Santa Clara Valley Water District
Water Supply and Demand Management Committee

HQ. Bldg. Boardroom, 5700 Almaden Expressway, San Jose, California
Join Zoom Meeting: https://valleywater.zoom.us/s/92597340524

REGULAR MEETING
AGENDA

Monday, March 23, 2026
10:00 AM

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

COMMITTEE OFFICERS:

Nai Hsueh, Chairperson
Director, District 5
Shiloh Ballard, Vice Chairperson
Director, District 2
Richard Santos
Director, District 3

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STAFF LIAISONS:
Vincent Gin
Kirsten Struve
Ryan McCarter
Stephanie Simunic
COB Liaison
Assistant Deputy Clerk II
ssimunic@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 Supply and Demand Management Committee

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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 matters not listed on the agenda may do so by completing a Speaker Card and submitting it to the Clerk, or by using the "Raise Hand" feature within the Zoom meeting application to request recognition. Speakers will be acknowledged by the Board/Committee Chair in the order requests are received and, when recognized, will be granted speaking access to address the Board/Committee.

Public comments shall be limited to three (3) minutes per speaker, or such other time as determined by the Chair. State law does not permit the Board/Committee to take action on, or engage in extended discussion of, any item not appearing on the posted agenda, except as otherwise authorized under applicable law. If Board/Committee action is requested, the matter may be scheduled for consideration at a future meeting.

All public comments requiring a response will be referred to staff for a written reply. The Board/Committee may take action on any item of business appearing on the posted agenda.

3. APPROVAL OF MINUTES:

3.1. Approval of February 23, 2026 Water Supply and Demand Management Committee (WSDMC) Minutes. 26-0264

Recommendation: Approve the minutes.

Manager: Wendy Ho, 408-630-3874

Attachments: Attachment 1: 12082025 WSDMC Minutes

Est. Staff Time: 5 Minutes

4. REGULAR AGENDA:

4.1. Receive Results of Consultant Study Regarding Santa Clara Valley Water District's Water Use Projections, Water Demand Elasticity, and Customer Affordability; Provide Feedback or Recommendations to Board. 26-0252

Recommendation:

A. Receive results of the consultant study regarding Santa Clara Valley Water District's water use projections, water demand elasticity, and customer affordability, including study scope, objectives, and status update; and
B. Provide feedback or recommendation(s) to the Board as desired.

Manager: Darin Taylor, 408-630-3068

Attachments: Attachment 1: PowerPoint
Attachment 2: Comprehensive Executive Summary
Attachment 3: Full Study Report

Est. Staff Time: 20 Minutes

4.2. Review and Discuss the 2026 Water Supply and Demand Management Committee (WSDMC) Work Plan and Make Adjustments as Necessary; and Confirm the Next Meeting Date. 26-0265

Recommendation: Review and discuss the 2026 WSDMC Work Plan and make adjustments as necessary; and confirm the next meeting date.

Manager: Wendy Ho, 408-630-3874

Attachments: Attachment 1: 2026 WSDMC Committee 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. The Next Regular Meeting is Scheduled at 10:00 a.m., on Monday, April 27, 2026.

Santa Clara Valley Water District

File No.: 26-0264

Agenda Date: 3/23/2026
Item No.: 3.1.

COMMITTEE AGENDA MEMORANDUM
Water Supply and Demand Management Committee

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

SUBJECT:
Approval of February 23, 2026 Water Supply and Demand Management Committee (WSDMC) Minutes.

RECOMMENDATION:
Approve the 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:
The approval of minutes is not subject to environmental justice impact analysis.

ATTACHMENTS:
Attachment 1: 02232026 WSDMC Minutes

UNCLASSIFIED MANAGER:
Wendy Ho, 408-630-3874

WATER SUPPLY AND DEMAND
MANAGEMENT COMMITTEE MEETING

DRAFT MINUTES

REGULAR MEETING
MONDAY, FEBRUARY 23, 2026
10:00 A.M.

(Paragraph numbers coincide with agenda item numbers)

1. CALL TO ORDER:

A regular meeting of the Santa Clara Valley Water District (Valley Water) Water Supply and Demand Management Committee (Committee) was called to order by Chairperson Hsueh at 10:00 A.m. in the Valley Water Headquarters Building Boardroom at 5700 Almaden Expressway, San Jose, California, and by Zoom teleconference.

1.1. Roll Call.

Committee members in attendance were: District 5 Director Nai Hsueh, Chairperson, District 2 Director Shiloh Ballard, Vice Chairperson, and District 3 Director Richard Santos, constituting a quorum of the Committee.

Staff members in attendance were: Chanie Abuye, Emmanuel Aryee, Aaron Baker, Rita Chan, Scott Elkins, Rachael Gibson, Vincent Gin, Andrew Gschwind, Walter Gonzalez, Jason Gurdak, Wendy Ho, Linh Hoang, Cindy Kao, Candice Kwok-Smith, Nicole Merritt, Carmen Narayanan, Carlos Orellana, Don Rocha, Stephanie Simunic, Kirsten Struve, Charlene Sun, Metra Ulloa, Jing Wu.

Public in attendance were: Peter Drekmeier (Yosemite Rivers Alliance) and Katja Irvin (Sierra Club).

2. TIME OPEN FOR PUBLIC COMMENT ON ANY ITEM NOT ON THEAGENDA:

Chairperson Hsueh declared time open for public comment on any item not on the agenda. Peter Drekmeier provided public comment.

3. ELECTION OF OFFICERS:

3.1. Election of 2026 Water Supply and Demand Management Committee (WSDMC) Chairperson and Vice Chairperson.

Recommendation: **Nominate and elect the 2025 WSDMC Chairperson and Vice Chairperson.**

It was moved by Director Santos, seconded by Vice Chairperson Ballard, and unanimously carried, that the officer slate continue with Chairperson Hsueh and Vice Chairperson Ballard for 2026.

4. APPROVAL OF MINUTES

4.1. Approval of December 8, 2025 Water Supply and Demand Management Committee (WSDMC) Minutes.

Recommendation: **Approve the minutes.**

The Committee considered the minutes of the December 8, 2025 Water Supply and Demand Management Committee (WSDMC) meeting.

Public Comment: None.

It was moved by Vice Chairperson Ballard, seconded by Director Santos, and unanimously carried, that the minutes be approved as presented.

5. REGULAR AGENDA:

5.1. Receive Informaiton on 2025 Urban Water Management Plan Update and Provide Feedback.

Recommendation: **Receive Informaiton on 2025 Urban Water Management Plan Update and Provide Feedback to Staff.**

Jing Wu reviewed the information on this item, per the attached Committee Agenda Memo and in the attachment and was available to answer questions.

The Committee discussed the following with staff input including: water demand projections including how they are developed through the Water Supply Master plan, comments from the Sierra Club letter and public commentor Peter Drekmeier from the Yosemite Rivers Alliance, inclusion of the Delta Conveyance Project, how future growth may effect demand and cost, working with water retailers on 2025 water use data, and reduced reliance on Delta. Chairperson Hsueh stated she will work with staff to synthesize the discussion questions for further review.

Public Comment: Katja Irvin and Peter Drekmeier.

The Committee received the information and took no formal action.

5.2. Receive Update on Groundwater Basins Managed by Valley Water and Compliance with the Sustainable Groundwater Management Act.

Recommendation: **Receive an update on groundwater basins managed by Valley Water and compliance with the Sustainable Groundwater Management Act.**

Scott Elkins reviewed the information on this item, per the attached Committee Agenda Memo and in the attachment and was available to answer questions.

Director Santos suggested this Committee meet with San Benito Water District, and Chairperson Hsueh stated she will explore this.

Public Comment: None.

The Committee received the information and took no formal action.

5.3. Review and Approve 2026 Water Supply and Demand Management Committee (WSDMC) Work Plan, Provide Feedback on Upcoming Discussion Items, and the 2026 WSDMC Meeting Schedule.

