service to find out the latest information on district projects or to submit questions, complaints or compliments directly to a district staff person.

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Valley Water

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Overview on Water Supply Planning

Presented by: **Aaron Baker**, Chief Operating Officer

March 19, 2021 - Special Joint Meeting with San Jose City Council

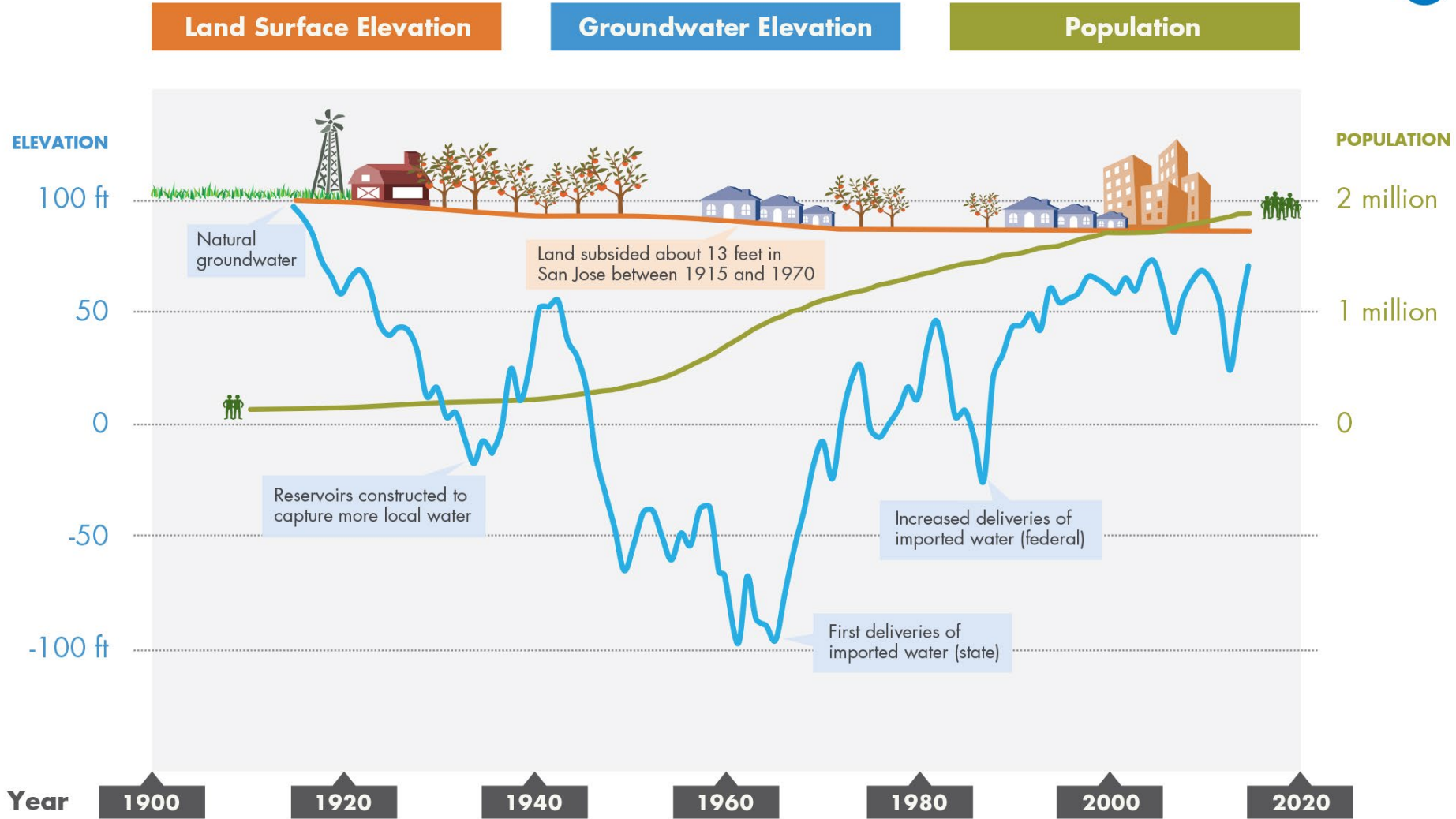
SANTA CLARA COUNTY GROUNDWATER AT-A-GLANCE

a graphic representation not intended as a technical exhibit

Santa Clara Valley
Water District



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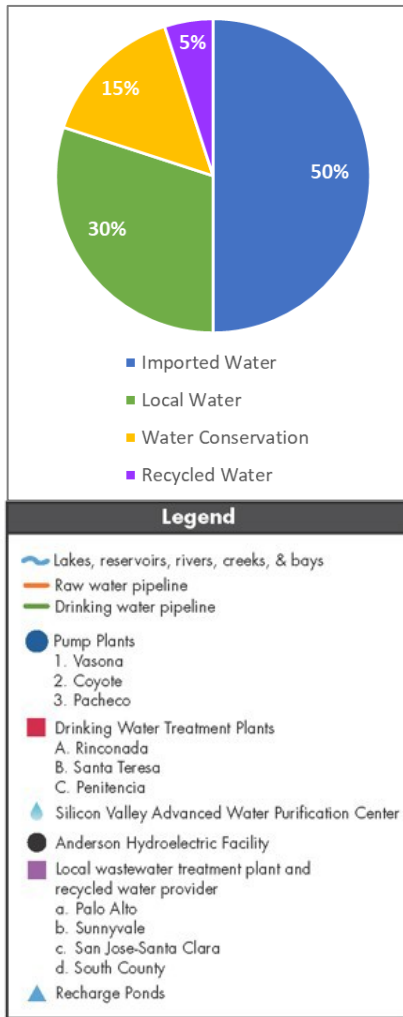


valleywater.org

Last updated January 27, 2017



A Comprehensive, Flexible Water System 4



10 reservoirs
3 pump stations
142 miles of pipelines
3 water treatment plants
1 water purification center
393 acres of recharge ponds
\$7.1B System Replacement Value

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Diversified Portfolio for a Reliable Supply

