Docket		A.26-04-010
Exhibit Number	:	Cal Adv -
Commissioner	:	Matthew Baker
Administrative Law Judge	:	Gerald F. Kelly
Public Advocates Office Witness(es)	:	Zaved Sarkar

PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

REPORT ON PER- AND POLYFLUOROALKYL SUBSTANCES COMPLIANCE PROGRAM: PART B – CONTINGENCY AND VOLUMETRIC ADJUSTMENTS

Application 26-04-010
(San Jose Water Company)

San Francisco, California
September 14, 2026

TABLE OF CONTENTS

MEMORANDUM

The Public Advocates Office at the California Public Utilities Commission (Cal Advocates) examined application material, data request responses, and other information presented by San Jose Water Company (San Jose) in Application (A.) 26-04-010 (Application) to provide the California Public Utilities Commission (Commission) with recommendations in the interests of ratepayers for safe and reliable service at the lowest cost. Zaved Sarkar prepared this report under the general supervision of Program Manager Syreeta Gibbs and Program and Project Supervisor Mukunda Dawadi. John Van Geffen is Cal Advocates' legal counsel.

Cal Advocates is filing two separate reports regarding this Application. This report, Report B, covers contingency adjustments and volumetric reduction recommendations. Report A, prepared by Meghan Tosney, covers the proposed budget cap and advice letter approach, and cost transparency and affordability.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence from Cal Advocates' testimony of any particular issue connotes neither agreement nor disagreement of the underlying request, methodology, or policy position related to that issue.

CHAPTER 1 CONTIGENCY ADJUSTMENTS

I. INTRODUCTION

Contingency factors increase capital budgets and operate as a financial safety net to cover potential, unforeseen costs. This practice is unfair in a monopoly setting and shifts risks from the company to ratepayers who ultimately bear costs for unknown situations that may not materialize.

Due to the fundamental regulatory structure where a utility's profit is directly proportional to its capital expenditure, there is an incentive for utilities to fully utilize their allocated capital budgets. This encourages the expenditure of contingency funds included in the revenue requirement, even when no unforeseen event has occurred.

As the following chapters demonstrate, San Jose's request for a capital budget for its PFAS Compliance Program is excessive and unreasonable. Blanket adders such as contingency are speculative, unnecessary, and unfairly inflate San Jose's capital budget for ratemaking purposes.

II. SUMMARY OF RECOMMENDATIONS

The Commission should reject San Jose's proposal to include a 5% contingency factor in rates for its PFAS Compliance capital project. Any reasonable and unanticipated costs can be incorporated into customer rates if the costs actually occur and when a completed project is used and useful.

III. ANALYSIS

A. San Jose Has Not Justified the Need for Contingency

San Jose's request to design and construct the Williams Station PFAS Treatment Project includes a 5% contingency applied directly to the project's base construction and material subtotal of $131,800,000.[1] This creates an explicit cost buffer of $6,590,000 embedded within the total $156.3 million project estimate (in 2026 dollars).

[1] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, p. 31.

San Jose has not identified any specific event, regulatory change or foreseeable cost increase that is anticipated or likely to occur that would increase costs by $6.59 million dollars. Rather, San Jose states that this 5% margin is necessary to hedge against potential material tariffs, trade policy fluctuations, and supply chain constraints that *could* emerge across the multi-year construction window spanning through 2030.[2]

The Commission has ruled that including pre-set contingency factors by a regulated utility is unnecessary and unfair to ratepayers.[3] Ratemaking requires that every expenditure included in rate base be explicitly justified. The utility bears the burden of proof as ratepayers are a captive market. Unlike most other services and goods that a ratepayer purchases, a ratepayer does not have the option to switch to an alternative utility service if dissatisfied. As a result, the normal supply and demand forces of a free-market economy are absent, and ratepayers are left at the mercy of a monopoly utility that should justify every dollar included in the rate base. An unallocated contingency fails to meet this standard of explicit cost justification.

1. San Jose Double Counts Contingency with its Built-In Escalation

In San Jose's response to Cal Advocates' data request, San Jose admits it has already adjusted its rate base estimate of $156.3 million (in 2026 dollars) to $176.1 million in project-year dollars by applying a 3.0% annual compounded escalation rate through 2030.[4] By escalating at 3% annually, San Jose has already mathematically

---

[2] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, page 31.

