



SANTA CLARA, SAN MATEO & SAN BENITO COUNTIES

June 4, 2026

To: WaterSupplyPlanning@valleywater.org

CC: Valley Water Board of Directors and Clerk of the Board

Re: Sierra Club Comments on Valley Water’s Draft 2025 Urban Water Management Plan (June 9, 2026, Agenda Item 3.5. Public Hearing on the 2025 Urban Water Management Plan and Water Shortage Contingency Plan)

The Sierra Club Loma Prieta Chapter has reviewed Valley Water’s Draft 2025 Urban Water Management Plan (UWMP). Please consider the following comments regarding the Draft UWMP which focus on water demand projections, and specifically the evidence that water use will continue the current downward trend and how that could impact water supply planning.

Demand Projections

On February 23, 2026 the Water Supply and Demand Management Committee (WSDMC) meeting included an item to receive Information on 2025 UWMP update and provide feedback. The Sierra Club submitted the attached comment letter to the Committee regarding the Water Supply Master Plan 2050 demand projections to be used in the UWMP.

Our comment letter discusses the historic inaccuracy of demand projections in Valley Water’s UWMPs since 2000, and introduces a model we created that fits more closely to historic demands, and projects demand continuing to decrease in the future. Looking back, we found that UWMP forecasts have over-projected future demand by about 50% on average since 2000.

This trend of declining demand is supported by UWMP Figure 4-5, which shows reduced water usage in 2025 compared to 2024. However, the UWMP still projects a steep increase in demand between 2026 and 2030 from about 280,000 acre-feet/year (AFY) to 330,000 AFY. This is about an 18% increase in water demand over four years. Considering Valley Water’s conservation goal to reduce demand by 12,000 AFY during the same period, this would actually be a 23% increase in demand, which does not seem realistic.

The forecasted sharp increase in demand to 330,000 AFY by 2030, and then stable demand through 2050 was described in a September 2023 memo titled “Water Supply Master Plan Demands.” At a minimum, baseline data (such as actual population growth and actual water

demand) have changed in the past two and a half years. The Draft 2025 UWMP uses this same demand forecast, which is now out-of-date and needs to be recalculated as soon as possible.

Following submission of the attached comments, the Sierra Club met with Valley Water staff from the water supply planning team to discuss water demand projections and Valley Water's demand forecasting model. We learned more about the data and assumptions used to run the model, and we were impressed by the comprehensiveness of the model. However, we still don't understand how the model shows a steep increase in water demand from 2025 to 2030.

Therefore, we made a public record request for the demand modeling files, but thus far the records have not been provided due to their location offsite and the need for legal review. These delays hamper our ability to fully analyze the demand modeling for the 2025 UWMP.

Consultant Studies on Water Use Projections and Demand Elasticity

On March 23, 2026 the WSDMC received the results of a consultant study regarding Valley Water's water use projections. The consultant's technical memorandum says the result of their analysis "indicates a clear downward trend in water usage, likely influenced by conservation efforts and behavioral shifts."

The consultant also completed a water demand elasticity analysis. Their memorandum on elasticity concludes that price increases will result in downward pressure on demand, predicting that "a 10% increase in price would be expected to reduce retail demand by about 2%."

The Protection and Augmentation of Water Supplies report for 2026-27 projects Valley Water's wholesale water rates will increase 81% for the North County W-2 zone over the next 10 years. Using the information about elasticity, this would result in at least a 13% decrease in demand over the next 10 years. This accounts for the finding that 83% of wholesale prices pass through to volumetric retail rates, but does not account for the fact that rate increases are cumulative. This impact on demand has yet to be added to Valley Water's models along with drought and conservation, as recommended in the elasticity study.

2026 Demand Trend

In May 2026, the Valley Water Audit Committee received the Fiscal Year 2025-2026 Third Quarter Financial Status Update. During this update, staff reported that groundwater production charges and treated water revenue are estimated to be about \$10M below budget due to lower-than-anticipated demand. Although this does not include water delivered by the San Francisco Public Utilities Commission, this shows that water demand is certainly not increasing at the rate projected in the Draft 2025 UWMP.