5

IMPORTED WATER



LOCALS SURFACE & GROUNDWATER



CONSERVATION



RECYCLED WATER

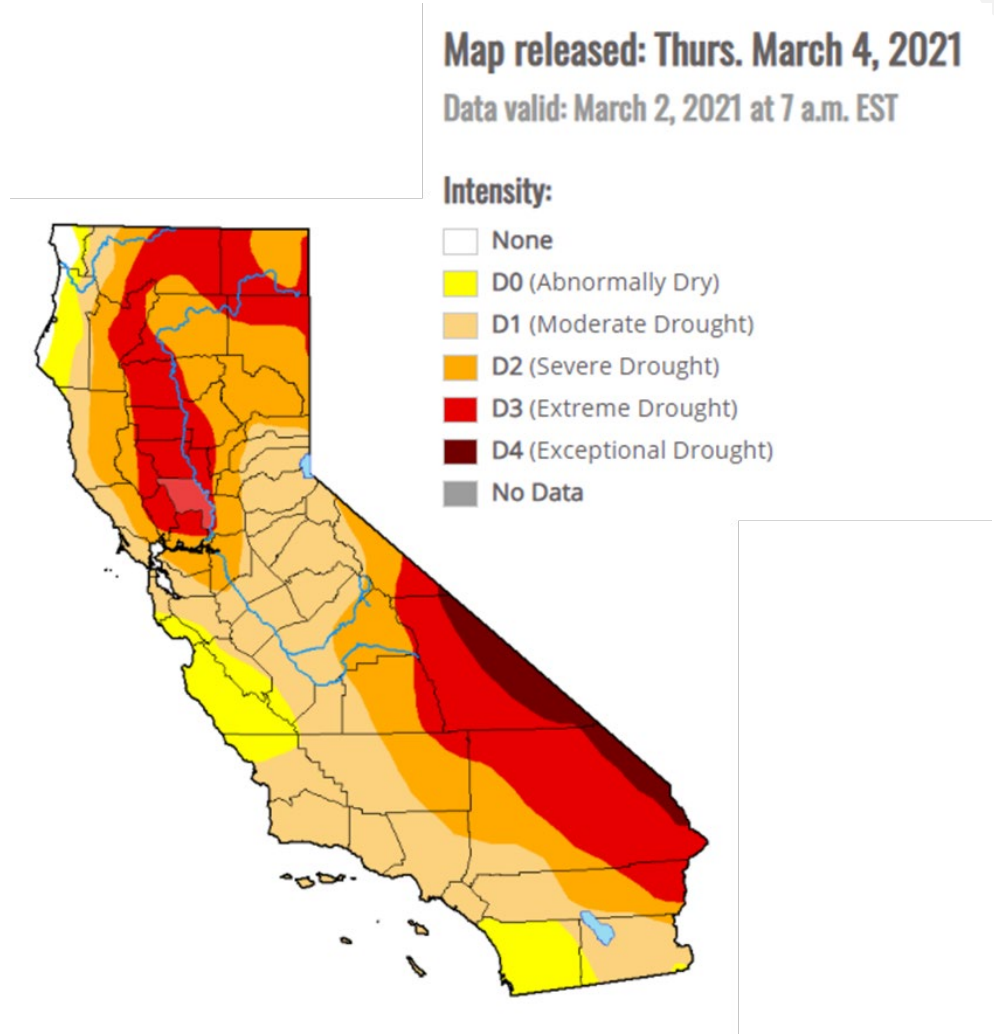


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Drought Monitor

- Rainfall: 45% of avg. (4.61 inches)
- Snowpack: 62%
- Local Reservoir Storage: 44% of restricted capacity
- SWP/CVP Allocations: 10% and 55%/5%

