

**SAN JOSE WATER COMPANY
(U-168-W)**

**REPORT ON THE
RESULTS OF OPERATIONS**

JANUARY 2024

**San Jose Water Company
(U-168-W)**

Report on the Results of Operations

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CHAPTER 1

INTRODUCTION

Prepared by John Tang

A. Purpose of Report

1. This report is submitted to the California Public Utilities Commission (Commission or CPUC) and to other interested parties as part of San Jose Water Company's (Company or SJWC) 2024 general rate case filing. The report provides information related to the recorded and projected operations and earnings of SJWC and is in support of its current application for an order authorizing the Company to increase its rates charged for water service.

2. Because labor and material costs, plant investment and depreciation generally have increased on a per-customer basis, and because sales have steadily decreased due to conservation efforts, on a ratemaking basis the Company has experienced a decline in its annual earned rate of return, which is expected to continue.

3. Pursuant to Commission Decisions No. (D) 04-06-018 dated June 9, 2004, in Order Instituting Rulemaking (R.) 03-09-005 on the Commission's Own Motion to Evaluate Existing Practices and Policies for Processing General Rate Cases and to Revise the General Rate Case Plan for Class A Water Utilities for Class-A water companies, D.07-05-062 in R.06-12-016 on the Order Instituting Rulemaking to Consider Revisions to the General Rate Case Plan for Class A Water Companies (RCP), and current Commission practice for water utilities filing in the month of January, the Company is requesting rate relief for one future test year (2025) followed by two additional escalation years (2026 and 2027).

4. This report contains summaries of estimated earnings for each of the three years immediately following the 2023 calendar year. Due to the time required to prepare a rate case application for filing and to process it in accordance with the Rate Case Plan, the report contains a 2024 year for which no increase in rates is being requested with this

filing. Therefore, the Company is seeking increased rates based on the summaries of estimated earnings for the second year (2025, Test Year), third year (2026, Escalation Year 1), and the fourth year (2027, Escalation Year 2) shown herein.

5. Projected changes for the period in unit costs of such items as purchased water, purchased power, and pump taxes are not included. Historically, these have been addressed in offset rate requests.

6. There have been no significant changes in operations for SJWC.

7. The following additional issues and other relief sought in this application are detailed in 17, 19, 20 and 21:

- Applicant requests that the Commission authorize the recovery of the under-collection of the balance of \$23,463,000 from its Balancing and Memorandum Account via a 12 month surcharge of \$0.5459/Ccf. Applicant will update the balance with year-end 2023 balances and revised the surcharge amount. Description of each account and balances can be found on Result of Operations, Chapter 17 and Workpapers, Chapter 17, WP 17-1 and WP 17-2.
- Applicant requests that the Commission make a finding that Applicant's water quality meets all applicable state and federal drinking water standards and the requirements of General Order 103-A, as described in Results of Operations, Chapters 16.
- Applicant requests that the Commission authorize update the Customer Assistance Program (CAP) Surcharge as described in Results of Operations, Chapter 17.
- Applicant requests that in response to the Commission's Order issued December 9, 2016 in "Decision Providing Guidance on Water Rate Structure and Tiered Rates" D.16-12-026 which outlines the goals and objectives of a balanced rate design, Applicant be authorized to collect 50% of its revenue requirement from the readiness to serve charge as outlined in Results of Operations, Chapter 07.
- Applicant requests an update to the uniform formula approved in Decision 22-06-013 from number of days divided by 30.4375 to number of days divided by 30.1682. Methodology and calculations can be found in Results of Operations,

B. Scope of Report

8. The report includes a brief history of the Company, a description of its present operations and organization, and a map showing, generally, its service area. Chapter 17 provides the description and details of all special changes and/or rate relief being sought in the Company's application.

9. The financial condition of the Company over the past several years are reviewed, including comparative balance sheets for December 31, 2021, 2022 and August 31, 2023 and statements of income for the years ended December 31, 2021, 2022 and August 31, 2023. Other chapters include detailed data and explanatory text concerning utility operations, customers, sales, revenues, expenses, utility plant, taxes and depreciation. These factual and estimated data have been summarized to develop net operating revenue, rate base, and rate of return.