Recommendation: A. Review and approve the 2026 WSDMC Work Plan and make adjustments as necessary; and
B. Confirm dates for the 2026 WSDMC Committee meetings.

Stephanie Simunic and Kirsten Struve reviewed the information on this item, per the attached Committee Agenda Memo and in the attachments and were available to answer questions. The Committee stated questions from the Urban Water Management Plan item discussion (with staff input) will be added to the workplan.

Public Comment: None.

It was moved by Vice Chairperson Ballard, seconded by Director Santos, and unanimously carried, that the 2026 WSDMC Work Plan and meeting schedule was approved with flexibility for changes.

6. CLERK REVIEW AND CLARIFICATION OF COMMITTEE REQUESTS:

Stephanie Simunic noted the officer slate will continue for 2026 and the next Committee meeting is March 23, 2026.

The Committee took no formal action.

ADJOURN:

Adjourn. The Next Regular Meeting is Scheduled at 10:00 a.m. on Monday, February 23, 2026.

Chairperson Hsueh adjourned the meeting at 11:09 a.m.

Date Approved:

Stephanie Simunic
Assistant Deputy Clerk II

File No.: 26-0252

Agenda Date: 3/23/2026
Item No.: 4.1.

COMMITTEE AGENDA MEMORANDUM
Water Supply and Demand Management Committee

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

SUBJECT:
Receive Results of Consultant Study Regarding Santa Clara Valley Water District's Water Use Projections, Water Demand Elasticity, and Customer Affordability; Provide Feedback or Recommendations to Board.

RECOMMENDATION:
A. Receive results of the consultant study regarding Santa Clara Valley Water District's water use projections, water demand elasticity, and customer affordability, including study scope, objectives, and status update; and
B. Provide feedback or recommendation(s) to the Board as desired.

SUMMARY:
Santa Clara Valley Water District (Valley Water) has engaged two consultants to perform a study to validate or suggest refinements to Valley Water's current water use projections for Valley Water-managed water use, analyze water demand elasticity, and determine or address the affordability of water to residents and businesses within Santa Clara County (the Study). The majority of County residents and businesses receive water service from a retailer, while Valley Water acts as the water wholesaler. Study results have been finalized and may impact future Valley Water groundwater charges.

Background:

The Financial Planning and Revenue Collection office manages long-term forecast models and the annual rate setting process for the Water Utility. Water charges are adopted annually. Based upon feedback received from the Board during previous long-term forecasting cycles, staff pursued a study to inform future rate setting cycles.

The consultants - Raftelis Financial Consultants, Inc. and Hazen and Sawyer - were tasked to provide analyses for the following Study scope and objectives:
1. Analyze water use projections in Santa Clara County, for retailers, their direct customers, and private well owners to better determine Valley Water-managed water use projections. Valley

Water-managed water use translates to revenue for Water Utility.
2. Prepare a water demand elasticity analysis to better understand how rates impact water demand.
3. Determine the affordability of water provided by Valley Water to Santa Clara County residents and businesses now and based on future rate projections.

Valley Water staff and Valley Water's consultants both recognize that the scope of this Study presented unique challenges, one of which was obtaining detailed water usage data from non-Valley Water sources.

Technical memorandums for each of the three (3) analyses have been compiled into a final report documenting the study. Attachment 1 is a PowerPoint presentation. A Comprehensive Executive Summary is included in Attachment 2, and a link to the full report is provided in Attachment 3.

Study Results:

Task 1: Water Use Projections key takeaways are:
- Valley Water's approach to projecting water use is consistent with peer agencies
- Forecast-to-actual water use has been largely accurate, with reduced variance in recent years
- High level statistical analyses demonstrate that the current approach yields reasonable ranges for near-term demand
- Water use overall continues to trend downward
- Tools exist to refine the forecasting method, if desired

Task 2: Water Demand Elasticity Analysis key takeaways are:
- Three econometric methods were used to assess Retailer's water demand sensitivity to Valley Water's wholesale rates, and understand the effect on Retailer's customers.
- Water use in Santa Clara County is generally inelastic with respect to price; a 10% increase in price would be expected to reduce retail demand by about 2%
- There is a high correlation (about 83%) and common trend between Valley Water and Retailer's *volumetric* rates

Task 3: Water Affordability Analysis key takeaways are:
- Based on multiple affordability indicators residential water bills are generally below threshold levels
- Based on both the Poverty Prevalence Indicator and Household Burden Indicator, nearly all Retailer water providers fall within the *Low Burden* category
- An estimated 37,000 households - *equivalent to 6% of Santa Clara County households* - could have water bills that are unaffordable (defined as annual water bills that total more than 2% of reported household income)

The three study tasks produced discrete and valuable results, highlighting the dynamic interrelationships among water demand projections, price elasticity, and affordability. The Study has provided a foundation by identifying a feedback loop that can inform future rate setting cycles and

policy decisions:

- Demand forecasts drive rate levels and are key to rate stability.
- Rate increases reduce demand through price elasticity.
- Wholesale prices pass through to volumetric retail rates.
- Affordability constrains rate-setting flexibility.

Staff seeks input from the Committee on recommendations for the Board, if any. Staff will also be sharing results from the Study with the Santa Clara Valley Water Commission, scheduled for April 2026.

ENVIRONMENTAL JUSTICE IMPACT:
Increasing wholesale water rates may have a direct impact on water bill affordability for households in Santa Clara County.

ATTACHMENTS:
Attachment 1: PowerPoint
Attachment 2: Comprehensive Executive Summary
Attachment 3: Full Study Report

UNCLASSIFIED MANAGER:
Darin Taylor, 408-630-3068

Santa Clara Valley Water District

Water Use Projections, Water Demand Elasticity, and Customer Affordability Study – Final Results

