



The imported water baseline unit cost was calculated to be \$450/acre-feet (AF). Valley Water also has a contract with Semitropic Groundwater Storage District (Semitropic) where imported water supplies can be stored outside the county. Putting water into Semitropic occurs primarily in wet years, while taking water out of Semitropic via exchange occurs primarily in drought years or when needed, for example to mitigate for loss of local supplies while Anderson dam is reconstructed. Utilization of Semitropic is integrated into Valley Water's annual operations decision-making and facilitates efficient use of local surface water and groundwater management as well as imported supplies. Adding the average Semitropic costs from 2019 through 2023, which includes higher costs due to both drought operations and wet-year operations captured during this time period, to the imported water baseline unit cost would result in a combined unit cost of \$490/AF.

### **Future Baseline Imported Water Cost**

Valley Water's long-term imported water baseline costs were included in the long-range financial planning presentation to the Board on March 26, 2024 (Item 10.1 - Receive and Discuss Long Range Financial Planning Models for the Water Utility Enterprise Fund, the Watersheds Stream Stewardship Fund, and the Safe, Clean Water Fund) and are summarized below:

- SWP and CVP Contract Water Delivery Costs (Fixed and Variable Charges) – SWP and CVP contractual fixed costs, SWP variable charges paid to DWR for water delivery to Valley Water, and CVP variable charges paid to both USBR and SLDMWA for water delivery to Valley Water.
- Delta-Mendota Canal (DMC) Subsidence and Extraordinary O&M Project Costs – SLDMWA's total projection is \$578M over the next ten years; Valley Water's portion forecasted at \$30.5M and included in CVP cost projections over the next 30 years.
- San Felipe Division Capital Repayment – Remaining capital obligation to USBR for the San Felipe Division; \$172M remaining through 2035 per the contract repayment schedule.
- San Felipe Reach Capital and O&M Costs – Valley Water's internal capital and O&M costs for San Felipe Reaches 1, 2 and 3.
- California Aqueduct Subsidence Program (CASP) – DWR's total projection is \$1.4B through 2035; Valley Water's portion is included in DWR Statement of Charges projections but is expected to be minimal since planned subsidence repairs are limited to facilities that do not directly service Valley Water.
- South Bay Aqueduct Long Term Repairs – Valley Water's projection for long-term repairs of the South Bay Aqueduct; forecasted at \$50M beginning in 2028 and repaid over the following 35 years; final cost projections and plans to be provided by DWR in the future.

Consistent with the Water Supply Master Plan 2050 (WSMP) cost analysis methodology, the cost of this continued baseline SWP and CVP water service is \$1.91 Billion (in 2023 dollars) over a 50-year time period from 2024-2074.

Climate change projections show precipitation patterns for both local and imported supplies shifting towards more extreme wet years, more intense droughts, and increased temperatures. Modeling scenarios estimate a reduction in our average annual SWP plus CVP supplies from 190,000 AF currently to 128,000 AF by 2040. Consistent with the approach used in the WSMP, a levelized unit cost,

which is the unit cost needed to recover the total cost of the project over the next 50 years, is calculated in Table 1.

**Table 1 – Future Imported Water Costs with 2040 Climate Change Impact**

	<b>Average Annual Supply (AF)</b>	<b>Present Value Cost (Millions)</b>	<b>Levelized Unit Cost (\$/AF)</b>
Baseline Imported Water Supplies**	128,000	\$1,910	\$514

\*\* Baseline imported water supplies are those supplies allocated to Valley Water through long-term water supply contracts executed with the State of California and the U.S. Bureau of Reclamation for SWP and CVP water supplies.

### **Potential Imported Water Supply Projects**

Valley Water is participating in the planning phase for several new water supply projects that could help offset projected climate change impacts to our imported water supplies. Valley Water has not yet made a commitment to invest in the construction of these projects, which are being evaluated as part of the WSMP process. The levelized unit cost for these projects are shown in Table 2 below.