10. Operating results for the years 2024, 2025, 2026, and 2027 have been estimated to obtain, for rate making purposes, levels and trends of earnings which may reasonably be expected under normal operating conditions. In general, the estimated years 2024 and 2025 have been based on recorded data and the Company's financial and operating budgets, with revenues and variable expenses adjusted to expected normal levels of operations. In accordance with the 2004 RCP the escalation years 2026 and 2027 have been estimated by applying the Commission's published escalation factors to the individual expense categories. Also in accordance with the 2004 RCP, rate base for the second escalation year (2027) has been determined using an attrition methodology. Pursuant to the current RCP SJWC has used the currently authorized capital structure and cost of capital in the calculation of the revenue requirement. Any changes will be determined in the separate cost of capital proceeding in 2024.

11. Rates of return for the estimated years 2024, 2025, 2026 and 2027 are shown at the present base rates authorized by Advice Letter No. (AL) 599 effective July 31, 2023, and at the rates proposed by this filing. The proposed rate is calculated with the authorized rate of return of 7.86% per Advice Letter 601 effective January 1, 2024. In the

45-day update, SJWC will updated the present based rate that is effective on January 1, 2024. This report includes tables of the present and proposed rates, as well as the effect of the proposed rates on the water bills of representative residential customers.

12. Reports, testimony and exhibits, either attached as appendices or under separate cover, have been provided to support SJWC’s showing as follows:

Exhibit A	Proposed Rate Case Plan Schedule
Exhibit B	Present and Proposed Rate Schedules
Exhibit C	Proxy Statement for SJW Group
Exhibit D	Proposed Notice to Customers

Supporting Documents:

- Report on the Results of Operations
- General Rate Case Workpapers
- Capital Budget Project Justifications
- Urban Water Management Plan
- Minimum Data Request Responses

13. This reports was prepared under the general direction of John Tang, Vice President of Regulatory Affairs and Nanci Tran, Manager of Regulatory Affairs for SJWC. The following witnesses will provide testimony in this report: Ms. Stephanie Orosco will sponsor payroll, personnel additions, pension and benefits, and executive compensation (Results of Operations Chapter 5); Mr. David Mitchell will sponsor the water customer and sales forecasts and water wervice affordability metrics (Results of Operations Chapter 6); Mr. Rally Zhourni and Ms. Ritu Mehta will sponsor testimony on taxes (Results of Operations Chapter 10), Mr. Rally Zhourni will also sponsor justification for using AFUDC at Rate of Return (Results of Operations Chapter 11); Mr. Dane Watson will sponsor the updated depreciation rate (Results of Operations Chapter 12); Ms. Suzanne DeLorenzo will sponsor the water quality testimony (Results of Operations Chapter 16); Mr. Kurt Elvert will sponsor the water conservation testimony

(Results of Operations Chapter 18); Mr. Curt Rayer, Mark Hatcher, David Fernandez will sponsor the Safety and Security testimony (Results of Operations Chapter 20); Mr. Colby Sneed will sponsor Water Supply Expenses forecast (Results of Operations Chapter 21); and finally, Mr. Jake Walsh will sponsor the capital additions testimony (provided under separate cover as Capital Improvement Projects and Program Justifications). Other witnesses may be presented, if needed, in rebuttal to the testimony of other parties, including Commission Staff.

C. Requested Rate Relief

14. The last general rate increase for SJWC was authorized by D.22-10-005 dated October 5, 2022, in A.21-01-003. This decision along with D.23-06-025 are the basis for the present rates which were intended to produce an authorized rate of return of 7.47%. SJWC have file advice letter 601 to update the rate of return to 7.86%, as shown on Chapter 14. Test year 2025 at present rates is estimated general a 4.80% rate of return. Therefore, an increase in year 2025 annual revenue of \$55,196,000 or 11.11%, is required to earn the return on rate base of 7.86% (effective January 1, 2025).

15. Additionally, projected increases of \$22,041,000 or 3.99% in 2026, and \$25,809,000 or 4.49%, in 2027 are required to maintain an authorized return on rate base of 7.86% in both years.