Water Supply and Demand Management Committee

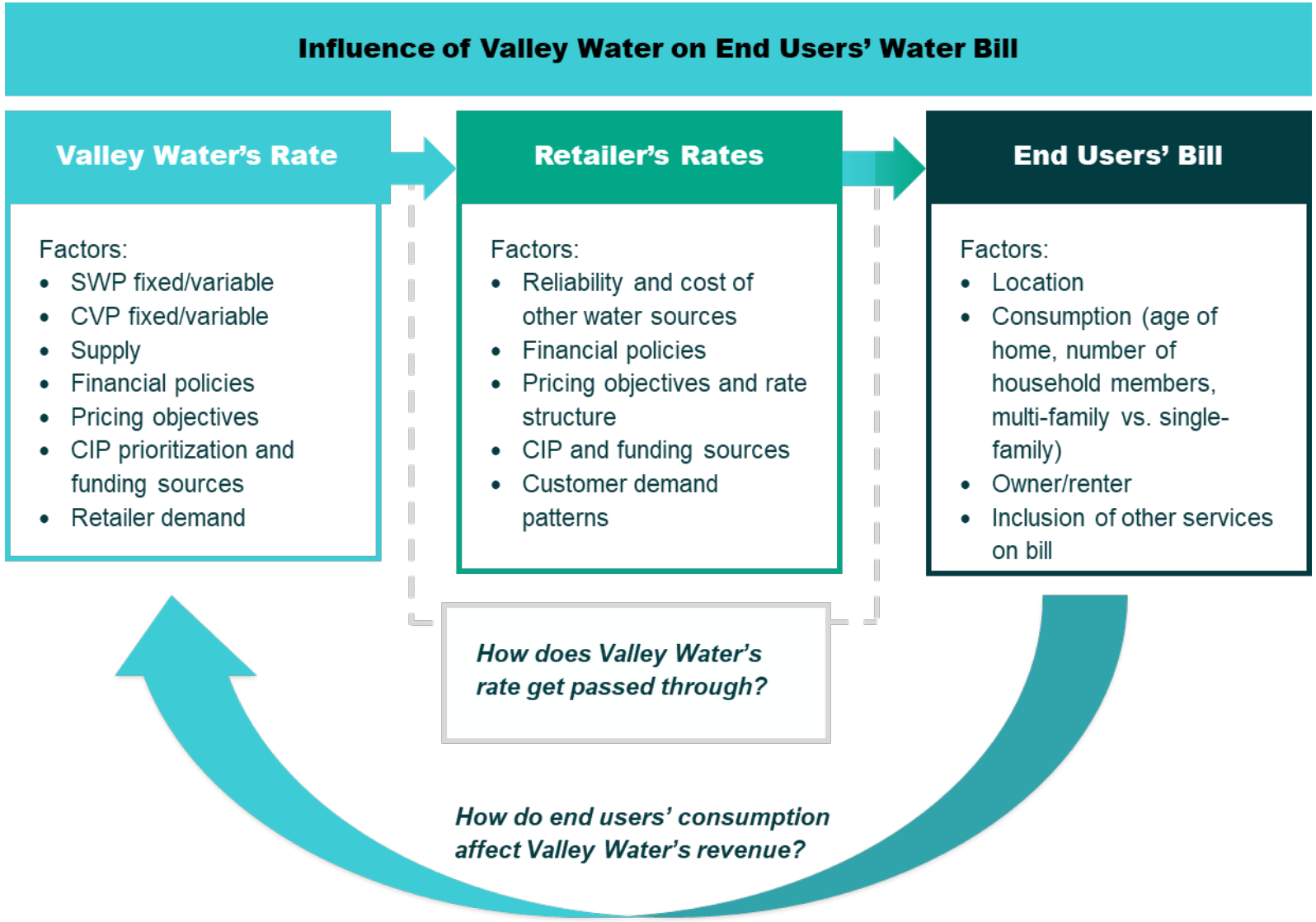
March 23, 2026

RAFTELIS

Hazen

Project Goals

- Identify how Valley Water's rates impact water demand (elasticity) and affordability of water service in Santa Clara County
- Validate and/or refine water demand forecasting for purposes of annual rate setting and long-term capital planning
- Tasks:
  - Demand Forecast
  - Elasticity Analysis
  - Affordability Assessment



Preliminary Results – Fall 2025 Meetings

Oct. 15, 2025

Quarterly Water Retailers Meeting

Oct. 22, 2025

Santa Clara Valley Water Commission

Oct. 27, 2025

Water Supply and Demand Management Committee

Nov. 12, 2025

Board of Directors

Final Results – Spring 2026 Meetings

Mar. 23, 2026

Water Supply and Demand Management Committee

Apr. 8, 2026

Santa Clara Valley Water Commission

Apr. 28, 2026

Board of Directors

Summarized Feedback

- Affordability results averaged by retailer may not tell the whole story within a community
- How to harmonize these affordability indicators with other non-utility indicators? How does affordability relate to other known socio-economic indictors?
- At what change in rates would people make behavioral changes? What is that elasticity estimate?
- Does Valley Water have a low-income assistance program?
- What is Valley Water doing to increase recycled water use?

Key Findings

Task 1: Water Use Projections

- Declining demands across the Valley Water service area
- Forecasting approach by Valley Water is a) consistent with peers and b) largely accurate in near-term projections (low budget-to-actual variance)
- Evaluation of alternatives demonstrate Valley Water's approach falls between other approaches

FY 2025 Ranges	Valley Water Method	Time Series Method	Regression Method	*Average*
Low Range	208	187	221	***205***
Medium Range	217	198	230	***215***
High Range	223	204	234	***220***

Values represent thousand acre-feet per year (TAF)

Task 2: Water Demand Elasticity

- Goal: Estimate the relationship between water prices and water consumption
- Estimates across three methods: **-0.18 to -0.21**
  - Confirms water demand is inelastic with respect to price
  - A 10% change in price would be expected to drive a 2% change in demand
- Results align with prior Valley Water studies and academic literature
- Supplemental finding: wholesale-to-retail volumetric pass-through
  - **83%** of the annual variation in retail volumetric prices is explained by the change in Valley Water's wholesale rates

Task 3: Customer Affordability

Retail Metrics	North Zone	South Zones	Total Valley Water Service Area	Metric Thresholds
AR20	1.5% - 3.4%	1.3% - 3.4%	**2.5%**	***5%***
HMW	2.7 – 3.8	2.8 – 5.4	**4.6**	***4***
LQI RI	0.7% - 0.9%	0.7% - 1.6%	**1.2%**	***2%***
MHI RI	0.4% - 0.5%	0.4% - 0.8%	**0.7%**	***2%***

[1]*All results shown at essential water use of 6 HCF*

Affordability results averaged by retailer may not tell the whole story within a community.

How to harmonize these affordability indicators with other non-utility indicators?

Single Family Residential Affordability Results by Retailer

	Single Family Residential Water Affordability Metrics			
Retailer (and Service Area)	**LQI**	**MHI**	**HMW**	**AR_{20}**
City Of Gilroy	0.7%	0.4%	2.7	1.5%
City Of Milpitas	1.1%	0.7%	4.6	2.0%
City Of Morgan Hill	0.9%	0.5%	3.8	1.6%
City Of Mountain View	0.9%	0.5%	3.1	1.8%
City Of Santa Clara	1.1%	0.6%	4.2	2.3%
City Of Sunnyvale	0.7%	0.4%	2.8	1.4%
CWSC Los Altos Suburban	0.9%	0.5%	4.1	1.6%
Great Oaks Water Company	0.8%	0.5%	2.9	1.7%
San Jose Municipal Water System (Coyote)	1.1%	0.7%	3.6	2.5%
San Jose Municipal Water System (Evergreen/Edenvale)	1.2%	0.8%	5.4	2.0%
San Jose Municipal Water System (North San Jose/Alviso)	0.8%	0.6%	4.6	1.3%
San Jose Water	1.6%	0.8%	5.3	3.4%
Valley Water Service Area of Included Retailers*	**1.2%**	**0.7%**	**4.6**	**2.5%**
Affordability Thresholds - Water Service	*2.0%*	*2.0%*	*4.0*	*5.0%*

Census tract information - American Community Survey maintained by the US Census Bureau and Consumer Expenditure survey

**Weighted based on the population served by each retailer*

Single Family Residential AR_{20} by Retailer and Census Tract

Retailer (and Service Area)	Weighted Average Census Tracts	Affordable Census Tracts (Count)	Unafford. Census Tracts (Count)
City Of Gilroy	1.5%	13	1
City Of Milpitas	2.0%	16	5
City Of Morgan Hill	1.6%	9	2
City Of Mountain View	1.8%	22	3
City Of Santa Clara	2.3%	26	7
City Of Sunnyvale	1.4%	40	1
CWSC Los Altos Suburban	1.6%	40	2
Great Oaks Water Company	1.7%	18	5
San Jose Municipal Water System (Coyote)	2.5%	4	1
San Jose Municipal Water System (Evergreen/Edenvale)	2.0%	18	4
San Jose Municipal Water System (North San Jose/Alviso)	1.3%	8	1
San Jose Water	3.4%	125	88
Valley Water Service Area of Included Retailers	**2.5%***	**339**	**120**

**Weighted based on the population served by each retailer*

Resulting Retailer Metrics – Estimate of Affordability Impact[1]

Retail Metrics	North Zone (per Retailer)	South Zones (per Retailer)	Estimated Households Valley Water Service Area[2]
Estimated Number of Customers with Unaffordable Water Bills	200 – 24,000	1,000 - 1,200	**37,000**

[1] Estimate of customers that could be have bills considered unaffordable
[2] Out of approximately 624,500 households