**Table 2 – Potential Imported Water Supply Project Costs**

<b>Water Supply Project</b>	<b>Average Annual Supply Produced (AF)</b>	<b>Present Value Lifecycle Cost (Millions)</b>	<b>Levelized Unit Cost (\$/AF)</b>
Delta Conveyance Project	14,000	\$720	\$2,700
Sites Reservoir Project**	5,000	\$130	\$1,200

\*\*This participation level corresponds to the maximum wait-listed participation level (2.65%) for Valley Water. Current participation level is at 0.2%

### **Potential Water Storage Projects**

If new investments are made in new imported projects and local projects such as purified water, additional storage investments would likely be required to optimally manage unused wet-year water for use in dry years. Similar to the way Semitropic is currently utilized in Valley Water's water supply operations, new water supply storage would be incorporated into annual decision-making regarding how Valley Water's various water supply sources are integrated and utilized. Investment in new storage would also support Valley Water's planning strategy to diversify storage options to improve overall water supply resiliency in dry years, as well as provide additional tools to manage operations as we approach the expiration date for our Semitropic banking contract in 2035.

Storage projects that are being evaluated as part of the WSMP process include the following:

**Table 3 – Potential Water Storage Projects**

<b>Water Storage Project</b>	<b>Storage (AF)</b>	<b>Present Value Lifecycle Cost (Millions)</b>	<b>Lifecycle Cost PV/Storage Capacity (\$/AF)</b>
Pacheco Reservoir Expansion Project	140,000	\$1,590	\$11,400
B.F. Sisk Dam Raise and Reservoir Expansion Project	60,000	\$470	\$7,900
Las Vaqueros Reservoir Expansion Project	30,000	\$350	\$11,700
New Groundwater Banking Project	350,000	\$350	\$1,000

The combined cost of baseline imported water supplies and new projects depends on the specific portfolio of projects that the Valley Water Board chooses to invest in. The WSMP is evaluating various combinations of projects to meet Valley Water's level of service (LOS) goal through the planning horizon. The Board will receive an update on the WSMP on June 25, 2024.

DocuSigned by:

*Aaron Baker*

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 Aaron Baker, P.E.  
 Chief Operating Officer  
 Water Utility Enterprise

Attachment 1: Follow Up from April 9, 2024 Board Meeting, Item 23-1065

**MEMORANDUM**

FC 14 (01-25-23)

**TO:** Board of Directors**FROM:** Darin Taylor**SUBJECT:** Follow Up from April 9, 2024 Board Meeting,  
Item 23-1065.**DATE:** April 15, 2024

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On April 9, 2024 the Board held a public hearing on the February 2024 Annual Report on the Protection and Augmentation of Water Supplies and Recommended Increases in Groundwater Production Charges, Surface Water Charges, and Recycled Water Charges for Fiscal Year 2024-25.

After hearing the staff presentation, members of the Board posed several questions. Staff has prepared responses in the attached question and answer (Q&A) document. The Q&A document also includes responses to related questions received from members of the public.

DocuSigned by:

A handwritten signature in cursive script that reads "Darin Taylor".

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Darin Taylor

Chief Financial Officer

Office of the Chief Executive Officer

CC: R. Callender, A. Baker, S. Bogale, L. Penilla, J. Collins, V. Gin, K. Struve, C. Narayanan  
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*Memo\_4-9-2024\_Board\_FollowUp*

**1. How are costs allocated across groundwater production zones, and are the allocations equitable?**

A: Valley Water employs an integrated approach to manage a sustainable water supply through conjunctive management and use of surface water and groundwater resources to maximize water use efficiency. Water utility costs are allocated between the 4 groundwater production zones based upon benefits received. Benefits received within each zone are based on the infrastructure used and activities undertaken to provide a reliable water supply to each zone.