Total groundwater storage at end of 2021 is projected to be in Stage 1 (Normal) of Water Shortage Contingency Plan.



Water Supply Master Plan

Ensure Sustainability Strategy

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1. Secure
existing
supplies and
infrastructure



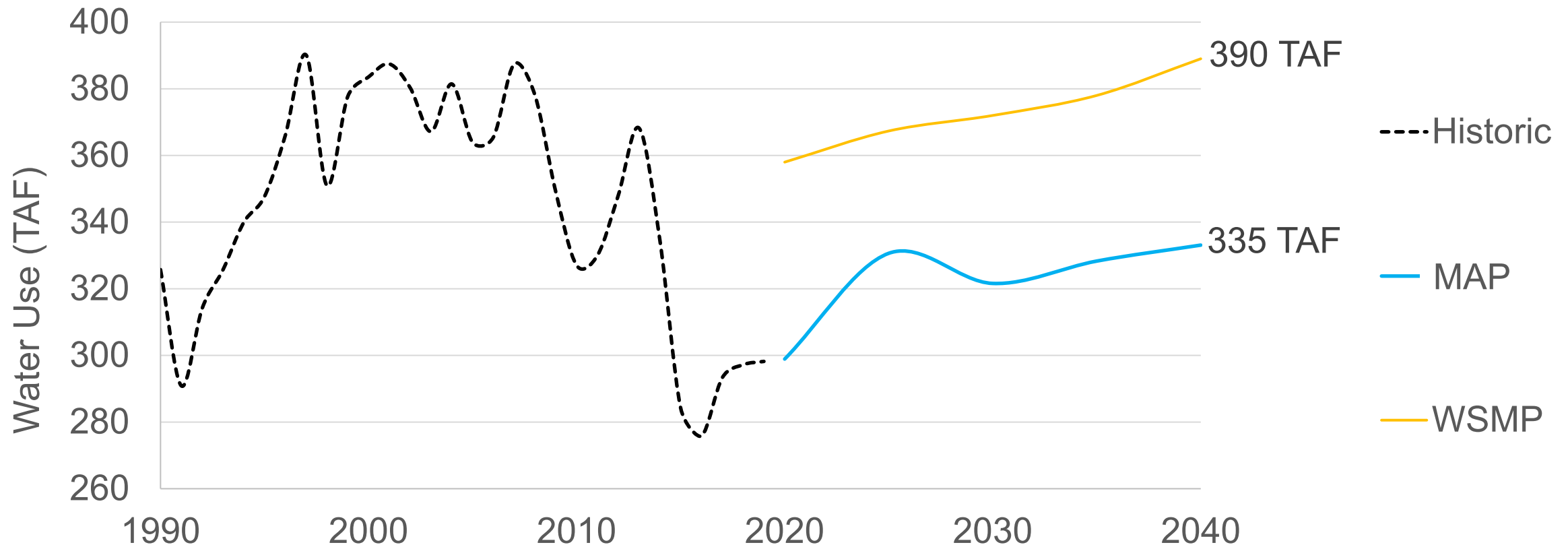
2. Expand
conservation
and reuse



3. Optimize
the system

Historic and Projected Water Use (Including Water Conservation)