[3] See, e.g., D.24-03-042 at 27 ("Given Cal Water's indiscriminate application of contingency factors … as well as its near blanket approach … we cannot conclude that the contingency factors are reasonable."); D.21-08-036 at 331 ("Since contingency allowances are … intended to cover 'unforeseen conditions,' these amounts are also unpredictable, and therefore, … SCE has not established these costs to be reasonable."); D.19-05-020 at 152 ("We see no benefit to the ratepayers in this instance of carving exceptions and creating ratemaking policy which is only applicable to software projects."); D.26-04-045 at 52, Section 4.3.4 ("Excluding contingency allowances … avoids recovery of speculative costs that have not yet been incurred or demonstrated to be necessary.")

[4] Attachment 1-2: A.26-04-010 SJWC Response to Data Request ZS1-002 (Production Data and Ratemaking), Q 6.a.

captured inflation, supply chain friction, and rising material costs. Allowing San Jose an additional 5% contingency ($6.59 million) in addition to 3.0% annual compounded escalation can force ratepayers to pay twice for the exact same macroeconomic risk.

San Jose's own discovery responses confirm this is not a hypothetical concern. When asked why an additional 5% contingency was necessary on top of its base construction estimate, San Jose explained that CDM Smith's (CDM) certified cost estimators recommended that tariff-related uncertainty "be addressed through the 5% project contingency" because the underlying Opinion of Probable Construction Costs "expressly excludes any tariff surcharges or money for COVID related impacts."[5] San Jose has therefore identified, in its own words, the specific risk: tariff and trade-policy exposure, that the 5% contingency is meant to cover. That is the identical risk San Jose separately cites to justify its 3.0% annual escalation to 2030 dollars. Requesting to include an already named, identified risk into a blanket percentage contingency, after already pricing that same risk into the escalation factor, is the precise double-recovery the Commission should reject.

As the Commission has repeatedly noted, "in a normal general rate case, a utility must demonstrate the reasonableness of every dollar in its revenue requirement."[6] It is inappropriate to increase customer bills to account for unknown errors or events that may or may not occur, or unforeseen project changes that the Commission cannot review for reasonableness when authorizing a budget.

2. San Jose Is Shifting Risk to Ratepayers

A public utility's authorized return on equity (ROE) is specifically granted to compensate investors for taking on normal operational and macroeconomic risks, including market volatility and procurement variances. Allowing a $6.59 million

---

[5] Attachment 1-1: A.26-04-010 SJWC Response to Data Request ZS1-001 (Cost, Alternative Analysis, O&M), Q 4.c.

[6] Decision (D.)96-12-066 page 5; D.21-08-036 page 331.

contingency "cushion" effectively protects San Jose from standard market pressures and forces captive ratepayers to bear unknown costs.

While contingencies may be appropriate in standard construction project planning, contingencies in monopoly utility ratemaking are fundamentally different. In construction, contingency factors help estimate additional unanticipated costs that ***might*** occur. However, in ratemaking, these adders are built directly into customer rates, meaning ratepayers pay for unforeseen events ***even if they never happen***. The result is that shareholders earn profit on contingency amounts that may never be needed, while customers bear higher—and unnecessary—costs.

In multiple decisions, including Cal Water Service Company's (CWS) recent GRC, the Commission determined that blanket contingencies for routine projects are unreasonable and create a disincentive to prudent forecasting by utilities.[7]

As the Commission has explained, contingencies are used to account for variables that are unknown, are unpredictable and therefore cannot be established as reasonable.[8]

> "…budgeting for contingencies is not necessarily appropriate in the context of a general rate case, where the utility must demonstrate the reasonableness of every dollar in its forecast revenue requirement."[9]

For these reasons, the Commission requires utilities to forecast what is projected to be a reasonable expense.[10] If the forecast is high, then the company will recover more than its capital expenditure and benefit its shareholders. If the forecast is low, the utility's

---

[7] See, e.g., D.24-03-042 at 27 ("Given Cal Water's indiscriminate application of contingency factors … as well as its near blanket approach … we cannot conclude that the contingency factors are reasonable."); D.21-08-036 at 331 ("Since contingency allowances are … intended to cover 'unforeseen conditions,' these amounts are also unpredictable, and therefore, … SCE has not established these costs to be reasonable."); D.19-05-020 at 152 ("We see no benefit to the ratepayers in this instance of carving exceptions and creating ratemaking policy which is only applicable to software projects."); D.26-04-045 at 52, Section 4.3.4 ("Excluding contingency allowances … avoids recovery of speculative costs that have not yet been incurred or demonstrated to be necessary.")