Appendix H. Reduced Reliance on the Delta

Section H.2, Regional Self Reliance, says “Water supplies that contribute to regional self-reliance are shown in Table C-3. Consistent development and funding of these supplies have resulted in reduced reliance on the percentage of water supplies imported from the Delta watershed as compared to overall water use in the County.”

Please note:

- The Draft 2025 UWMP provided for review did not include Tables C-2, C-3 and C-4 which are referenced in the UWMP text, so we cannot comment on the content of those tables.
- Since water demand has decreased overall since 2010, the reduced reliance on the Delta as a percentage of water supplies should also result in a volumetric reduction in water supplies imported from the Delta. This should be stated in section H.2, or the lack of a volumetric reduction of imported water (despite decreasing water use) should be explained. Also see section H.3.3, Water Supplies Contributing to Regional Self Reliance which quantifies expected local supplies to be generated from programs to increase water use efficiency, water recycling, potable reuse, etc.

Conclusion

Recent studies and water use data supports the results of Sierra Club’s modeling, which shows water demand will continue to decrease in Santa Clara County. Contrary to demand increases projected in the UWMP, it appears that water use in the County is no longer rebounding from the 2020-2022 drought. However, this information is not reflected in the UWMP water demand forecasts.

By discounting the scenario which continues the downward trend in water usage, Valley Water is not planning for that possible future scenario. Decreasing demand would require larger rate increases, and these rate increases would likely encourage further demand reduction and further unplanned rate increases, etc. This would also impact water affordability for lower-income residents. These possible impacts should be analyzed and quantified.

Therefore, the Sierra Club recommends using a broader range of scenarios for long-term supply/demand planning, including scenarios that use reasonable alternative assumptions related to growth and climate impacts.

Sincerely,

Sue Chow, Chapter Chair
Sierra Club Loma Prieta Chapter



February 20, 2025

To: Kirsten Struve, Jing Wu, Nai Hsueh, Shiloh Ballard, Richard Santos
Cc: Stephanie Simunic

Subject: 2/23/26 Water Supply and Demand Management Committee Item 5.1. Sierra Club comments on demand scenarios for 2025 Urban Water Management Plan

Dear Valley Water Staff and Water Supply and Demand Management Committee,

The Sierra Club is concerned about water supply planning in the San Francisco Bay Area. Specifically, we are bringing to policymakers' attention how historic overestimation of future water demand has justified investment in unnecessary projects designed to increase imported water supplies. These supplies and projects come at the expense of the Bay-Delta ecosystem and the in-stream flows it needs to survive. They are also likely to come at the expense of ratepayer affordability. Therefore, we suggest Valley Water reconsider its demand scenario outcomes and also include an additional demand scenario in the 2025 Urban Water Management Plan (UWMP).