Groundwater Benefit Zones:

In 2020 a comprehensive Zone of Benefit Study was completed. Beginning in 2014, the scientific study focused on Valley Water's groundwater benefit zones and is based on up-to-date geologic studies, local groundwater data, and the services Valley Water provides. In 2020 Valley Water Board of Directors adopted changes to update the zones based on the study results. There was extensive community outreach as part of this study. The current zones ensure ratepayers are grouped in a way that reflects the most recent and relevant data regarding services and benefits received by well users, including retailers.

Cost Allocations:

In general, costs are driven by infrastructure that provides benefit to a zone, and shared infrastructure costs are allocated to zones primarily based on the amount of water delivered to each zone by that infrastructure. While water rates differ from zone to zone, they are equitable in that a water user only pays for benefits provided to that zone.

The FY 2024-25 PAWS report (<https://www.valleywater.org/your-water/current-water-charges/proposed-water-charges>) provides details for the Basis of Cost Allocations between North and South Zones for operating projects (see Appendix B). Appendix C provides capital cost recovery details for completed capital projects benefiting the 3 South County Zones.

**2. What portion of water rate increases are driven by capital investments?**

A: Over the next ten years, on average, 63% of total rate increases are driven by the Capital Improvement Program (CIP). It is important to note that due to the South County zone's capital cost recovery mechanism (i.e., once a capital project is completed, the portion benefiting a South County zone is amortized over 30 years), the portion of CIP costs driving annual rate increases will vary. Of note, over the next ten years, Operations & Maintenance (O&M) costs increase by 3.7% per year, on average.

**3. How has inflation impacted the water rate projection? Is it a major cost driver of the rate projection?**

A: The U.S. experienced severe inflation in 2021 and 2022 due to global events related to COVID-19, supply chain issues, and the Russian invasion of Ukraine. In fact, the U.S. CPI peaked in June 2022 at 9.1% year over year. Since June 2023, the U.S. CPI has ranged between 3% and 4% year over year each month. Nevertheless, the impact of that severe inflation surge is felt today in the prices for labor and goods and services.

The construction cost escalation factors for VW's Capital Projects ranges between 7% and 4.8% from FY25 to FY30, which is a significant contributor to the total project cost of capital projects.

**4. What inflation factors are being used for Water Utility projects?**

A: Valley Water uses several inflation factors. Prior year actuals and current and future year projections are shown in the table below. Construction cost inflation factors are provided to Valley Water by O'Connor Construction Management, Inc. (OCMI) who conducted a San Jose Market Study for the Construction Cost Escalation Rate (CCER) to be used in the FY 2024-25 planning cycle. The OCMI Market Study is attached to this memo.

Valley Water Cost Inflation Factors	Actual	Actual	Actual	Actual	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
Supplies & Services Inflation*	1.6%	3.2%	6.8%	2.9%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Construction Cost Inflation**	5.4%	3.4%	14.1%	0.1%	12.0%	7.0%	5.5%	5.5%	5.5%	5.0%	4.8%	4.8%	4.8%	4.8%	4.8%

\* Actual supplies and services inflation based on the San Francisco-Oakland-Hayward Consumer Price Index for all urban consumers as of June 2023  
 \*\* Actual construction cost inflation based on the City Cost Index of Engineering News Record results for the San Francisco Bay Area as of June 2023

**5. How much is the Water Utility spending on imported water?**

A: The cost of Valley Water’s imported water supplies are competitive with other sources of supply. The unit cost of our contractual supplies from the State Water Project (SWP) and Central Valley Project (CVP) is approximately \$450 per acre-foot based on average annual hydrology. However, these unit costs would be greater in dry years and lower in wet years. Current 2024 water allocations are 30% for SWP and 75% M&I / 35% Ag for CVP, equating to approximately 140,000 AF of supply for Valley Water which is more than half of the water delivered in the County.