[8] D.19-05-020, p. 150.

[9] D.21-08-036, p. 331.

[10] D.19-05-020, p. 151.

recovery can be deferred for review in a subsequent rate case. This approach allows the Commission to review the reasonableness of the additional budget request before allowing the utility to include the extra costs in rates, as well as providing the utility with an incentive to control costs.

In San Jose's response to Cal Advocates' data request, San Jose explicitly confirmed that its annual rate base offset filings will be based strictly on actual recorded eligible costs, not merely forecasted percentages.[11] If real-world tariffs or unexpected supply disruptions actually occur; San Jose already has the regulatory mechanism to track, record, and present those itemized, audited costs to the Commission for a true prudence evaluation. Pre-approving a speculative $6.59 million baseline buffer eliminates any incentive for San Jose to aggressively negotiate cost-effective procurement contracts.

The Commission should not allow San Jose to include the costs of contingency factors in customer rates. These costs are speculative, unnecessary, and therefore, unreasonable. To protect ratepayers and to promote greater accuracy in forecasting, budgeting, and prudent cost controls, the Commission should reject San Jose's request for ratepayer-funded contingency factors.

3. San Jose has Confirmed there is No Cost Ceiling, and that its Construction Schedule does Not Depend on Commission Timing

San Jose's discovery responses confirm that no cap accompanies the contingency it seeks to include in rates. When asked directly whether it had estimated a cost ceiling in the event tariffs remain elevated through construction, San Jose responded that it "has not established a formal cost ceiling or not-to-exceed amount associated with elevated tariff conditions," and that it "will seek recovery of prudently incurred costs rather than adherence to a predetermined cost ceiling."[12] In other words, the 5% contingency is not a

---

[11] Attachment 1-2: A.26-04-010 SJWC Response to Data Request ZS1-002 (Production Data and Ratemaking), Q 6.b.

[12] Attachment 1-1: A.26-04-010 SJWC Response to Data Request ZS1-001 (Cost, Alternative Analysis, O&M), Q 4.e.

cap that limits San Jose's cost exposure, it is simply an additional, uncapped amount layered on top of an estimate that itself carries no ceiling. If tariff or supply-chain costs exceed both the base estimate and the contingency, San Jose has confirmed it will seek recovery of those additional costs as well, subject only to a prudence review that will occur after the money has already been spent. A contingency without a cap provides ratepayers no protection; it only guarantees an additional $6,590,000 in rates on top of an estimate that was never bounded in the first place.

The urgency San Jose invokes to justify locking in its cost estimate; and the contingency and escalation layered on top of it is simply overstated. San Jose has clarified that construction bidding "is not contingent upon Commission approval" and that it intends to proceed with bidding in the fourth quarter of 2026 regardless of the timing of a Commission decision.[13] San Jose has also confirmed that if a decision is delayed into 2027, it will continue advancing permissible pre-construction activities, resequencing construction activities, and pursue early procurement of long-lead equipment to mitigate any schedule impact. San Jose's own procurement strategy therefore does not depend on Commission approval by year-end 2026, undercutting any suggestion that ratepayers must accept an unbounded, uncapped contingency now to preserve the project schedule.

IV. CONCLUSION

The Commission should not require ratepayers to pay for unjustified, unnecessary blanket percentage contingency factors. Removing the contingency factors from San Jose's proposed PFAS Compliance capital budget saves ratepayers $6,590,000.

[13] Supplemental Direct Testimony of Kateline Lin, A.26-04-010 (Aug. 19, 2026), p. 6; and Attachment 1-1: A.26-04-010 SJWC Response to Data Request ZS1-001 (Cost, Alternative Analysis, O&M), Q 8.a.