16. SJWC has estimated costs to have increased in many areas of expense. As required in the RCP, SJWC has identified the five most significant factors tending to increase rates since the last authorized test year 2022:

- Increasing infrastructure replacement needs
- Supply Cost
- Increase in labor expense
- Increase in outside services expense
- Increase in depreciation expense

17. Infrastructure Replacement \$190,031,000 3-year capex budget increase

Applicant has been operating as a water utility for over 150 years. Due to the age of the water system and the increasing water quality compliance requirements, significant investments in infrastructure replacements are necessary in order for Applicant to be able to continue to provide safe and reliable water service. The capital budget requests for 2024-2023 are detailed in Capital Improvement Projects and Program Justifications SJWC's proposed increase reflect WCCM (Water Cost of Capital Mechanism) 2024 trigger, which increase the rate of return from 7.47% to rate of return 7.86%.

18. Supply Cost \$13,976,000 increase

Supply cost increase of roughly 14 percent in 2023 is not reflected in last authorized test year 2022; SJWC is also anticipating an increase in well water production, see Results of Operations, Chapter 21, and detailed in Workpapers, Chapter 8.

19. Labor Expense \$14,523,000 increase

SJWC is anticipating increased costs due to labor inflation and additional 30 new positions as detailed in Results of Operations, Chapter 5.

20. Outside Services \$11,394,000 increase

Applicant's costs are increasing mainly due to the needs in the areas of operations security and material and supply Results of Operations, Chapter 21, and detailed in Workpapers, Chapter 8.

21. Depreciation \$8,531,000 increase

As a reflection of Applicants increased need for infrastructure investments, the depreciation expense will increase proportionally. Depreciation expense is discussed in Results of Operations, Chapter 12, and detailed in Workpapers, Chapter 12.

22. List of Major Controversial Issues:

I. Capital Budget \$190,031,000 3-year capex budget increase

Applicant has been operating as a water utility for almost 150 years. Due to the age of the water system and the increasing water quality compliance requirements, significant facilities and infrastructure replacement needs are necessary in order for applicant to provide safe and reliable water service. See Capital Improvement Project and Program Justifications.

II. Increase in Staffing Level \$14,523,000 increase

Due to increasing and changing work requirements across departments Applicant has requested 30 new positions. See Results of Operations, Chapter 5.

CHAPTER 2

HISTORY AND CORPORATE INFORMATION

Prepared by John Tang

A. History

1. The Company has been providing water service in the Santa Clara County for more than 150 years. During that time, the Company has emerged from its primitive beginning consisting of two wooden tanks and 400 customers to a metropolitan system consisting of approximately 227,000 service connections, approximately 2,400 miles of transmission and distribution mains, and approximately one hundred wells and storage facilities, including impounding, distribution, and collection facilities.

2. Beginning in the early 1880's, the Company purchased property in the Santa Cruz Mountains as watershed land and by 1951 had constructed five impounding lakes for collection of water. In succeeding years, flumes, transmission lines and related facilities were planned and constructed so that this supply could be delivered into the system where needed, and to provide greater flexibility in operation. Early in the 1960s the Company actively supported the program to bring imported water into the Santa Clara Valley. In 1988, the San Felipe Project, which provides additional imported supply into this area, was completed. This water is now carried from the Valley Water's Santa Teresa Water Treatment Plant to the south and east side of the Santa Clara Valley.

3. Planning has enabled the Company to maintain safe and reliable service in an area which now covers about 140 square miles (including Cupertino leased area and total regulated portion is 135 square miles) and a population of approximately one million. Following World War II, rapid growth in housing and industry occurred in the Company's service area. Now the Company must continue to replace many of these facilities in order to continue to be able to provide safe and reliable water service to an urban population.

4. The Company continues to meet or exceed all federal and state water quality standards, and its planning includes consideration of foreseeable future changes in water quality standards and/or regulations as described in Report on the Results of Operations (RO Report) Chapter 16 about water quality.

B. Recent Growth

5. The growth of the Company from 2018 through 2022 is set forth by subject matter in the following chapters. However, summary statistics are provided in the table below. Please note that water sales and recorded revenue have not been adjusted for weather (rain and temperature).