- Estimates extrapolated based on public use micro statistics (PUMS) household survey data including self reported income, water use, household size, and/or payment of a water bill
- Then, calculate bills over 2% of reported household income *and* estimated essential water use at each retailers' service area rates
- **Household water bills estimated as unaffordable across the Valley Water service area is 5.95%**

Comparison with Non-Utility Indicators

Source/Method	% of Households
Social Security Income (SSI) Households	8.3%
Income Deciles	3.6% to 4.9%
Supplemental Nutrition Assistance Program (SNAP) Enrolled	7.7%
Public Use Microdata Sample (PUMS) Analysis	**5.95%**

- PUMS analysis is based on a survey of self-reported income and self-reported household size
- The estimate of 5.95% of households in the Valley Water service area having unaffordable water bills tracks with other indicators that reflect lower income and needs based households

Customer Assistance Programs (CAP) and Valley Water

- Retailers offer their own customer assistance programs
  - These vary by retailer and are distinct between private / IOUs and public / municipal utilities
- Valley Water contributes directly across the service area via $1 million annual funding to Sacred Heart Community Service
- Annual monitoring can help inform Valley Water's future level of direct support
- Valley Water can further work with retailers on related assistance like payment programs, rate design, and customer outreach

Backup

Glossary of Terms

- HCF: Hundred Cubic Feet (748 gallons)
- gpcd: gallons per capita per day
- MHI: Median Household Income
- LQI: Lowest Quintile of Income
- AR: Affordability Ratio
- HW: Hours at Minimum Wage
- PPI: Poverty Prevalence Indicator
- HBI: Household Burden Indicator
- SFR: Single Family Residential
- MFR: Multi-Family Residential
- PPH: Persons per Household
- CPUC: California Public Utilities Commission
- EPA: United States Environmental Protection Agency
- MIT: Massachusetts Institute of Technology
- CIP: Capital Improvement Program
- SWP: State Water Project
- CVP: Central Valley Project
- SFPUC: San Francisco Public Utilities Commission
- RI: Residential Indicator
- AWWA: American Water Works Association
- WEF: Water Environment Federation
- NACWA: National Association of Clean Water Agencies
- PUMS: Public Use Micro Statistics
- FPL: Federal Poverty Level
- California Urban Water Agencies (CUWA)
- California Water Association (CWA)

Residential Affordability Indicators

Measurement Approaches (Metrics):		Used By
MHI RI: Median Household (Income) Residential Indicator	*Average* Water Bill / 50th Percentile Household Income	California Urban Water Agencies (CUWA), California Water Association (CWA), EPA, SFPUC
LQI RI: Lowest Quintile Income	*Essential* Water Bill / 20th Percentile Household Income	EPA, SFPUC
HMW: Hours at Minimum Wage	*Essential* Water Bill / Minimum Wage Rate	California PUC, EPA
AR_{20}: Affordability Ratio	*Essential* Water Use Bill / (Total Income - Non-Discretionary Expenses[1])	California PUC[2]
HBI: Household Burden Index (HBI)	*Average* Water Bill / LQI	AWWA/NACWA "New Framework"
PPI: Poverty Prevalence Indicator	Population at or below 200% FPL/ Total population	AWWA/NACWA "New Framework"
Essential Water Use Bill	Bill at 47 gallons per capita per day	California PUC, CWA
Average Water Use Bill	Bill at 64 gallons per capita per day	CUWA, EPA, SFPUC

[1, 2] *Non-Discretionary expenses = Housing, health care, food, and home energy*
[3] *Federal Poverty Level*

Retailer Affordability Characteristics*

Characteristics	North Zone	South Zones	Total Valley Water Service Area
% of Total Service Area Population	4% - 52%	3% - 5%	**100%**
Average Household Size	2.3 – 3.5	3.1 – 3.4	**3.0**
Minimum Hourly Wage	$18.20 - $19.00	$18.20	**$18.30**
Median Household Income (MHI)	$120k - $236k	$142k - $169k	**$169k**
Lowest Quintile Income (LQI)	$68k - $80k	$69k - $112k	**$76k**
Monthly Water Bill @ Essential Use (~6 HCF)	$54 - $98	$45 - $64	**$83**
Monthly Water Bill @ Average Use (~8 HCF)	$65 - $118	$52 - $71	**$96**

*All figures are rounded

Resulting Retailer Metrics – AR20, HMW, LQRI, MHRI[1]

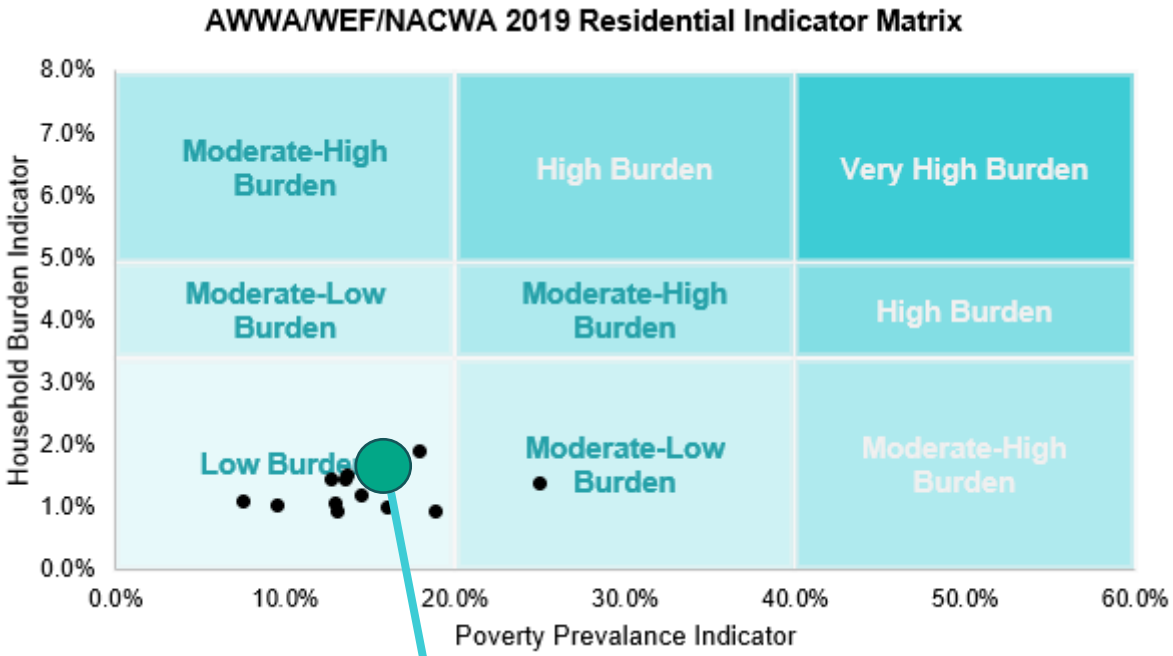
Retail Metrics	North Zone	South Zones	Total Valley Water Service Area	Metric Thresholds
AR20	1.4% - 3.8%	1.7% - 1.9%	**2.8%**	***5%***
HMW	3.7 – 6.2	2.7 – 3.8	**5.3**	***4***
LQI RI	0.8% - 1.7%	0.8% - 1.0%	**1.3%**	***2%***
MHI RI	0.4% - 0.7%	0.4% - 0.5%	**0.6%**	***2%***

[1]*All results shown at essential water use of 6 HCF*

- AR20, LQI, and MHI are all below thresholds across the service area
- HMW is modestly above the threshold value across the service area
- Results are generally lower (water bill is less burdensome) in the South zones

Resulting Retailer Metrics – HBI/PPI Matrix

Retail Metrics	North Zone	South Zones	Total VW Service Area	Metric Threshold Low Burden
HBI	0.8% - 1.7%	0.8% - 1.0%	**1.3%**	***3.5%***
PPI	7.5% - 25%	13% - 19%	**15.7%**	***20%***