CHAPTER 2 VOLUMETRIC ADJUSTMENTS

I. INTRODUCTION

This chapter evaluates the historical well flow logs, hydraulic modelling simulations, and ratemaking workpapers related to San Jose's proposed Williams Station PFAS Treatment Project to determine if the project's forecasted 20,000 GPM (28.8 MGD) treatment facility represents a prudent use of ratepayer funds.

II. SUMMARY OF RECOMMENDATIONS

- The Commission should deny San Jose's request for the escalated 28.8 MGD and direct San Jose to evaluate a phased implementation framework that focuses on a 14-MGD initial treatment design to meet historical average daily requirements while preserving structural space for potential future expansion. Reducing the project's capacity from 28.8 MGD to 14 MGD would reduce San Jose's proposed capital budget from $156.3 million to $101.4 million and save ratepayers from subsidizing San Jose's requested excess capital budget of $54.9 million.
- The Commission should not allow any future capital costs related to downstream interzone modifications tied to, or recovered under, this PFAS compliance application.

III. ANALYSIS

San Jose proposes to construct a 28-vessel centralized Ion Exchange treatment facility at Williams Station, one of San Jose's largest individual groundwater production facilities, to address persistent Per- and Polyfluoroalkyl Substances (PFAS) contamination discovered during routine monitoring since 2019.[14] Williams Station serves San Jose's distribution network with 15 production wells on a 14.2-acre site. With an estimated cost of $156.3 million in 2026 dollars, the total project cost is estimated to

[14] A.26-04-010FINAL Williams Station PFAS Treatment Justification_v2.pdf, page 1.

escalate to $176.1 million in 2030.[15] San Jose plans to have this treatment facility fully operational by Q2 of 2030.[16]

A. San Jose's Plans Have Sizing Discrepancies and Infrastructure Constraints

To address the complex task of developing and evaluating treatment alternatives for Williams Station, San Jose hired Hazen and Sawyer (Hazen), a firm that markets itself having specialized expertise in addressing PFAS treatment and mitigation.[17]

Hazen's March 2022 report identifies project goals based upon a maximum treatment system capacity of 14 million Gallons Per Day (MGD).[18] Using this MGD, Hazen evaluated several treatment options and narrowed it down to Ion Exchange treatment, with an initial probable project cost of $48.8 million.[19] In a later section of its report, Hazen states "The probable project cost increased from the alternatives evaluation estimate of $48,800,000 to $60,100,000. The project cost increased by $10,000,000 due to increasing design flow from 10,000 to 14,000 gpm".[20]

Following completion of Hazen's alternatives analysis, San Jose issued a request for proposals to four major engineering design firms to perform final design of the PFAS treatment facilities at Williams Station. San Jose ultimately hired CDM Smith (CDM) which completed the final design in January 2025. CDM's final design drastically expanded the scope and established a Maximum Plant Capacity of 20,000 GPM, equivalent to approximately 28.8 MGD.[21] This represents a 105.7% increase in maximum design capacity without a corresponding shift in localized aquifer yields.

---

[15] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, p. 31.

[16] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, p. 28.

[17] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, p. 14

[18] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, Appendix E, p. 55.

[19] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, Appendix E, p. 104.

[20] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, p. 194.

[21] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, p. 239.

There is a profound misalignment between the maximum physical size of the infrastructure and its planned usage. San Jose explicitly states in its project justification that the planned *average daily production capacity* of the facility is only 7.0 MGD.[22] Sizing structural foundations and purchasing 28 separate Ion Exchange (IX) vessels to handle 28.8 MGD for a facility that operates at an average daily baseline of 7.0 MGD results in a capacity factor of just 24.3%. San Jose's proposal would force ratepayers to fund an extra 21.8 MGD of capacity that will remain idle under normal operating conditions.

While the aggregate nominal pump capacities total roughly 21,300 GPM, real-world extraction is restricted by groundwater drawdown and deteriorating water quality. Multiple standby wells (for example, Wells W-4, W-13, and W-18) are severely impaired by elevated iron and seasonal. If all wells are online to meet a 20,000 GPM peak, these impaired wells would rapidly degrade the project's designed 5-micron pre-filtration system well before reaching the 15 PSI terminal limit,[23] and may result in automated plant shutdowns.