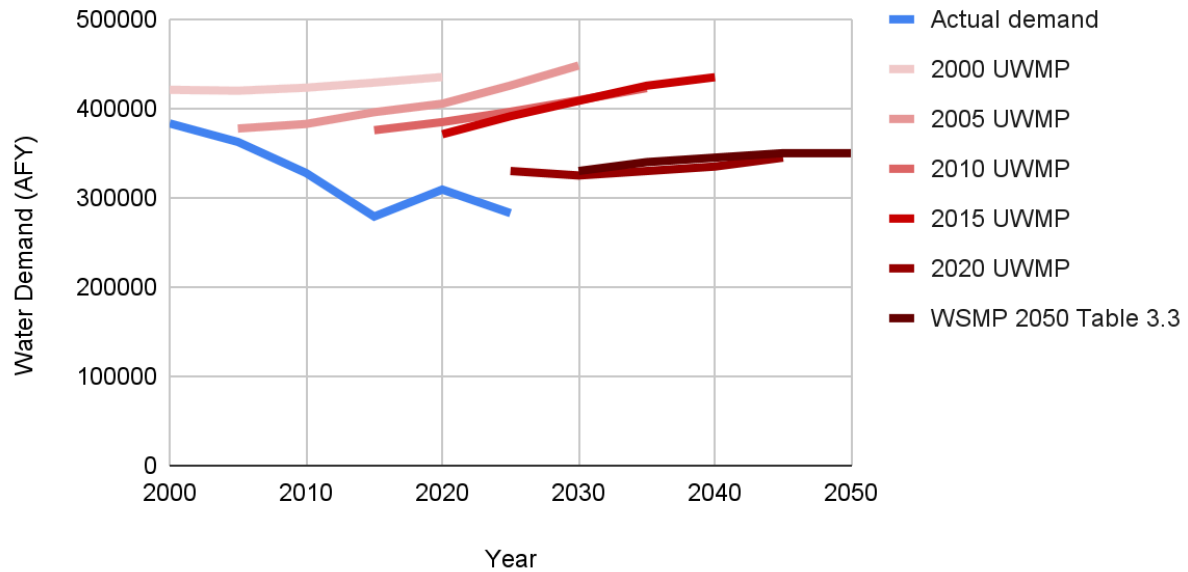
The Sierra Club has modeled water use in Santa Clara County and also taken a deep dive into the Bay Area Water Supply and Conservation Agency (BAWSCA) water demand model, which covers a significant portion of Santa Clara County. Please refer to the attached letter the Sierra Club sent to BAWSCA on December 4, 2025.

1. Valley Water's UWMP demand projections have consistently overestimated future water demand.

More recently, Sierra Club conducted a similar analysis of Valley Water's countywide demand projections for Santa Clara County. The chart below shows the history of Valley Water's UWMP demand projections vs. actual use during the past 25 years.