8



Manage Unknowns and Risks

9

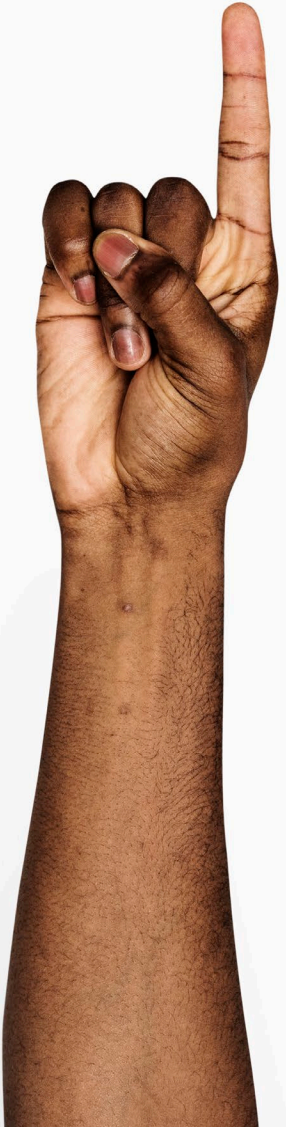


Next Steps

- Collaborate on drought communication
- Promote water conservation programs and rebates
- Support water conservation ordinances (i.e., MWENDO*)
- Annual Water Supply Conditions and Outlook – spring 2021
- Draft Monitoring and Assessment Plan (MAP) – summer 2021

*Model Water Efficient New Development Ordinance (MWENDO)

QUESTIONS





Valley Water

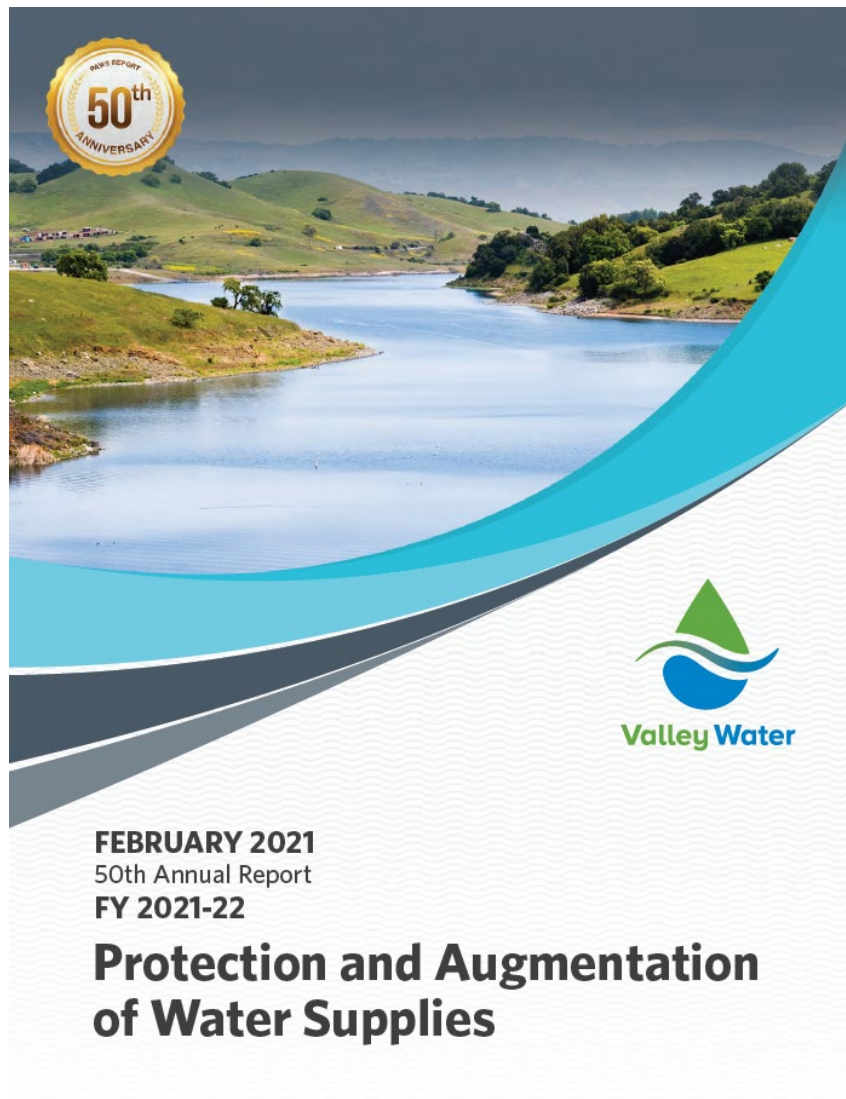
Clean Water • Healthy Environment • Flood Protection