In the upcoming biennial budget, total imported water supply costs are close to \$80 million in FY 2024-25 and \$84 million in FY 2025-26, excluding supplemental water transfers and new water supply and storage project costs. CVP contract costs include U.S. Bureau of Reclamation costs for CVP water deliveries and San Felipe Division capital costs, as well as San Luis & Delta-Mendota Water Authority costs. SWP contract costs include all costs for delivery of SWP water, including costs related to the South Bay Aqueduct. Semitropic Groundwater Banking includes annual O&M and water banking activity costs and San Felipe Reach costs include Valley Water’s internal capital and O&M costs for the San Felipe Division.

Imported Water Supply Costs	FY 2024-25	FY 2025-26
Imported Water Contract Costs (Central Valley Project, State Water Project & Semitropic Groundwater Bank)	\$69.9 M	\$72.5 M
San Felipe Reach Capital and O&M Costs	\$ 9.7 M	\$11.3 M
<b>TOTAL</b>	<b>\$79.6 M</b>	<b>\$83.8 M</b>

Potential imported water supply-related project costs are shown in the following table. These projects are being evaluated as part of the Water Supply Master Plan 2050. Updates on each of these projects are being planned for future Water Supply and Demand Management Committee meetings.

Imported Water Supply-Related Projects	FY 2024-25	FY 2025-26
<b>Delta Conveyance</b> <sup>1</sup>	\$5.8 M	\$8.0 M
<b>B.F. Sisk Dam Raise at San Luis Reservoir</b> <sup>2</sup>	\$10.0 M	\$5.0 M
<b>Los Vaqueros Reservoir Expansion</b> <sup>3</sup>	\$ 4.0 M	\$4.5 M
<b>TOTAL</b>	<b>\$19.8 M</b>	<b>\$17.5 M</b>

1. Delta Conveyance costs reflected as an Operations Project. Ten-year total investment approximately \$94M.
2. B.F. Sisk Dam Raise costs reflected as an Operations Project. Ten-year total investment approximately \$225M.
3. Los Vaqueros Reservoir Expansion costs reflected as an Operations Project. Ten-year total investment approximately \$130M.