Valley Water Demand

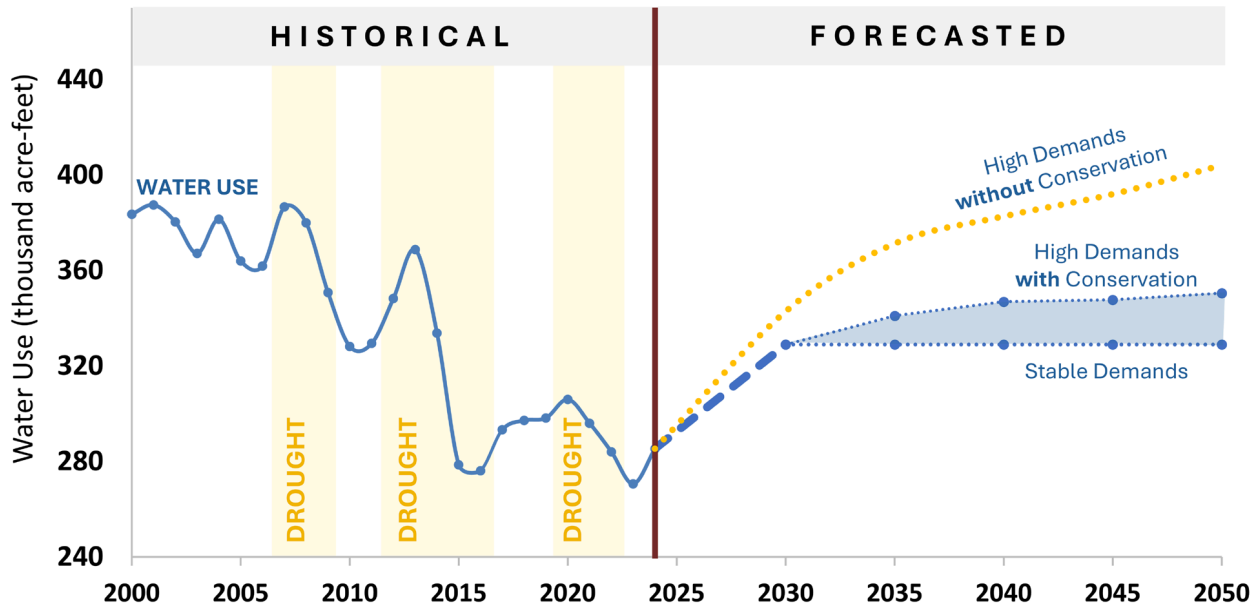
UWMP Projections vs Actual



Furthermore, demand projections in the Water Supply Master Plan 2050 (WSMP), which Valley Water plans to use for the 2025 UWMP, do not appear to align with the projections from the model discussed in Appendix D of the WSMP. The drought rebound between now and 2030, the stable demand curve and the high demand with conservation curve all seem to be arbitrary and are not supported by the model. **The UWMP should use model results for demand projections, not these arbitrary values.**

The forecasted Santa Clara County water demands through 2050 (WSMP Table 3-3) show demand starting at 330,000 AFY in 2030 with conservation. This seems to be unreasonably high given current demand is less than 300,000 AFY and demand has not reached 330,000 AFY since 2014. WSMP Figure 3-4 (see chart below) illustrates this well, with the steep demand curve increase between now and 2030. **The assumption that the drought rebound will continue does not appear to be supported by the model so should be updated in favor of using model outcomes for changes in demand.**

Figure 3-4 Historical and Forecasted Water Demands



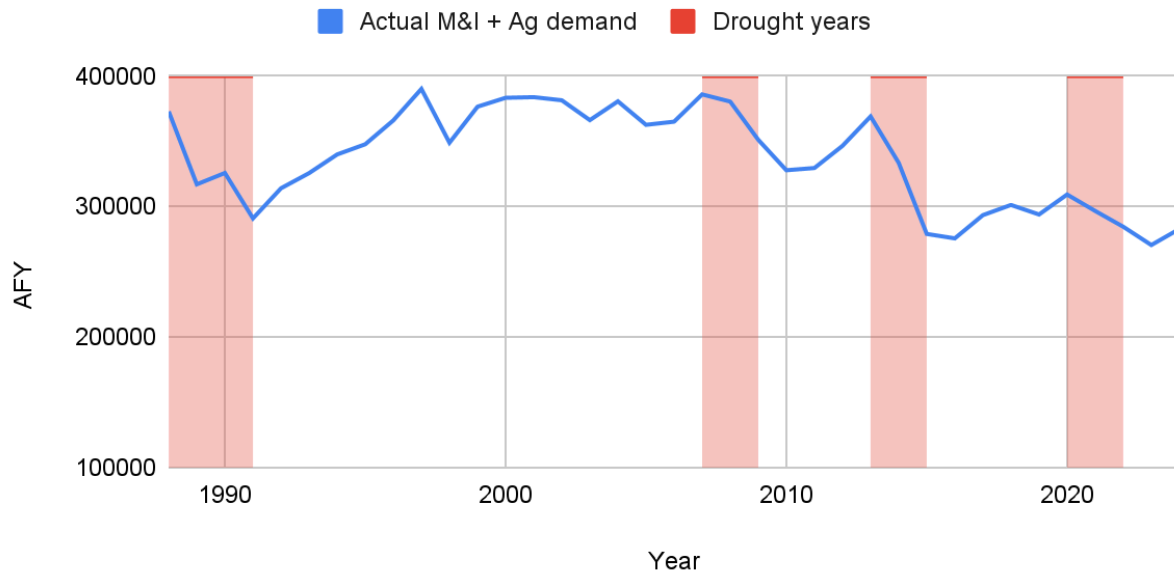
2. The Drought-Demand Model: A statistical model based on the Standardized Evapotranspiration-Precipitation Index (SPEI) drought index is a better predictor of water demand.