FY22 Water Charge Setting Process Overview

Special Joint Meeting With San Jose City Council

March 19, 2021

50th Annual Report Released



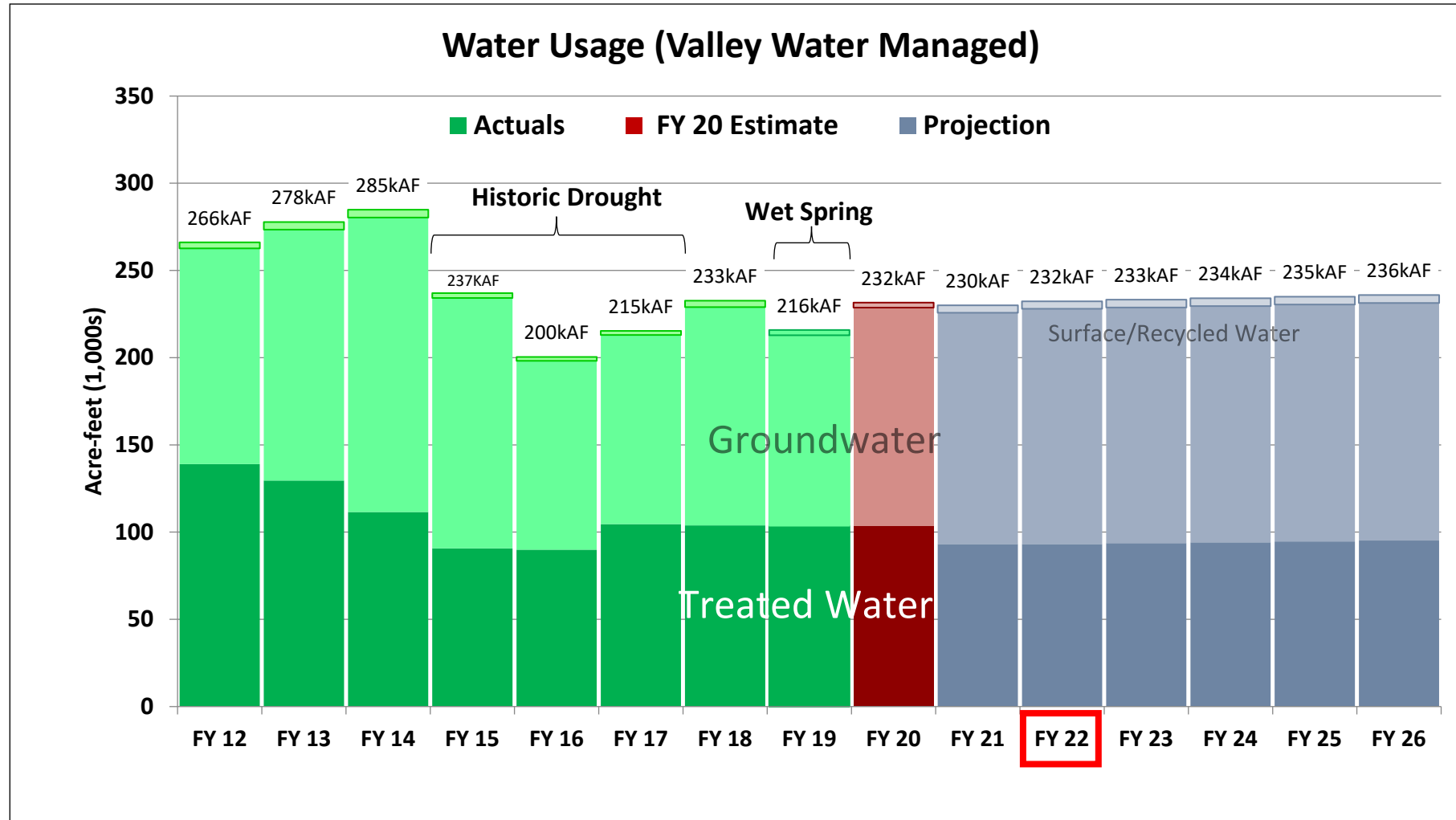
Annual Protection and Augmentation of Water Supplies Report provides information & accountability