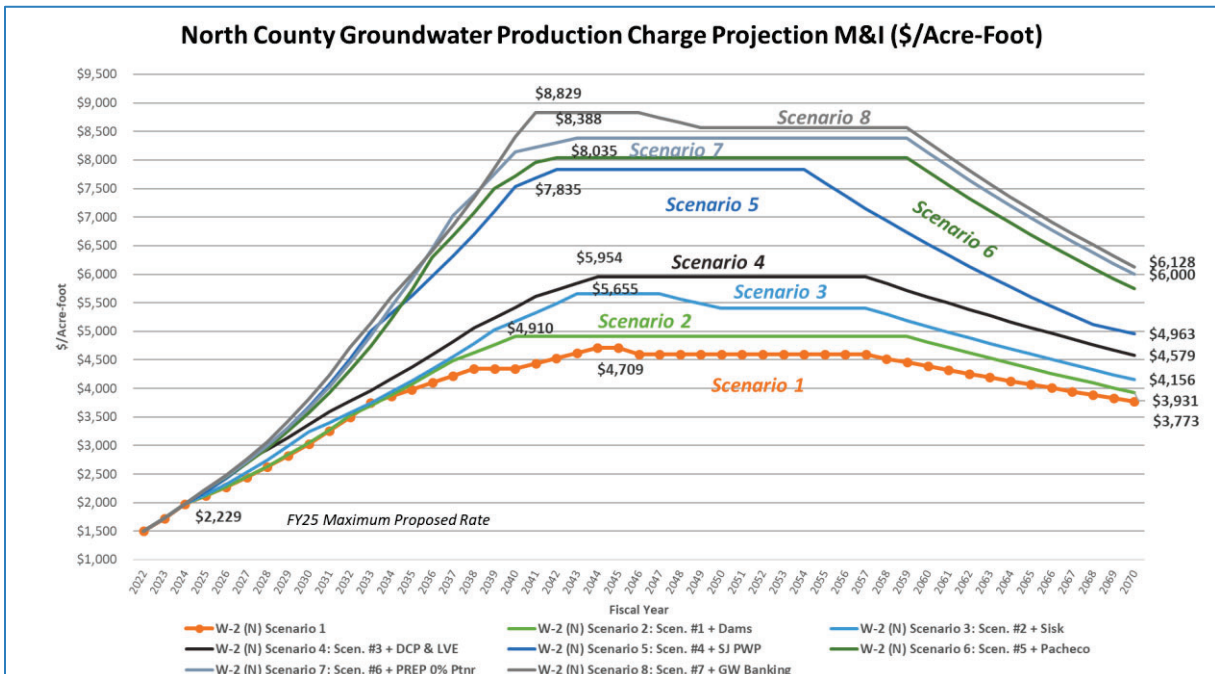
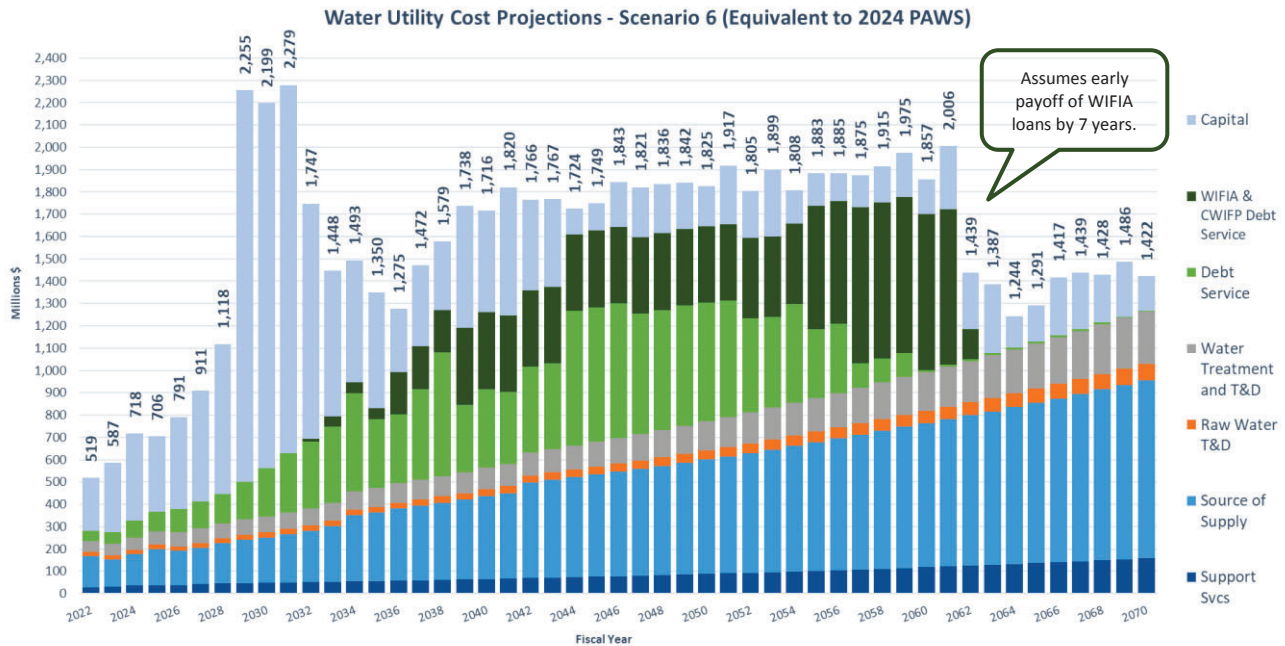
## 6. When will an analysis on the elasticity of water usage and water rates be available?

- A: Staff has engaged a consultant for a *Study on Water Use Demand, Elasticity and Rate Affordability*. This study is kicking off this Spring and the Board can expect staff to bring the project scope for review and discussion at an upcoming Water Conservation and Demand Management Committee meeting. Staff anticipates the study to take a year or so to complete, and is hopeful it will be informative to the FY 2025-26 rate setting cycle.