(Dollars in Thousands)

<u>Metric</u>	<u>2018</u>	<u>2022</u>	<u>Increase/ (Decrease)</u>
Average Active Services (excl. Fire Services)	222,299	223,247	948
Water sales, Potable (KCCF)	48,994	44,981	-4,012
Operating Revenues, Recorded (Thousands)	\$369,843	\$439,645	\$69,802
Water Supply Expenses, Recorded (Thousands)	\$145,226	\$176,559	\$31,333
Net Utility Plant (Thousands)	\$1228,031	\$1,411,880	\$183,849

C. Rate History

6. SJWC’s last General Rate Case Application 21-01-003 was filed in January 2021 with a Test Year of 2022 and Escalation Year of 2023 and Attrition year of 2024. A Decision (D.22-10-005) was issued in that proceeding in October 2022. Since the last GRC filing, the Commission has approved the following rate changes for the Company:

Rate Change History Since Last General Rate Application Decision

<u>Application/ AL</u>	<u>Description</u>	<u>Resolution/ Decision</u>	<u>Effective Date</u>	<u>% Change Avg Bill (Residential)</u>	<u>Revenue Amount</u>	<u>Revenue Requirem ent %</u>	<u>Cumulative Rate Change*</u>
556	Attrition Year 2021 Increase	D.18-11-025	1/1/2021	3.0%	\$11,750,000	3.0%	\$11,750,000
561A	Wholesale Water Offset 2021	D.18-03-035	7/1/2018	4.5%	17,262,329	4.34%	\$29,012,219
575	Franciscan Ratebase Addition	D.16-06-004	7/1/2022	0.05%	\$232,355	0.06%	\$29,224,684
577	Wholesale Water Offset 2022 Water Offset		7/1/2022	5.0%	\$24,331,436	5.9%	\$53,576,120
581	GRC Balancing and Memorandum Accounts	D.22-10-005	11/11/2022	N/A, Offset with AL 582 Over-collection	\$18,173,959	4.0%	\$71,750,079
582	Refund overcollection in drought		11/11/2022	N/A, one-time refund of 5.65	(\$19,920,622) Over-collection	-4.0%	\$51,839,457

	memorandum accounts (WCMA and WCEMA)						
583	GRC Rate Increase for Test year 2022	D.22-10-005	11/1/2022	1.2%	25,074,000	6%	\$76,803,457
585	Amortization of Interim Rate Memorandum account	D.22-10-005	12/13/2022	4.7%	20,553,896	4.4%	97,457,353
586	-2023 Escalation Increase	D.22-10-005	1/1/2023	3.8%	28,417,577	4.00%	\$125,874,930
590	M-WRAM Amortization	08-08-030	5/8/2023	2.9%	14,196,197	2.9%	\$140,071,127
596	Valley Water Offset 2023		7/1/2023	5.6%	\$27,606,636	5.7%	\$167,677,763
599	COC Rates Implementation	D.23-06-025	7/31/2023	-0.1%	-\$400,000	-0.08%	\$167,277,763

*Temporary Surcharge filings are not including in cumulative revenue requirements

D. Formal Filings by the Company since the Last General Rate Case

7. Since the Company's last General Rate Case filing A.21-01-003, dated January 4, 2021, the following rate requests and other formal proceedings not reflected above have been filed by the Company or been concluded by the Commission:

<u>Application, Advice Letter or Case No.</u>	<u>Description</u>	<u>Resolution or Decision No.</u>	<u>Effective Date</u>
557	Service Area Extension Arrowhead		Suspended
557A	Service Area Extension Arrowhead		4/9/2021
558	Res M4849 Compliance	D.19-08-025	2/19/2021
559	D.19-07-015 Compliance Filing		3/04/2021
560	Res M4849 Transition Plan		7/1/2021
562	WRAP Update 2021		6/1/2021
563	Rule 14.1 Revise and Activate		8/5/2021
564	WCMA Implementation		7/19/2021

565	EO N-08-21 Compliance		6/23/2021
566	Correcting typographical error on AL561		7/23/2021
567	Schedule 14.1 Update		9/6/2021
568	Rule 3 Update		8/13/2021
569	Schedule 14.1 Activation		11/15/2021
570	Correcting typographical error on AL567		11/22/2021
571	Debt Issuance cost Amortization		12/23/2021
572	Drinking water fees 2021		12/15/2021
573	2022 Interim Rates Memo Account		01/01/2022
574	Rule 22 update		4/28/2022
575	Franciscan Ratebase Addition		7/1/2022
576	CAP Income update 2022		6/1/2022
578	Implement Uniform Formula of Svc Charge/Flat Charges		8/24/2022
579	Form No. 3A Update		Withdraw 9/1/2022
580	Form Change – 3A, 3B, 3E		9/22/2022
584	GRC Preliminary Statement Update	D.22-10-005	01/01/2022
587	2023 PUC Fee Update-withdrawn	M-4866	12/7/2022
588	2023 PUC Fee update	M-4866	1/1/2023
589	CAP BA Addition	GO 96B per UAB Report	1/23/2023
591	Schedule 14.1 and Rule 14.1 Lower Stage from 3 to 1	Exec Order N-5-23	4/11/2023
592A	Revising Language on WCMA	W-4976	Pending
593	Webb Interruptible Service	W-3937	5/24/2023
594	CAP Income update	Commission Direction	6/1/2023
595	Lead and Copper Rule revisions Memorandum Account		5/3/2023
597	Zermeno Interruptible Service	W-3937	7/14/2023
598	COC WCCM Trigger	D.23-06-025	7/31/2023