Filed February 26, 2021

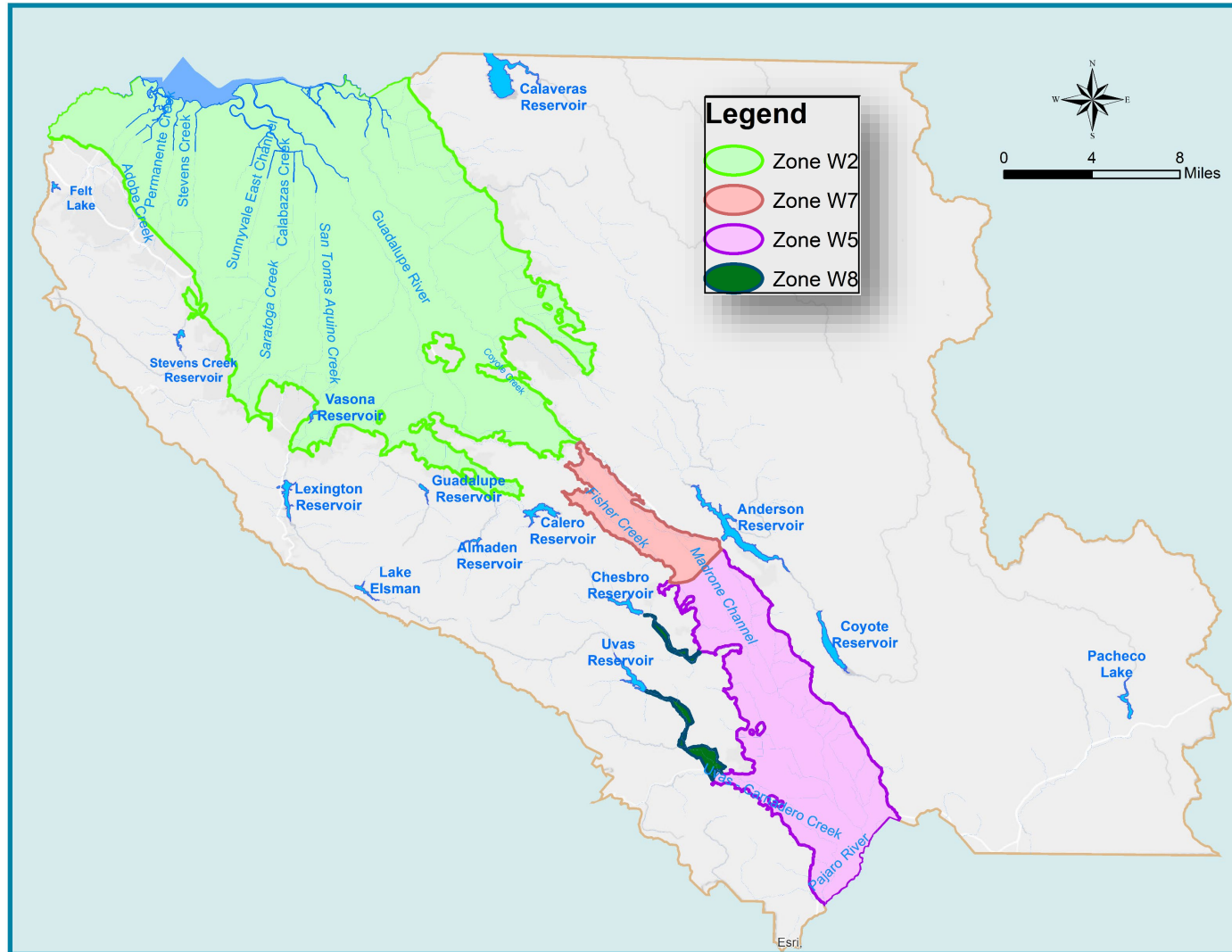
Available online:

<https://www.valleywater.org/ProposedWaterCharges>

Water Usage (Valley Water Managed)



Background



- Groundwater charges are levied within a zone for benefits received
 - Modified zones shown became effective on 7/1/2020

Scenario Assumptions

1) Baseline: Pacheco + PWP P3 *Staff Recommendation*

- ▶ Baseline Projects*
- ▶ Delta Conveyance (3.23% participation)
- ▶ Anderson Dam Seismic Retrofit
- ▶ Potable Reuse Phase 1 to produce 9-12KAF by FY 28
- ▶ Pacheco Reservoir
 - ▶ \$485M Proposition 1 grant
 - ▶ WIFIA loan for 49%
 - ▶ Partner Agencies pay 20% of project
- ▶ Master Plan Projects Placeholder**:
 - ▶ Assumes \$346M from FY22-FY31, mainly after 5 Year CIP