The standard water agency approach to modeling droughts is to assume that hotter, drier weather increases water use. This appears to be what the Valley Water model does in its climate modeling.

However, this approach is not supported by the historical record. In fact, droughts and higher temperatures over the past 20 years have suppressed water demand among Valley Water retailers. Every drought has resulted in large demand reductions, and post-drought demand has not rebounded to previous levels. Droughts have a long-term impact on demand by causing both behavioral changes (e.g. replacing lawns) and policy changes (e.g. the ban on watering ornamental turf with potable water). See figure below for a timeline of droughts and consumption in Santa Clara County.

Demand vs drought years

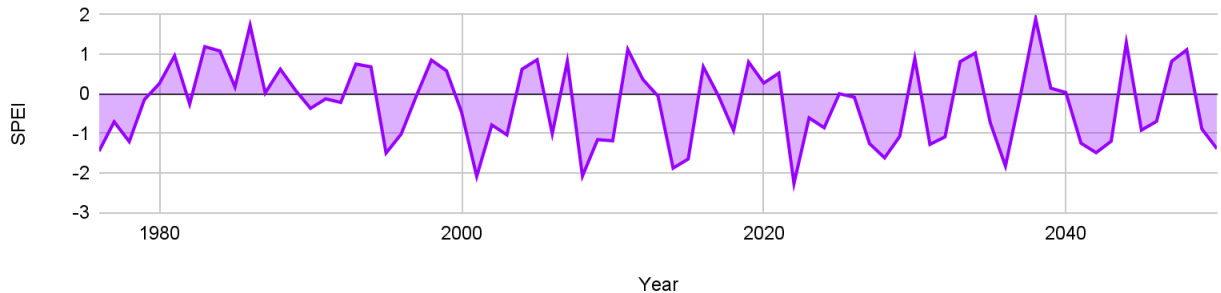
Santa Clara Valley Water



Using this insight, the Sierra Club built a curve-fitting model. This Drought-Demand Model uses a common drought measure to predict future water use. This drought measure, the Standardized Precipitation and Evapotranspiration Index (SPEI), coupled with population data and historical water use from the year 1976 to today, shows high predictive value when tested against out-of-sample test data. Essentially we created a water use curve that responds to a drought index and then tested it against years that we held back from the model. Our Drought-Demand Model's in-sample Mean Absolute Percentage Error (MAPE) is 3.4% and out-of-sample MAPE is 8.7%. In other words, our Drought-Demand Model has a 8.7% forecast error, compared to the 50% historical forecast error of Valley Water's WSMP projections.

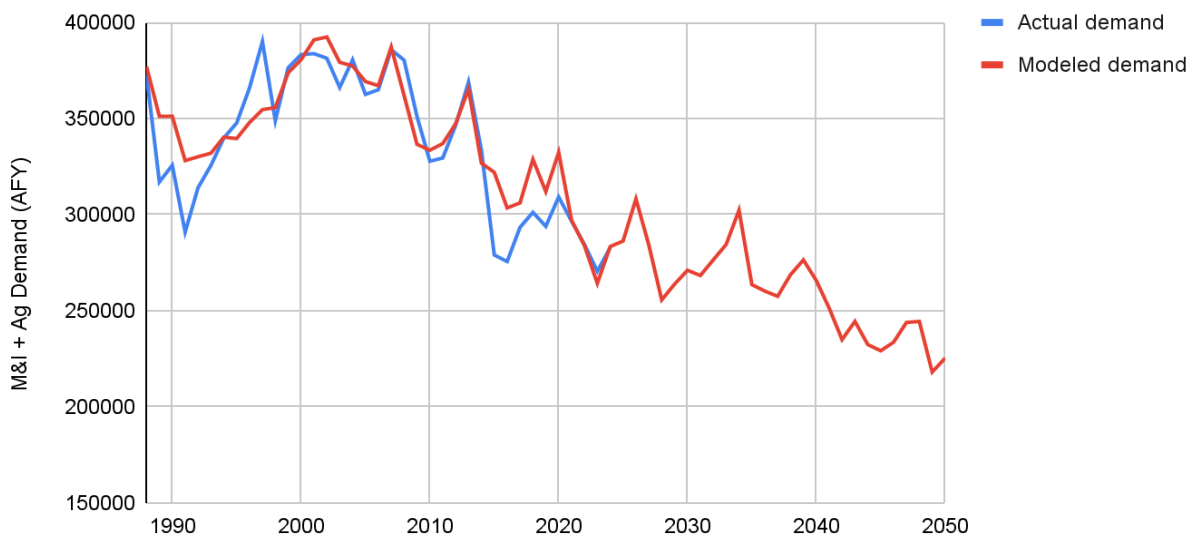
The key to our model is the assumptions around future droughts. We pulled drought (SPEI) predictions for Santa Clara County from the world's leading climate models, and settled on the HadGEM2-ES365 (Historical +rcp45) as our baseline model. This model is used by CalAdapt to test against future droughts and runs slightly warmer and drier than other models. For our population inputs, we used the California Department of Finance population projections for Santa Clara County, which project 0.11% annual population growth to 2050. Below is a chart that shows the future drought projection we used for a baseline. Negative numbers are drier and/or hotter than normal and positive numbers are wetter and/or cooler than normal.