- HBI and PPI are both within the low burden category
  - All but one retailer are in the Low Burden category
- Both metrics have a wider range in the North zones than in the South zones

Valley Water Service Area Result (Weighted Average)

Groundwater Benefit Zones

North County Zone W2

- Santa Clara County north of Metcalf Road

South County Zone W5

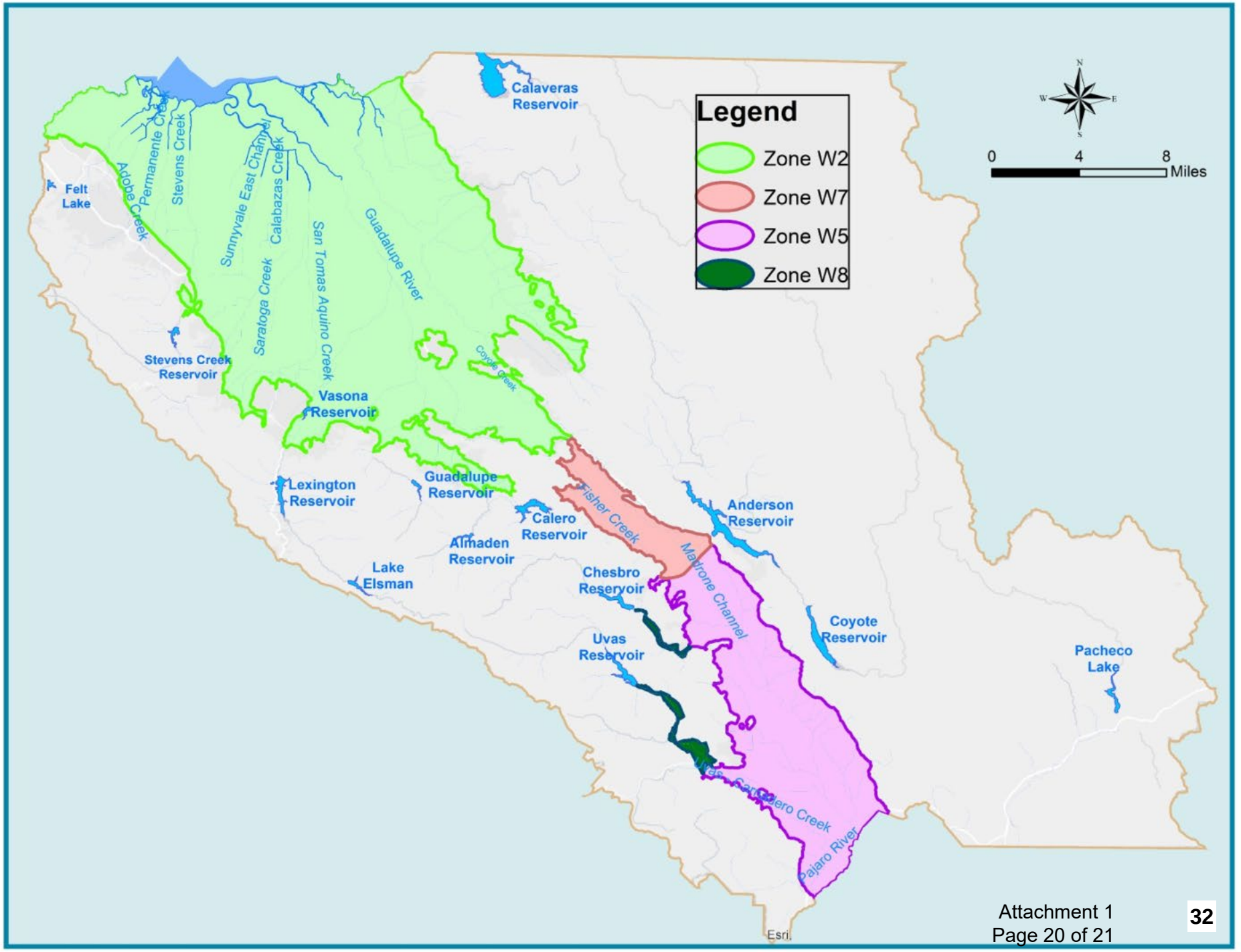
- Morgan Hill to Pajaro River

South County Zone W7

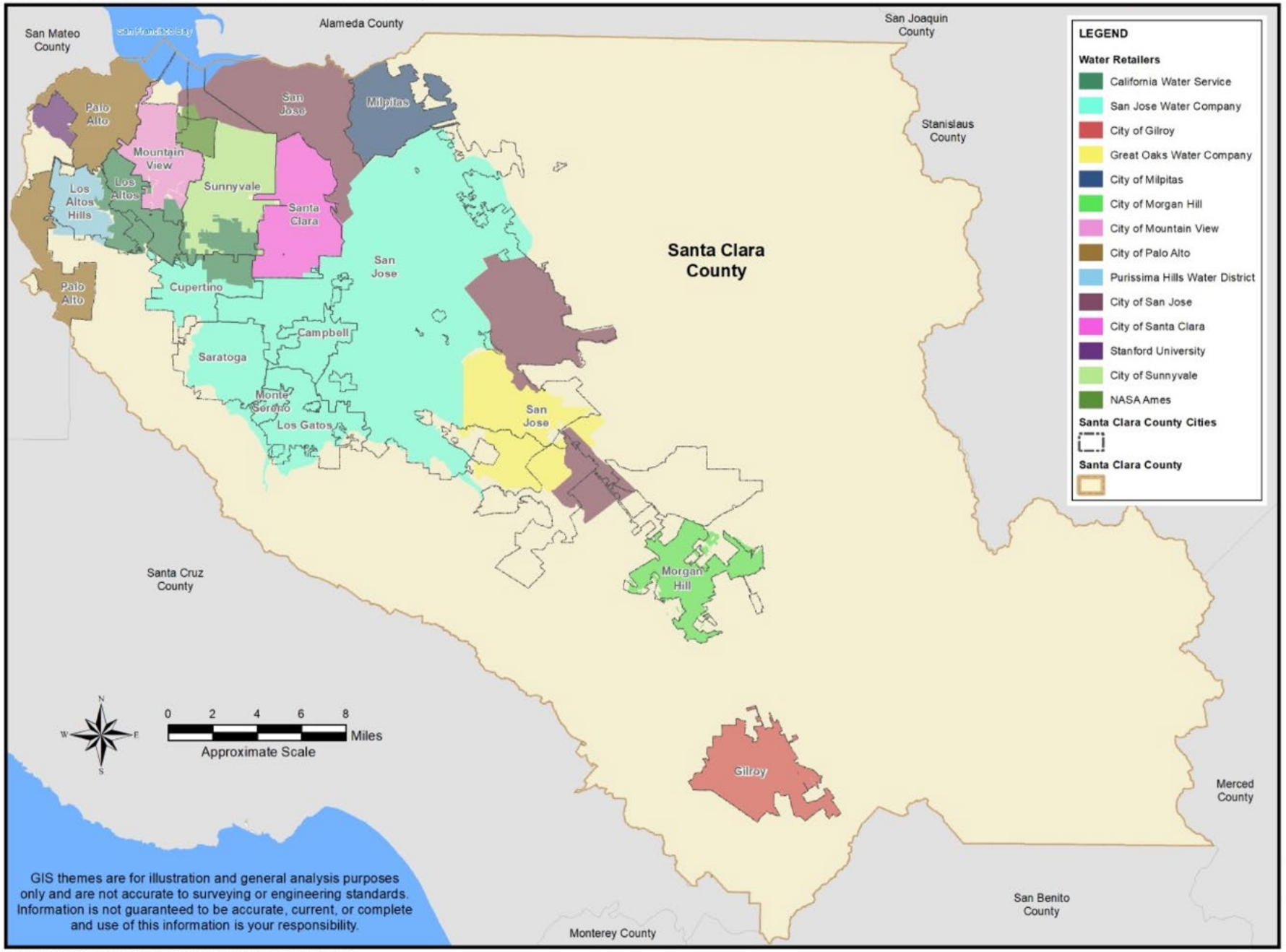
- Coyote Valley

South County Zone W8

- Foothills below Uvas & Chesbro Reservoirs



Water Retailers in Santa Clara County



Executive Summary

Introduction

Raftelis Financial Consultants, Inc. and Hazen and Sawyer (the "project team") were engaged by Santa Clara Valley Water District (Valley Water) to conduct an integrated study comprising three interrelated tasks: 1) review and refinement of water use projections for rate setting, 2) estimation of water demand price elasticity, and 3) assessment of customer affordability of water rates in Santa Clara County. Valley Water provides wholesale water and groundwater management services to local municipalities and private water retailers who deliver drinking water directly to approximately two million residents across Santa Clara County. This executive summary synthesizes the findings from all three tasks and highlights the critical linkages among them.