B. San Jose's Planning Lacks Economic Optimization

During review of this project, Cal Advocates inquired about a formal engineering analysis, technical reviews, or San Jose executive directives between March 2022 and January 2025 that authorized the maximum design capacity to double from Hazen and Sawyer's initial 14-MGD recommendation to CDM Smith's 28.8-MGD design.[24] In response, San Jose explicitly admitted that it "did not prepare a separate standalone lifecycle cost analysis comparing a 10 MGD or 14 MGD modular plant against the

---

[22] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, p. 26. San Jose repeated this operational baseline on pdf page 194, 293 and Appendix I on pdf, p. 295.

[23] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, p.116.

[24] A.26-04-010 SJWC Response to Data Request ZS1-002 (Production Data and Ratemaking), Q 3 & 4.

selected 28.8 MGD design capacity" and that the design decision "was not based on a separate lifecycle-cost comparison.".[25]

San Jose's admission that it never compared the 28.8 MGD design against a smaller facility is significant considering San Jose's own, separate evaluation of a right-sized alternative. In San Jose's direct testimony addressing its grant-funding efforts, San Jose's grant consultant disclosed that San Jose evaluated a consolidated regional treatment facility that would serve six well stations; including Williams Station, through a single, shared facility rather than the distributed, station-by-station approach San Jose now proposes.[26] San Jose's own consultant described that regional alternative as yielding "significant long-term cost savings over the distributed approach." San Jose did not pursue that lower-cost alternative in the current application cycle, but not because of cost: San Jose's stated reason was that it does not yet own or control the land needed for the centralized facility.[27] San Jose's failure to prepare any lifecycle-cost comparison for its own Williams Station design is compounded by the fact that San Jose was, at the same time, aware of a differently-scaled regional approach that its own consultant identified as materially cheaper over the long term. The Commission should not approve ratepayer funding for a 28.8 MGD single-station design as the most prudent and cost-effective path forward when San Jose has not shown that it seriously evaluated a lower-cost alternative that it was aware existed.

The historical data, provided by San Jose, confirms that Williams Station rarely approaches a continuous 28.8 MGD demand. Over the last decade, true average daily flow calculated across every day of operation, not merely the single highest-volume day of each year, has remained far below 10 MGD in nearly every year, falling to as little as 1.27 MGD in 2023 and averaging only 6.29 MGD across the full eleven-year record.

---

[25] A.26-04-010 SJWC Response to Data Request ZS1-002 (Production Data and Ratemaking), Q 4.

[26] Direct Testimony of Kristin Cooper Carter, A.26-04-010 (Aug. 19, 2026), pdf, p. 11 (Regional PFAS Treatment Facility Planning Grant — Evaluated; Not Pursued in Current Cycle).

[27] Id.

Sizing the physical structural footprint for 28.8 MGD on day one, without performing an intermediate phasing framework, forces ratepayers to pay millions of dollars in capital expenditure for treatment capacity that will likely remain 60% to 75% idle during standard operations.

Cal Advocates also inquired about the actual daily and peak hourly production (in GPM and MGD) for all the wells at Williams Station for the past ten years.[28] The station's true historical average operation of approximately 6.29 MGD[29] is well below Hazen and Sawyer's initial 14 MGD recommendation, which is itself less than half of San Jose's proposed 28.8 MGD design capacity.

Table 1 below shows the historical flow capacity from the last 10 years and its comparison against the proposed flow capacity for this treatment.