**7. Show debt service repayment schedules for WIFIA/CWIFP loans. What is the corresponding impact on water rates?**

A: The overall impacts of WIFIA and CWIFP loan debt service, is highlighted in the “Water Utility Cost Projections – Scenario 6” graph below, which reflects water supply investments incorporated into the 2024 PAWS Report. In the scenario shown, WIFIA and CWIFP debt is paid off roughly 7 years early due to excess cash generation in the outer years. The subsequent graph shows the North County M&I Groundwater charge projection for several water supply investment scenarios, with each successive scenario building on top of the former. Scenario 6 shows the water rate projection based on the WIFIA and CWIFP debt service projection shown in the Water Utility Cost Projection graph below.



**8. Are conservation savings factored into the water use projection? Is water conservation cost effective and how much is budgeted?**

A: Yes, Water conservation is reflected in District-managed water use for FY 2023-24 adopted budget (207,000 acre-feet) and future projections (222,000 in FY 2024-25). If it were not for the conservation efforts achieved by residents and businesses in Santa Clara County, District-managed water use projections would otherwise be higher, all things being equal. That said, staff anticipates a post-drought water use rebound similar to what has been observed after previous droughts. Next year's water rate setting cycle will be informed by the summer 2024 water usage and by the consultant study results. The water use projection will be adjusted accordingly.

In 2023 an estimated 84,000 acre-feet of water was conserved in Santa Clara County. Valley Water has a robust conservation program that consists of various rebates and resources for residents and businesses in Santa Clara County, available [through over 20 programs](#). Prior year spending and current year budget is highlighted in the table below.

<b>Programs &amp; Projects</b>	<b>FY 21</b>	<b>FY 22</b>	<b>FY 23</b>	<b>FY 24</b>
<b>Drought Emergency</b>	\$ -	\$ 4.1	\$ 4.8	\$ -
<b>Water Conservation Program</b>	\$ 4.6	\$ 7.8	\$ 11.6	\$ 12.1
<b>TOTAL (millions) =</b>	<b>\$ 4.6</b>	<b>\$ 11.9</b>	<b>\$ 16.4</b>	<b>\$ 12.1</b>

Water conservation is cost effective on a per acre-foot cost for new water supply and it saves residents and businesses money when implementing conservation. At the same time, water conservation results in less revenue to the Water Utility.

The Water Supply Master Plan analysis has shown that investment beyond conservation and recycling is needed for a reliable water supply in the future, even with the most aggressive possible conservation targets. In order to meet the Board's current water conservation targets, drought level participation must be maintained even in non-drought years. The water conservation targets are already included in the demand projections and therefore the portfolios being analyzed for the Water Supply Master Plan. While water conservation is a cost-effective new supply, depending on climate change impacts on demands, water conservation may not be sufficient to ensure a reliable supply in the future.

More information can be found online at [www.watersavings.org](http://www.watersavings.org).

**9. Is the San Jose direct potable purified water project funded?**

A: The San Jose Direct Potable Reuse (DPR) Phase 1 Demonstration Facility is validated, funded and included in the included in the CIP Draft FY 2025-29 Five-Year Plan. Preliminary cost projections for the San Jose DPR Phase 2 Full-Scale Facility are included in water utility rate projections in FY 2028-29 and beyond, although not included in the CIP Draft FY 2025-29 Five-Year Plan at this time.