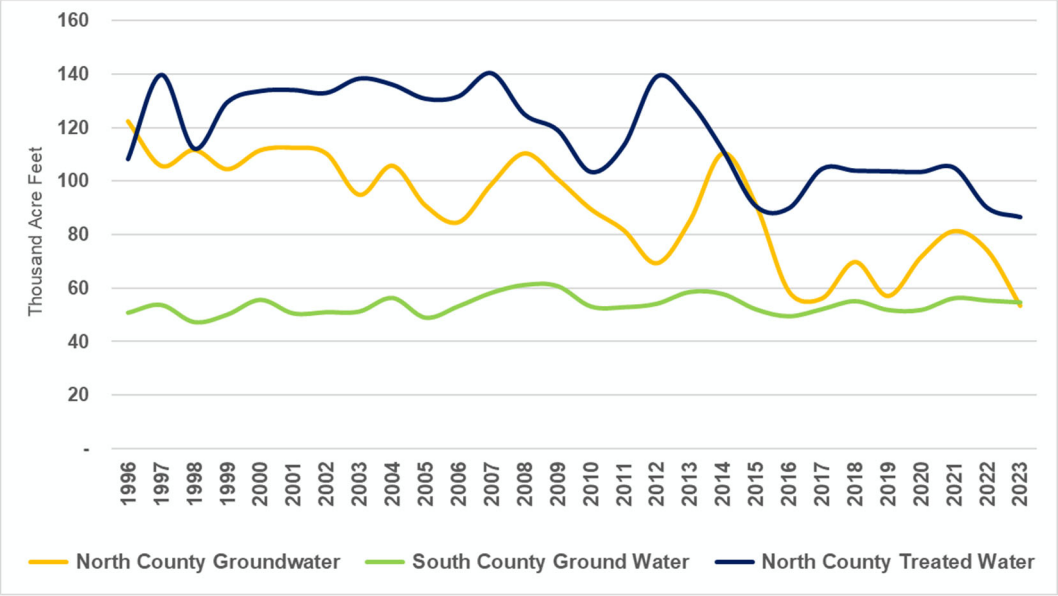
Task 1: Water Use Projections for Rate Setting

Task 1 evaluated Valley Water's methodology for projecting near-term water demand used in annual rate setting. The project team reviewed the District's existing approach, which relies on a three-part framework:

- Historical demand data weighted toward the prior year for the upcoming fiscal year (Year 1);
- Institutional knowledge and professional judgment for interim years (Years 2–3); and
- Growth rates from the 2010 Urban Water Management Plan (UWMP) for the longer term (Year 4 and beyond).

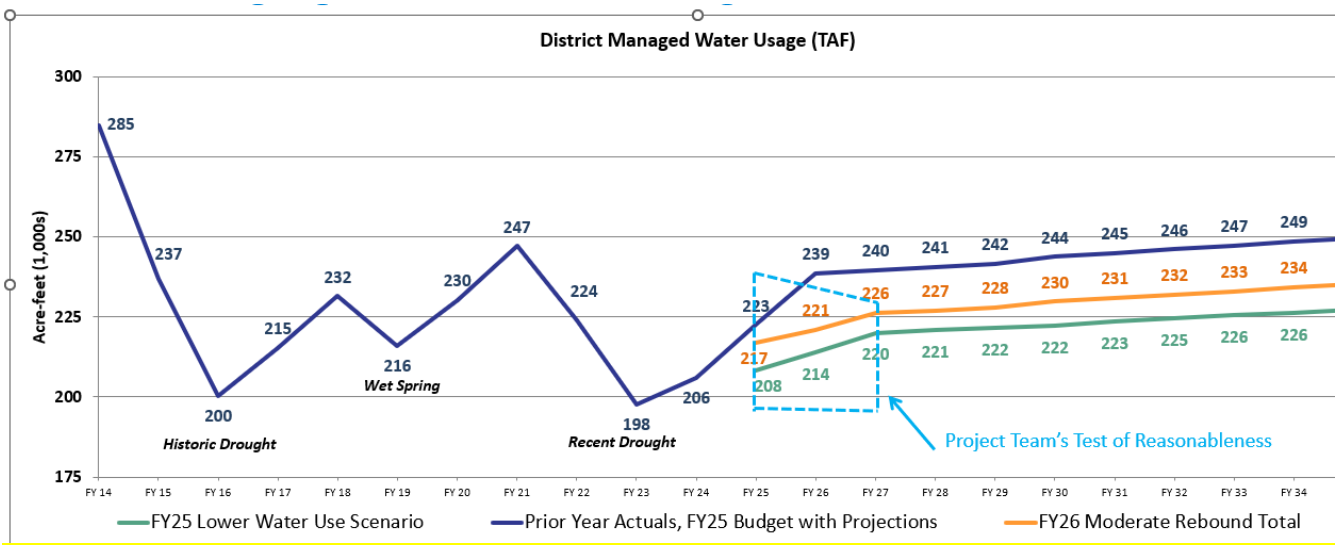
The analysis found that Valley Water's existing approach is largely consistent with practices at peer wholesale agencies and has produced modest forecast variances—averaging 1.41% over the 2012–2024 period—that have narrowed over time. Long-term trends show declining Treated Water and North County Groundwater demands since 1996, while South County Groundwater has remained relatively stable.

ES-1: Water Demand Trends



The project team applied regression and time series methods to generate a range of alternative demand projections with which to compare against Valley Water staff's approach. As shown in Exhibit ES- 2, Valley Water's baseline projection and higher and lower end ranges for FY 2025 fall between the ranges estimated by the project team (ES-3). However, the statistical approaches project declining demand in future years compared to Valley Water's projections which increase over time due to growth assumptions. Valley Water's demand projections could be enhanced by updating their methodology using growth demand forecasts from the most recent UWMP and by weighting demand projections for lower and moderate scenarios more to reflect the overall elasticity results from Task 2.

ES-2: Valley Water District Managed Water Use Demand Projection Ranges Compared to Project Team's Range of Projections



ES-3: Valley Water District Managed Water Use Demand Projection Ranges – Comparison of Alternative Methods

FY 2025 Ranges	Valley Water Method	Time Series Method	Regression Method	*Average of Methods*
Low Range	**208**	**187**	**221**	***205***
Medium Range	**217**	**198**	**230**	***215***
High Range	**223**	**204**	**234**	***220***

Task 2: Water Demand Price Elasticity

Task 2 estimated the relationship between water prices and water consumption in the Valley Water service area. The analysis used available data which included historical billed water use data from 10 retailers served by Valley Water, over the period from January 2000 to December 2024, which included Valley Water supplies delivered to retailers and classified by source as well as non-Valley Water supplies delivered to retailers. Historical water rate data, including Valley Water wholesale rates, San Francisco Public Utilities Commission (SFPUC) wholesale rates, and individual retailer rates, as well as relevant demographic, economic, public health, and weather data, were also collected.