Table 1: Historical Flow Capacity vs Proposed Design Capacity

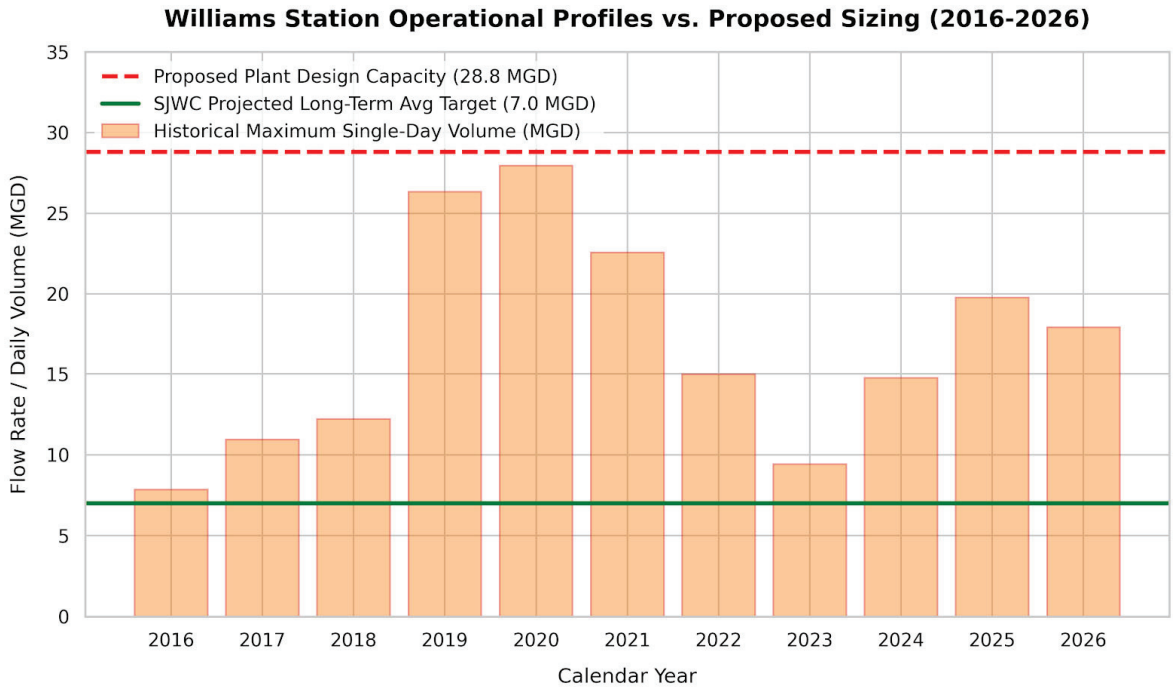
Calendar Year	Historical Max Hour Flow (MGD)	Historical Average Daily Flow (MGD)	Proposed Plant Design Capacity (MGD)	Operational Capacity Factor (%)
2016	15.58	1.84	28.8	6.4%
2017	17.69	1.86	28.8	6.5%
2018	20.26	2.31	28.8	8.0%
2019	30.35	7.73	28.8	26.9%
2020	28.62	14.69	28.8	51.0%
2021	26.08	11.39	28.8	39.6%
2022	21.35	5.39	28.8	18.7%
2023	16.27	1.27	28.8	4.4%
2024	24.79	6.49	28.8	22.5%
2025	29.40	7.97	28.8	27.7%
2026	20.49	8.23	28.8	28.6%
Average	**22.81**	**6.29**	**28.8**	**21.8%**

[28] A.26-04-010 SJWC Response to Data Request ZS1-002 (Production Data and Ratemaking), Q 1.

[29] The mean of actual daily production across all eleven years of records, not the mean of each year's single highest-volume day.

The figure below illustrates the gap between Williams Station's historical maximum single-day production and San Jose's proposed 28.8 MGD structural design capacity, highlighting a profound lack of utility economic scaling. Even in its highest volume years, the station's peak single-day volume has never approached the proposed design capacity; and, as Table 1 above shows, the station's true day-to-day average operation runs far below even that peak-day figure.

Figure 1: Historical Flow vs Proposed Sizing Capacity



C. Operational Inefficiencies and Stranded Asset Risk

Utilities often size treatment plants based on their absolute highest historical peak day. San Jose follows that methodology. However, a deep dive into San Jose's 10-year flow statistics sheet reveals that its extreme high-flow events are completely anomalous, short-term anomalies and not sustained trends.

San Jose recorded spikes in demand for 2019 (26.35 MG) and 2020 (27.96 MG).[30] When analysed by looking at adjacent rows, those flows occurred over isolated 24-to-48-

[30] Attachment 1-2: A.26-04-010 SJWC Response to Data Request ZS1-002 (Production Data and

hour periods on maximum-demand summer days. Outside of those rare spikes, the station's daily volume drops significantly.