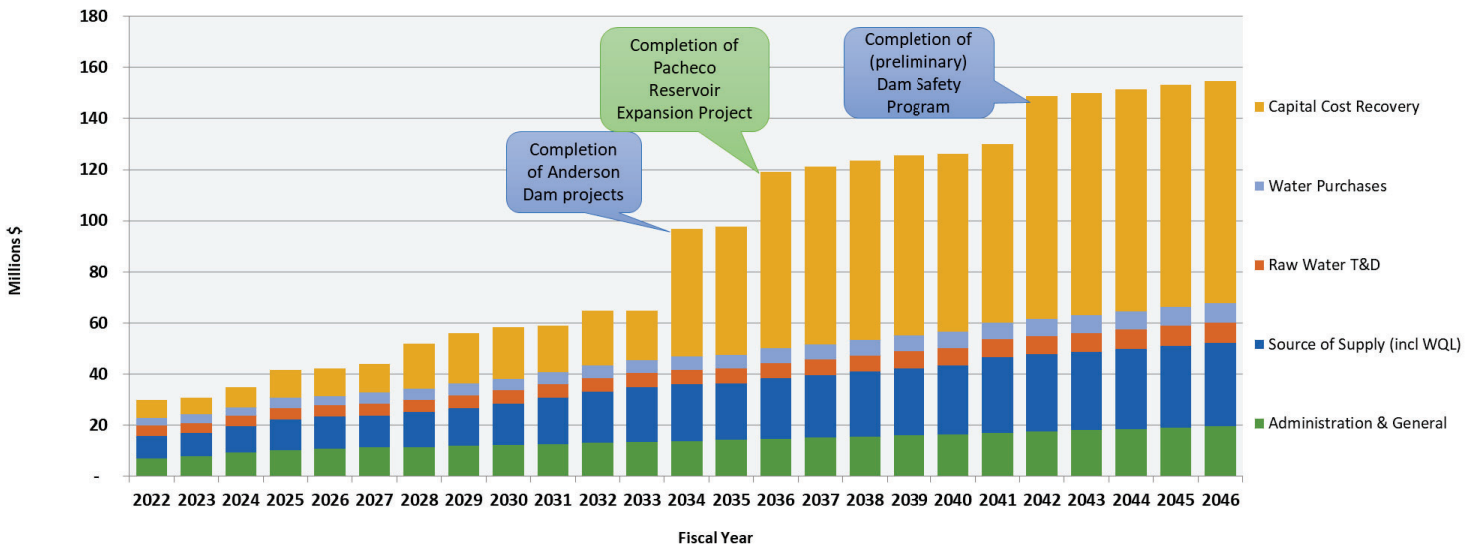
The Palo Alto Indirect Potable Reuse (IPR) Project was placed on the Unfunded Project list in the CIP Draft FY 2025-29 Five-Year Plan and will be reviewed and evaluated over the next 2 years.

**10. Is groundwater recapture being maximized?**

A: Per the District Act and SGMA, Valley Water is the Groundwater Sustainability Agency for the Santa Clara and Llagas subbasins. Valley Water responsibly manages the water supplies of the Santa Clara County by conjunctively managing the surface water and groundwater and has an effective managed aquifer recharge program using water from our ten local reservoirs and imported water. Several additional or expanded recharge facilities are being evaluated as part of the Water Supply Master Plan 2050 to increase recharge capacity and operational flexibility. In addition, Flood Managed Aquifer Recharge is also being evaluated as part of the Board’s no regret policy to recharge on agricultural or open lands.

**11. What happens to the South County cost projections after FY34?**

A: The South County cost projection graph has been extended beyond FY34 as shown in the graph below.



**12. Is the North County Zone W-2 M&I groundwater charge projected to increase by 12X in 11 years versus the FY 23 actual charge of \$1,724/AF?**

A: A 12X increase would mean a projected groundwater charge of \$20,688/AF in FY 34 which is not correct. Instead, the PAWS report reflects a North County groundwater charge of \$5,075 in FY 34.

**For North County Zone W-2 what is the contribution of the increase with and without Pacheco, Sisk, Los Vaqueros Expansion, and Delta Conveyance?**

A: See item 10.1 from the 3/26/24 Board meeting regarding the Long Range Financial Planning Models. Scenario 2 is the North County Zone W-2 groundwater charge projection without Pacheco, Sisk, LVE and Delta Conveyance. Scenario 6 includes all of those projects plus the impact of a San Jose Purified Water Program Phase 2 Full-Scale Facility project.

**What are the cost drivers of VW's groundwater charge projection?**

A: The key cost drivers of the long-term rate projection are large capital projects and investments in new water supply.