The study conducted exploratory data analyses involving several different model configurations to estimate price elasticity for water demand from the available data. These configurations experimented with different aggregations of volumes by source, as well as different measures of price, or price instruments. Ultimately, the study applied three general estimation methodologies relating total per capita water use (both Valley Water- and non-Valley Water-sourced) by retailer using a price instrument defined as the incremental residential charge for the 15th water consumption unit.

Three econometric methods—Ordinary Least Squares (OLS), Error Correction Models (ECM), and Cointegrating Regression—produced consistent system-wide price elasticity estimates ranging from -0.18 to -0.21. These results confirm that water demand in Santa Clara County is inelastic with respect to price: a 10% increase in price would be expected to reduce retail demand by only about 2%. This finding aligns with prior Valley Water studies and the broader academic literature. The ECM analysis further indicates that consumer adjustment to price changes occurs relatively rapidly, within approximately two months.

A significant supplementary finding is that approximately 83% of the annual variation in volumetric retail prices assessed by the retailers is explained by variation in Valley Water's wholesale rates, and statistical tests confirm that wholesale price changes lead to volumetric retail price changes. This wholesale-to-retail volumetric price pass-through establishes a direct pathway through which Valley Water's rate decisions influence end-user costs and, consequently, water demand and affordability outcomes.

Task 3: Customer Affordability Assessment

Task 3 established a baseline assessment of water service affordability across Valley Water's service area using multiple quantitative indicators and qualitative analysis. Water affordability is fundamentally a measure of the financial burden that water service places on a household relative to its ability to pay. The most common approach expresses a household's water bill as a percentage of income—the higher the percentage, the greater the burden. The study employed affordability calculations/metrics embraced by the water industry, California water associations, and the California Public Utilities Commission (which regulates several of Valley Water's private water providers). Four primary affordability indicators were evaluated across 12 retailer service areas and 459 census tracts:

1. **Lowest Quintile of Income (LQI):** Annual essential water bill (monthly bill at 47 gpcd × 12) divided by the weighted lowest quintile income for the retailer's service area.
2. **Median Household Income (MHI):** Annual average water bill (monthly bill at 69 gpcd × 12) divided by the weighted median household income for the retailer's service area.
3. **Hours at Minimum Wage (HMW):** Monthly essential water bill divided by the applicable minimum wage (dollars per hour) for the retailer's jurisdiction.

4. **Affordability Ratio at the 20th Percentile of Income (AR_{20}):** Annual essential water bill divided by annual discretionary income (lowest quintile income minus rent minus other utilities minus the essential water bill itself), expressed as a percentage.

Calculating a household's water bill is shaped not only by the wholesale rates charged by Valley Water, but also by the retail rate structures implemented independently by each of the retailers. Five retailers employ tiered rate structures that charge progressively higher rates for higher consumption, while five utilize uniform rates that apply a single volumetric charge regardless of usage. Tiered structures can promote affordability by keeping the cost of essential water use lower—the average Tier 1 rate among tiered retailers was $4.70 per HCF, compared to $6.48 per HCF for those with uniform rates. Beyond volumetric pricing, the balance between fixed and variable charges plays a critical role: fixed charges as a percentage of the total bill ranged from 25% to 65% across retailers, representing the portion of a customer's bill that cannot be reduced through conservation. Similarly, the volume of water allocated to the lowest-priced tier varied from 3 HCF to 6 HCF, affecting how much essential use a household can consume before facing higher rates.

Each retailer's water rate structure was used to estimate a single-family household's water bill at both essential and average water use. The water bill was then compared to various income levels – lowest quintile household income, median household income, minimum wage, or discretionary household income at the lowest quintile. Affordability of water service was calculated in aggregate (weighted based on population within a retailer's service area), granularly by census track within a retailer's service area for the AR_{20} metric only, and extrapolated using ***self-reported*** household income and estimated indoor water use based on ***self-reported*** household size. The resulting range of affordability metrics and estimate of the number of households with affordability challenges are shown in exhibits ES – 3 through ES -5.

ES-4: Resulting Aggregated Single Family Residential Water Affordability Metrics

	Single-Family Water Affordability Metrics			
Retailer	**LQI**	**MHI**	**HMW**	**AR_{20}**
City Of Gilroy	0.7%	0.4%	2.7	1.5%
City Of Milpitas	1.1%	0.7%	4.6	2.0%
City Of Morgan Hill	0.9%	0.5%	3.8	1.6%
City Of Mountain View	0.9%	0.5%	3.1	1.8%
City Of Santa Clara	1.1%	0.6%	4.2	2.3%
City Of Sunnyvale	0.7%	0.4%	2.8	1.4%
CWSC Los Altos Suburban	0.9%	0.5%	4.1	1.6%
Great Oaks Water Company	0.8%	0.5%	2.9	1.7%
San Jose Municipal Water System Coyote	1.1%	0.7%	3.6	2.5%
San Jose Municipal Water System Evergreen/Edenvale	1.2%	0.8%	5.4	2.0%
San Jose Municipal Water System North San Jose/Alviso	0.8%	0.6%	4.6	1.3%
San Jose Water	1.6%	0.8%	5.3	3.4%
Valley Water Service Area of Included Retailers*	**1.2%**	**0.7%**	**4.6**	**2.5%**
Affordability Thresholds - Water Service	*2.0%*	*2.0%*	*4.0*	*5.0%*

Census tract information - American Community Survey maintained by the US Census Bureau and Consumer Expenditure survey

**Weighted based on the population served by each retailer.*

ES-5: Single Family Residential Water Affordability, by Retailer - AR_{20} Metrics

Retailer	Weighted Average Census Tracts	Most Affordable Census Tract	Least Affordable Census Tract	Affordable Census Tracts (Count)	Unafford. Census Tracts (Count)
City Of Gilroy	1.5%	0.7%	7.8%	13	1
City Of Milpitas	2.0%	0.8%	18.1%	16	5
City Of Morgan Hill	1.6%	0.9%	7.8%	9	2
City Of Mountain View	1.8%	0.5%	34.2%	22	3
City Of Santa Clara	2.3%	0.9%	-63.5%	26	7
City Of Sunnyvale	1.4%	0.7%	5.9%	40	1
CWSC Los Altos Suburban	1.6%	0.6%	33.2%	40	2
Great Oaks Water Company	1.7%	0.8%	52.7%	18	5
San Jose Municipal Water System Coyote	2.5%	1.0%	8.0%	4	1
San Jose Municipal Water System Evergreen/Edenvale	2.0%	0.6%	40.9%	18	4
San Jose Municipal Water System North San Jose/Alviso	1.3%	0.8%	8.9%	8	1
San Jose Water	3.4%	0.8%	-132.4%	125	88

Census tract information - American Community Survey maintained by the US Census Bureau and Consumer Expenditure survey

ES-6: Extrapolated Unaffordable Bills Per Retailer Using Reported Household Income

Retailer	Percentage Unaffordable From PUMS Sample Data	Estimated Service Area Households	Estimated Households with Unaffordable Bills
City of Gilroy	6.06%	20,324	1,232
City of Milpitas	3.02%	25,675	775
City of Morgan Hill	6.06%	17,308	1,049
City of Mountain View	9.65%	34,188	3,300
City of Santa Clara	2.19%	48,138	1,052
City of Sunnyvale	0.50%	47,272	236
CWSC Los Altos Suburban	7.79%	40.308	3,142
Great Oaks Water Company	1.62%	30,249	489
San Jose Muni	5.22%	40,191	2,096
San Jose Water	7.41%	320,902	23,775
Retailer Total	**5.95%**	**624,555**	**37,145**

Self-reported household data - Public Use Microdata Sample (PUMS) data available from the ACS maintained by the US Census Bureau

At the aggregate level, water service in Santa Clara County remains generally affordable, and Valley Water's service area performs favorably compared to peer agencies. However, household-level analysis using Public Use Microdata Sample (PUMS) data estimates that approximately 6% of households, or roughly 37,000 households in the service area, currently face water affordability challenges. This estimate aligns with other social indicators such as 7.7% of county households receiving Supplemental Nutrition Assistance Program (SNAP) benefits and 8.3% dependent on fixed incomes via Social Security Income (SSI).