Historical Santa Clara County SPEI and HADGEM2-ES projection



The Drought-Demand Model shows continuing reductions for the next 20 years. We find in our base case that 2050 Santa Clara County demand for potable water could be about 225,000 acre-feet per year (AFY) in 2050. In this case, the 350,000 AFY predicted by the WSMP 2050 “High Demand with Conservation” projection could be a 55% overestimate.

Modeled vs Actual Demand, Santa Clara County



We believe the Drought-Demand Model uses reasonable alternative assumptions that should be considered and tracked to avoid over-investment, leading to increased unit-costs and increased water rates, thus resulting in additional conservation, etc.

A word about population projections: Valley Water uses relatively aggressive population growth numbers based on projections of the Association of Bay Area Governments. The growth rate chosen by Valley Water for its projections has not been attained for the past 25 years and far exceeds historical population growth rates. The Department of Finance

projections we use have generally been accurate within 3% on a 10-year basis, with errors tending toward overestimation of growth.

3. Conclusion

We ask that Valley Water’s 2025 UWMP consider our Drought-Demand Model demand projections for Santa Clara County, and inform retailers in the County about this alternative for consideration in their UWMPs.

The potential for reduced demand provides an opportunity to further reduce reliance on the Sacramento/San Joaquin Delta and return much-needed flows to the ecosystem as mandated by the Delta Reform Act. This is also in line with Valley Water’s 2026 Legislative Guiding Principles which support “efforts to address all Delta stressors, including ... in-Delta and upstream diversions.”

In particular, the Sierra Club is concerned about Valley Water’s participation in mega-projects such as Sites Reservoir and the Delta Conveyance Project. In addition to the great environmental harm these projects will have on the Delta, these projects will have ever-rising costs resulting in unplanned water rate increases and impacts on water affordability. Decreasing demand would also result in increased water rates per unit. These rate increases would likely encourage further demand reduction. Although we did not analyze affordability for Valley Water ratepayers as part of these comments, **the potential impacts of decreasing demand on affordability should be analyzed and understood.**

In summary, utilizing more realistic demand projections improves planning, reduces the need for rate increases, reduces the need to invest in water supply projects, and helps to address affordability.

Thank you for considering our input and making sure the 2025 UWMP includes modeling scenarios that capture the potential for continued reduction in demand. We would welcome the opportunity to meet with staff to discuss our Drought-Demand Model and the importance of these alternative demand projections in the context of the UWMP.

Sincerely,

Sue Chow, Chapter Chair
Sierra Club Loma Prieta Chapter

Miguel Miguel, Director
Sierra Club California

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