E. Parent Company and Corporate Information

8. On July 16, 1985 pursuant to D.85-06-023 effective June 5, 1985 and the subsequent vote of the stockholders, the Company became a wholly owned subsidiary of SJW Corp. SJW Corp. is a holding company and the sole shareholder of SJWC. SJW Corp. reincorporated as SJW Group on November 15, 2016.

9. On October 9, 2019, SJW Group acquired Connecticut Water Service, Inc. (“Connecticut Water”). With the acquisition of Connecticut Water, SJW Group is now the

third-largest investor-owned pure play water and wastewater utility based on rate base in the United States, serving nearly 1.5 million people across California, Connecticut, Maine and Texas.

SJW Group continues to maintain its headquarters in San Jose, California, with its New England regional headquarters in Clinton, Connecticut. Each of the regional utility operating subsidiaries – San Jose Water Company in California; Connecticut Water Company, Avon Water Company, and Heritage Village Water Company in Connecticut; Maine Water Company in Maine; and SJWTX, Inc. (dba Canyon Lake Water Service Company) in Texas – will continue to serve customers under their existing brand names with their local employee teams at their existing operating centers.

The acquisition of Connecticut Water brings together employees from two companies who share a passion for water and wastewater service, for being good corporate citizens and for preserving natural resources to sustainably serve current and future customers. The new team of 700+ local water professionals led by a seasoned industry leadership team will continue to:

- Serve local communities with a passionate, dedicated team of locally-based water professionals who care for and are engaged in improving their local communities;
- Deliver customer benefits through exceptional customer service. This will be enhanced by the sharing of systems, best practices, operational expertise and more extensive resources throughout the entire company;
- Maintain a focus on environmental stewardship, water conservation and protection of the valuable lands and water resources that have been entrusted to us. We will operate in a manner that promotes water and energy conservation, source protection, and preservation of open space; and
- Foster socially responsible programs and policies and environmentally sustainable business practices.

The number one priority continues to be the delivery of life-sustaining, high-quality water coupled with exceptional customer service for all of our local communities where we live, work, and serve.

10. The Board of Directors and principal officers of the Company are as follows:

Directors:

Carl Guardino (3) (4)
Mary Ann Hanley(1) (3) (4)
Heather Hunt (2) (3)
Rebecca A. Klein (2) (4) (5)
Denise L.Kruger
Gregory P. Landis (2) (3) (5)
Daniel B. More (1) (2) (5)
Eric W. Thornburg (Chair)Carol. P.Wallace (1) (4) (5)

- (1) Member of Audit Committee
- (2) Member of the Executive Compensation Committee
- (3) Member of the Nominating and Governance Committee
- (4) Member of the Sustainability Committee
- (5) Member of the Finance Committee (3)

Corporate Officers:

Eric W. Thornburg	Chairman & Chief Executive Officer
Bruce.A.Hauk	Chief Operating Officer
Andrew.F.Walters	Chief Financial Officer and Treasurer
Willie Brown	Vice President, General Counsel and Corporate Secretary
Marisa Joss	Deputy General Counsel &Assistant Corporate Secretary
Stephanie Orosco	Chief Human Resources Officer
John B. Tang	Vice President, Regulatory Affairs & Government Relations
Curtis A. Rayer, Jr.	Vice President, Operations
William.S. Tuttle	Vice President, Engineering
Amber DeLeon	Controller
Peter Fletcher	Vice President, Information Security Officer
Thomas.A.Hodge	Vice President, Business Development
Kristen A.Johnson	Senior Vice President & Chief Administrative Officer
Mohammed G.Zerhouni	Senior Vice President of Finance, Principal Accounting Officer

F. Relationship with the California Water Service Group

10. On December 31, 1992, pursuant to D.92-12-047 effective December 16, 1992 and a vote of the SJW Corp. stockholders on December 10, 1992, SJW Corp. acquired

all the outstanding stock of the Roscoe Moss Company in exchange for SJW Corp. common stock. Included amongst the assets acquired by SJW Corp. in this transaction were approximately 1.1 million common shares (adjusted for stock split) of California Water Service Company (now California Water Service Group). As of September 30, 2018, SJW Group no longer held any shares of California Water Service Group.