Several retailers within Valley Water's service area offer customer assistance programs to help households manage the cost of water and wastewater services, including bill discount programs, flexible payment arrangements, and crisis assistance funds. The availability and design of these programs vary by retailer, and it should be noted that private / investor-owned utilities and public / municipal utilities in California operate under distinct, and different, regulatory requirements that govern how they may fund and administer affordability programs. Beyond retailer-led efforts, Valley Water contributes directly to addressing water affordability through an annual $1 million contribution to Sacred Heart Community Service, a San Jose–based nonprofit that provides water bill assistance to low-income households in Santa Clara County. In its 2023/2024 Impact Report, Sacred Heart reported providing $681,701 in water bill assistance to over 1,545 households alongside other forms of financial relief. Together, these retailer and Valley Water initiatives represent a layered approach to mitigating water affordability challenges.

Linking the Three Tasks: An Integrated Framework

While each task produced discrete and valuable results, the study's design recognizes the dynamic interrelationships among water demand projections, price elasticity, and affordability. These connections form a feedback loop central to Valley Water's rate setting and policy decisions:

- **Demand forecasts drive rate levels.** Valley Water's costs are predominantly fixed. When demand declines, rates must increase to recover the same revenue requirement. The demand projection methodology evaluated in Task 1 directly determines the denominator in the rate equation—estimated annual water sales—making demand forecasting for rate setting essential to rate stability.

- **Rate increases reduce demand through price elasticity.** Task 2 established that a 10% wholesale-driven price increase reduces *overall* retail demand (supply from Valley Water and other water providers) by approximately 2%. This creates a recursive dynamic: rate increases needed to offset declining demand may further suppress demand, requiring additional rate adjustments. Explicitly incorporating the elasticity estimate into demand forecasts could produce more realistic revenue projections and reduce forecast variance identified in Task 1, but more analysis is needed to identify which water types of Valley Water's supply, such as treated water, groundwater, etc., would decline.

- **Wholesale prices pass through to volumetric retail rates.** Task 2 demonstrated that 83% of the variation in volumetric retail prices is explained by Valley Water wholesale rates, with wholesale price changes leading retail volumetric price changes. This pass-through means Valley Water's investment decisions and rate increases directly affect the retail volumetric prices that determine affordability for end users.

- **Affordability constrains rate-setting flexibility.** Task 3 identified that while water service is broadly affordable in aggregate, approximately 37,000 households already face affordability challenges, and 26% of census tracts exceed the AR_{20} threshold. Future rate increases—driven by capital investments, supply reliability needs, and statewide efficiency mandates that reduce volumetric revenue—will intensify these pressures. The inelastic demand estimated in Task 2 means that low-income households, who have the least discretionary water use to curtail, may bear a disproportionate burden from price increases, not only because their water use may be inelastic but also because the fixed portion of their monthly water bill could represent a larger portion of their total water bill and which

is designed based on each retailer's pricing objectives. All of these factors highlight the importance of funding customer assistance programs to offset the burden to these customers.

Looking Forward

Together, the three tasks provide Valley Water with an analytical framework for informed decision-making. Improved demand forecasting (Task 1) enables more accurate rate setting, reducing revenue volatility and unexpected rate adjustments. Price elasticity estimates (Task 2) allow the District to anticipate how rate changes will affect both demand and revenue, and can be explicitly integrated into the demand forecast to improve projections. The affordability baseline (Task 3) equips the District to evaluate how future investments and rate decisions will impact vulnerable populations and the levels of future funding for customer assistance programs to promote affordability. This integrated approach supports Valley Water's mission of delivering reliable, affordable water service while maintaining the financial health of the water enterprise.

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Santa Clara Valley Water District's Water Use Projections, Water Demand Elasticity, Customer Affordability Study

Prepared by Raftelis Financial Consultants and Hazen & Sawyer

March 2026

- Comprehensive Executive Summary
- Task 1 Technical Memorandum: Water Use Projections
- Task 2 Technical Memorandum: Water Demand Elasticity
- Task 3 Technical Memorandum: Water Rate Affordability Assessment

TO VIEW FULL STUDY REPORT DOCUMENTS CLINK
LINK: https://fta.valleywater.org/fl/qgVqGyghQCYM

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File No.: 26-0265

Agenda Date: 3/23/2026
Item No.: 4.2.

COMMITTEE AGENDA MEMORANDUM
Water Supply and Demand Management Committee

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

SUBJECT:
Review and Discuss the 2026 Water Supply and Demand Management Committee (WSDMC) Work Plan and Make Adjustments as Necessary; and Confirm the Next Meeting Date.

RECOMMENDATION:
Review and discuss the 2026 WSDMC Work Plan and make adjustments as necessary; and confirm the next meeting date.

SUMMARY:
Under direction of the Clerk, Work Plans are created and implemented by all Board Committees to increase Committee efficiency, provide increased public notice of intended Committee discussions, enable improved follow-up by staff, and assist in preparing an Annual Committee Accomplishment Report. Work Plans are dynamic documents managed by Committee Chairs and are subject to change.

Discussion of topics as stated in the Plan have been described based on information from the following sources:

- Items referred to the Committee by the Board;
- Items requested by the Committee to be brought back by staff;
- Items scheduled for presentation to the full Board of Directors and
- Items identified by staff.

The WSDMC Work Plan contained in Attachment 1 is presented for the Committee's review to determine and confirm topics for discussion in 2026.

Establishing a Work Plan is necessary to provide staff with a basis for meeting planning, logistics coordination, and agenda item preparation.

ENVIRONMENTAL JUSTICE IMPACT:
The review of the WSDMC Work Plan is not subject to environmental justice analysis.

ATTACHMENTS:
Attachment 1: 2026 WSDMC Committee Work Plan

UNCLASSIFIED MANAGER:
Wendy Ho, 408-630-3874

WATER SUPPLY AND DEMAND MANAGEMENT COMMITTEE 2026 WORKPLAN

TASK	AGENDA ITEM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
WSMP Strategy 1: Ensure reliability and sustainability of the existing water supply system													
1.1	Water Conservation Savings Model/Annual Water Conservation Savings				X								
1.2	Water Conservation as a Way of Life recommendations (including water waste restrictions)										X		
1.3	SCW Funding (LRP & Demo Garden)					X							
1.4	Collaboration with Retailers + Outreach, including Renters/Landlords						X						
1.5	Water Use Demand, Elasticity, and Rate Affordability Study			X							X		
WSMP Strategy 2: Diversify water supplies to meet the Level of Service goal													
2.1	Sustainable Groundwater Management Act (SGMA) - 2026 Groundwater Management Plan		X			X			X		X		
2.2	South County Recharge				X								X
2.3	Sites Reservoir Expansion Update			~~X~~	X	X			X				
2.4	BF Sisk Dam Raise				X			X			X		
2.5	Groundwater Banking Opportunities					X							
2.6	Semitropic Groundwater Bank										X		
WSMP Strategy 3: Minimize the risk of shortage and disruption													
3.1	Drought Reports (as needed during droughts)												
WSMP Strategy 4: Maintain affordable water rates through cost-effective water supply investments and management													
4.1	Investments in no-regrets package, including stormwater resource plan						X						
4.2	Stormwater Capture/FloodMAR						X						
4.3	Find opportunities to ensure new development has improved water wise features (MWENDO, land use coordination)								X				
Other:													
5.1	UWMP Update		X			X							

UPDATED 1.27.26