Ratepayers should not be on the hook for funding expensive infrastructure to handle an operational condition that occurs less than 0.5% of the year when other more cost-effective options exist. In public utility economics, satisfying extreme, short-duration peaks is precisely what water storage tanks, system interties, and pressure-regulating distribution facilities are engineered to handle economically. Sizing a highly complex Ion Exchange treatment plant for a single-day summer spike represents an imprudent request for a capital project.

Furthermore, San Jose's unoptimized 28.8 MGD design creates an unquantified downstream liability regarding high-volume operational waste. Sizing the structural footprint to full station capacity significantly increases the peak instantaneous volume of pre-filtration backwash water,[31] and rinse-to-waste streams.[32] San Jose has failed to provide any technical or economic analysis to demonstrate that downstream distribution and local municipal sewer networks can accept these high-volume discharge surges without triggering capital-intensive storage basin requirements or several pipeline replacement projects to accommodate such volumetric surcharges. Ratepayers should not be expected to assume the risk of an un-costed secondary infrastructure footprint necessitated solely by this over-sizing decision.

Since the plant is engineered to provide 28.8 MGD (20,000 GPM) but will only run an average of 7.0 MGD, San Jose creates a hidden operational efficiency problem with its Ion Exchange (IX) resin media. Treatment vessels function most efficiently under steady, continuous hydraulic loading. When a 28.8 MGD plant is routinely throttled

---

Ratemaking), Q 1. Attachment: ZS1-001.Q1 – Williams Wells Daily Flow Stats 2016-2026 Excel file.

[31] Water used to periodically flush accumulated sediment/particulates out of the pre-filter (upstream of the IX vessels) by reversing flow through the media. It's a batch waste stream, generated as needed based on influent turbidity/loading.

[32] Water flushed through IX vessels before it's sent to distribution - either after resin regeneration (to clear residual regenerant/contaminants) or after vessel startup (to clear fines/air, stabilize quality).

down or run intermittently to hit a low 7.0 MGD average target, multiple IX vessels must be taken offline, stagnated, or cycled on and off frequently. Stagnant resin beds are highly prone to bacterial biofouling, premature compaction, and channelling, which destroy the media's adsorption capacity[33] early and, in turn, will likely trigger additional O&M costs in the future.

D. Estimated Cost Impact of a Phased 14-MGD Approach

The estimated cost of the phased 14-MGD will be approximately $101.4 million based on a standard capital-cost scaling methodology using San Jose's estimated project cost of $156.3 million for the proposed 28.8-MGD facility as the starting point.[34]

Water and wastewater treatment capital costs do not scale linearly with design capacity, because a substantial share of project cost, such as site work, buildings, electrical infrastructure, permitting, and design, is relatively fixed and does not necessarily decrease in direct proportion to a smaller design flow. Cost estimators account for this by using a capacity-scaling exponent, commonly referred to as the "six-tenths rule," in the form:[35]

Approximate Cost of a 14 MGD Plant = Cost of 28.8 MDG Plant × (14 MGD ÷ 28.8 MGD)^0.6

Applying this formula, the construction cost of the 14-MGD Williams Station facility will be approximately $101.4 million (in 2026 dollars) to construct, compared to

---

[33] (Smith & Jones, 2018) Smith, J. A., & Jones, L. R. (2018). *Biofilm formation and fouling in fixed-bed adsorption systems*. Environmental Science & Technology, 52(10), pages 6123–6131. https://doi.org/10.1021/acs.est.8b01234 accessed on 8/26/2026.

[34] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, page 31 (Table 6, Total Estimated Project Cost, 2026 dollars).

[35] The six-tenths-factor rule (also called the power-sizing or exponential cost-capacity method) is a widely used order-of-magnitude capital cost estimating technique in chemical process and water/wastewater treatment engineering, reflecting that fixed project costs (site work, buildings, electrical infrastructure, permitting, and design) do not scale linearly with treatment capacity. See, e.g., W.T. McGivney & S. Kawamura, Cost Estimating Manual for Water Treatment Facilities (AWWA/Wiley 2008); AACE International Recommended Practices. Cal Advocates applies an exponent of 0.6, the midpoint of the range (0.5–0.7) typically used for this class of facility; applying exponents across that range yields an estimated cost for a 14-MGD facility of approximately $94.3 million to $109.0 million (2026 dollars), with $101.4 million at the 0.6 midpoint.