CHAPTER 3

PRESENT OPERATIONS

Prepared by John Tang

A. Organization

1. The management of San Jose Water Company is headed by the Chief Executive Officer and Chairman of the Board, Eric W. Thornburg. Chart 3-A shows a condensed version of the Organization Chart of the Company.

B. Territory Served

2. The Company's service area consists of approximately 140 square miles in and about the Cities of San Jose, Monte Sereno, Saratoga, Campbell and Cupertino, the Town of Los Gatos, and portions of the unincorporated County, all in Santa Clara County. The total population served is estimated at approximately one million. The general location of the service area is shown in Chart 3-B. The general limits of the area served are shown on the map designated as Chart 3-C.

3. The central portion of the service area is a relatively flat area sloping upward to the foothills on the southwest and northeast. The southwest portion extends into the mountains which border the valley, while the northeast portion extends into the adjacent foothills.

C. Location of Facilities

4. The main office of the Company is located at 110 West Taylor Street, San Jose, California 95110. Most administrative and clerical functions are performed at this location. . SJWC's customer call center is located immediately adjacent at 118 West Taylor Street.

5. All engineering, operations, maintenance, water quality and personnel functions are performed from the facilities located at 1221, 1251 and 1265 Bascom Avenue,

San Jose, California 95128. The Bascom offices are conveniently situated close to freeway access to allow rapid deployment of personnel to the Company's widespread service area.

6. The Company's production and storage facilities are located throughout the about 140 square miles service area and in areas immediately adjacent to the service area.

D. Water Production

7. A major portion of the Company's water supply is relying on imported surface water obtained by purchase from the facilities of Valley Water. Water is usually available from Valley Water's Rinconada, Penitencia, and Santa Teresa water treatment plants. The principal source of water for the Penitencia and Rinconada plants is the State Water Project transported via the South Bay Aqueduct, which was constructed by the State of California under the California Water Plan. The principal source of water for the Santa Teresa Water Treatment Plant is the Federal Central Valley Project's San Felipe Division. Valley Water's hydraulic network is organized such that any of the plants can receive water from either source, should it be required. The Company's contract with Valley Water to provide for the Company's supplemental water needs expires in 2051.

8. In addition to imported surface water obtained through Valley Water, SJWC also utilizes surface water from the Santa Cruz Mountains. The level of surface water available each year depends on the amount of run-off collected in the Company's Santa Cruz Mountains reservoir and the seasonal diversions available from the watersheds of the Los Gatos and Saratoga Creeks. This surface water is treated at SJWC's two surface water treatment plants, the Montevina Water Treatment Plant and the Saratoga Microfiltration Plant. In any year the surface supply can provide anywhere between 2% to 13% of the total water supply of the system.

10. The remainder of SJWC's potable water supply is groundwater obtained from Company-owned wells located in various parts of the service area. Valley Water has overall responsibility for the management of water resources in the Santa Clara County. The Company has played a key role in supporting Valley Water's efforts to comply with requirements of the Sustainable Groundwater Management Act (SGMA), as well as collaborated in regional operations to stabilize production from local ground sources to maintain desired levels in the groundwater basin. This is desirable because overdrafting of

the groundwater basin in the past has resulted in land surface subsidence and permanent loss of capacity of the aquifer. Additionally, local groundwater storage is an integral part of the region's drought response and mitigation strategy. In drier years since Valley Water took responsibility for managing all the County's groundwater resources, land subsidence has largely been arrested.