2) Baseline without Pacheco

- ▶ Baseline Projects*
- ▶ Delta Conveyance (3.23% participation)
- ▶ Anderson Dam Seismic Retrofit
- ▶ Potable Reuse Phase 1 to produce 9-12KAF by FY 28
- ~~▶ Pacheco Reservoir~~
 - ~~▶ \$485M Proposition 1 grant~~
 - ~~▶ WIFIA loan for 49%~~
 - ~~▶ Partner Agencies pay 20% of project~~
- ▶ Master Plan Project Placeholder**:
 - ▶ Assumes \$346M from FY22-FY31, mainly after 5 Year CIP

Max Proposed Groundwater Charge Increases

North County Zone W-2 Baseline Scenario: Pacheco + Purified Water Program (via P3)

	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
M&I Groundwater Charge Year to Year Growth %	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	8.7%	8.7%
Monthly Impact to Average Household	\$4.55	\$5.18	\$5.59	\$6.14	\$6.40	\$6.99	\$7.64	\$8.35	\$8.54	\$9.28

FY 2022: North County W-2 Proposed Charges

Zone W-2 (North County)	Dollars Per Acre Foot			% Change FY22 vs FY21
	FY 2019-20	FY 2020-21	Maximum Proposed FY 2021-22	
Basic User/Groundwater Production Charge				
Municipal & Industrial	1,374.00	1,374.00	1,506.00	9.6%
Agricultural	28.86	28.86	85.38	195.9%
Surface Water Charge				
Surface Water Master Charge	37.50	37.50	41.10	9.6%
Total Surface Water, Municipal & Industrial*	1,411.50	1,411.50	1,547.10	9.6%
Total Surface Water, Agricultural*	66.36	66.36	126.48	90.7%
Treated Water Charges				
Contract Surcharge	100.00	100.00	115.00	15.0%
Total Treated Water Contract Charge**	1,474.00	1,474.00	1,621.00	10.0%
Non-Contract Surcharge	200.00	200.00	200.00	0.0%
Total Treated Water Non-Contract Charge***	1,574.00	1,574.00	1,706.00	8.4%



* The total surface water charge is the sum of the basic user charge (which equals the groundwater production charge) plus the water master charge

** The total treated water contract charge is the sum of the basic user charge (which equals the groundwater production charge) plus the contract surcharge

*** The total treated water non-contract charge is the sum of the basic user charge (which equals the groundwater production charge) plus the non-contract surcharge

Proposed Groundwater Charge Increases

North County Zone W-2

No Pacheco + Purified Water Program (via P3)

	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
M&I Groundwater Charge Year to Year Growth %	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	5.0%	5.0%
Monthly Impact to Average Household	\$4.02	\$4.36	\$4.74	\$5.14	\$5.57	\$6.05	\$6.56	\$7.12	\$4.54	\$4.77

2022 Schedule

✓ Jan 12	Board Meeting: Preliminary Groundwater Charge Analysis
✓ Jan 20	Water Retailers Meeting: Preliminary Groundwater Charge Analysis
✓ Jan 27	Water Commission Meeting: Prelim Groundwater Charge Analysis
✓ Feb 9	Board Meeting: Budget development update & Set time & place of Public Hearing
✓ Feb 26	Mail notice of public hearing and file PAWS report
✓ Mar 17	Water Retailers Meeting: FY 22 Groundwater Charge Recommendation
Mar 23	Board Meeting: Budget development update
Mar 30	Landscape Committee Meeting 
Apr 5	Ag Water Advisory Committee
Apr 13	Open Public Hearing
Apr 14	Water Commission Meeting
Apr 14	Special Board Meeting: Pacheco Reservoir
Apr 15	Continue Public Hearing in South County
Apr 27	Conclude Public Hearing
Apr 28-29	Board Meeting: Budget work study session
May 11	Adopt budget & groundwater production and other water charges

 Tentative Date

Summary

- **Groundwater Production Charge projection driven by drought preparation, water supply reliability investments and infrastructure repair & replacement**
- **Proposed maximum FY 22 Groundwater Production Charge increase equates to an increase of \$4.55 per month in North County (Zone W-2) to an average household**
 - **\$5.06 per month for treated water, staff proposed Treated Water Surcharge is \$115/AF (vs \$100/AF in FY21)**