San Jose's proposed $156.3 million for the 28.8-MGD design, which is a difference of approximately $54.9 million in capital that ratepayers would save under a phased approach.

Cal Advocates recommends this estimate as an order-of-magnitude approximation to inform the Commission, not as a substitute for a project-specific engineering estimate. The actual cost of a 14-MGD phased design would depend on site-specific factors that a capacity-scaling formula cannot capture. To evaluate a fully developed record with actual cost differences, Cal Advocates recommends that the Commission direct San Jose to prepare and submit a detailed capital cost estimate for a phased approach utilizing a 14-MGD design at the same level of engineering rigor as the Opinion of Probable Construction Cost[36] San Jose prepared for the 28.8-MGD design.

By contrast, Cal Advocates' review of San Jose's own operations and maintenance cost workpapers indicates that a phased 14-MGD design would generate minimal reduction in annual O&M cost relative to the proposed 28.8-MGD design. While a 28.8-MGD plant would contain more contactors, valves, instrumentation, pumps, piping, electrical equipment, and other assets requiring inspection and preventive maintenance, San Jose's O&M cost estimate for the 28.8-MGD facility is built on an assumed *average daily production of 7.0 MGD*[37], the same actual throughput the facility would treat regardless of whether it is built at 14 MGD or 28.8 MGD. Most of that $2,254,000 annual O&M estimate (IX resin replacement, resin disposal, feed pumping power, sampling, and labor) is a function of water *actually treated*, not of design capacity, and would not meaningfully change under a smaller design. Only the cartridge-filter and building HVAC line-item costs, which scale with the number of vessels installed, would be expected to decline under a right-sized design, by $40,000 to $60,000 per year.

---

[36] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, Appendix J.

[37] A.26-04-010 FINAL Williams Station PFAS Treatment Justification_v2.pdf, Appendix I (O&M Cost Estimate), p. 1 of 2 (“Daily Production 7.0 mgd”).

IV. CONCLUSION

The Commission should deny San Jose's request for the escalated 28.8 MGD and direct San Jose to evaluate a modular implementation framework focused on a 14-MGD initial treatment design to meet historical average daily requirements while preserving structural space for potential future expansion. Reducing the project's capacity from 28 MGD to 14 MGD would reduce San Jose's proposed capital budget from $156.3 million to $101.4 million and save ratepayers from footing the bill for San Jose's requested excess capital budget of $54.9 million. Additionally, the Commission should not allow any future capital costs related to downstream interzone modifications tied to or recovered under this PFAS compliance application.

Appendix A:

Qualifications of Witness

QUALIFICATIONS AND PREPARED TESTIMONY
OF
ZAVED SARKAR

Q.1 Please state your name and address.

A.1 My name is Zaved Sarkar, and my business address is 505 Van Ness Avenue, San Francisco, CA 94102

Q.2 By whom are you employed and what is your job title?

A.2 I am employed by the Public Advocates Office – Water Branch and my job title is Utilities Engineer.

Q.3 Please describe your educational and professional experience.

A.3 I received a Bachelor of Science Degree in Electrical and Electronic Engineering from the American International University – Bangladesh (AIUB) in 2010. I also earned a Master of Science Degree in Electrical and Electronic Engineering from California State University, Sacramento in 2019. I have been with the Public Advocates Office – Water Branch since October of 2017.

Q.4 What is your area of responsibility in this proceeding?

A.4 I am responsible for the preparation of Cal Advocates' testimony on Contingency Adjustments and Volumetric Reduction.

Q.5 Does that complete your prepared testimony?

A.5 Yes, it does.

Appendix B:

Supporting Attachments

Attachment 1-1 - SJWC Response to Data Request ZS1-001 (Cost, Alternative Analysis, O&M)

(Available via Email)

Note: Due to file size, the data request response documents are available via Kiteworks

Attachment 1-2 - SJWC Response to Data Request ZS1-002 (Production Data and Ratemaking)

(Available via Email)

Note: Due to file size, the data request response documents are available via Kiteworks