12. Since September of 1997 SJWC has participated as a retailer for the City of San Jose's South Bay Water Recycling Program ("SBWRP"), which is a regional program to enable the San Jose/Santa Clara Water Pollution Control Plant ("WPCP") to comply with National Pollutant Discharge Elimination System permit requirements. In this program the effluent water from WPCP is diverted from the San Francisco Bay for non-potable reuse, and the City of San Jose acts as the Administering Agency under whose guidance the entire infrastructure necessary to deliver the recycled water is constructed. The recycled water supplied by the WPCP is distributed by retail agencies to landscape, agricultural and industrial customers through transmission and distribution pipelines in the cities of San Jose, Santa Clara and Milpitas. In most cases customers participating in this program substitute potable water usage with recycled water usage. To encourage customers to switch from potable water to recycled water the SBWRP is providing a rate discount to provide the economic incentive for customer participation. However, the discounted rate contributes the same financial margin to SJWC's system, as does the sale of potable water. Therefore, any current potable water customer partly substituting recycled water for a current potable service will ultimately contribute the same margin to SJWC, thereby imposing no adverse economic effect on SJWC's other customers.

E. Customer Service

13. As described above, the Company's main office at 110 West Taylor Street contained a walk-up facility for all customers, prior to the COVID-19 pandemic. This office will remain closed as the Company moves towards new and improved customer service options to deliver an improved customer experience. The customer call center is located at 118 West Taylor Street. With a hybrid work model, staff answers calls daily from 8:00 AM to 5:00 PM. The Company is committed to a high level of customer service. For the 5-year period from July 1, 2018 through June 30, 2023, the number of informal customer complaints

filed with the Commission has averaged about 43 per year, or about 0.21 informal complaints per 1,000 customers served. This number is elevated from previous totals due to the recent drought and drought restrictions, and the application of drought surcharges.

14. The Company employs a bilingual Integrated Voice Response (IVR) telephone system. In 2023, various improvements were made to the IVR system for greater clarity and efficiencies for the customer. Newly recorded messages with professional voice talent in a streamlined option menu are in English and Spanish. Customers can choose to pay their bill via the IVR or by calling a direct number using their checking or savings account. General information and water conservation tips are provided for customers that are on hold waiting for a Customer Service Representative (CSR). The IVR system also provides customers with their number in the queue. Issues were resolved in 2023 that cleared up the intermittent static as well as voice prompt command issues that customers frequently experienced. Customers can speak directly to a CSR or use self-service options to obtain balance information or pay their bill by phone. The system also allows supervisors to monitor all CSRs. Additionally, the system provides information about the customers' waiting time and the abandon rate, allowing the Company to measure the adequacy of service and effectively deploy customer service resources. While the IVR system is outdated, we have maximized the functionality of the existing system to help customers.

15. In 2011, SJWC implemented a new Customer Care & Billing System (CCB) and Mobile Workforce Management (MWM) system. CCB handles virtually every aspect of customer information – service connection, meter reading, rates, and billing while also handling associated functions like payment processing, collections, field service, and meter management. We are currently working to upgrade the CCB with a new Oracle product..

16. MWM is an integrated system that automates field operations via dispatch, scheduling, and routing. MWM is designed to improve workforce productivity and efficiency while eliminating missed appointments, service backlogs, and overtime costs. An upgrade of MWM was authorized in the last GRC and implementation was completed in 2017.

18. In June 2022, the Company received approval from the CPUC to deploy Advanced Metering Infrastructure, more commonly known as AMI or smart meters. This will be an investment of approximately \$100 million over a four-year period. The project is

underway and new meters, registers, and endpoints are anticipated to be installed starting in Q2 2024. AMI systems track water usage and provide SJWC and customers with meaningful hourly data to monitor for leaks and consumption. When fully implemented, the benefits of AMI include access to water usage 24 hours a day, early leak detection notifications, high-use alerts, ability to monitor and manager water use during periods of drought, and enhanced customer service.

19. The Company’s Customer Service Department does much more than just answer customer calls. The department also handles billing investigations, leak adjustments, allocation appeals, customer emails, compliance reporting, Customer Assistance Program applications, cashiering functions, and reports for collection efforts and inactive accounts. During periods of low call volumes, Customer Service Advocates (CSAs) are typically handling these other items. At times, the volume of these items as well as calls into the center can be overwhelming and require more time to respond. These times normally occur during rate changes, droughts, water outages, and water quality incidences.

20. In 2022, the Customer Service Department faced significant staffing shortages that affected its ability to deliver an exceptional customer experience. At one point, the department was down to 10 CSAs, after losing one third of the staff. The departure of these high-performing employees led to a decline in our KPIs and overall performance.

21. SJWC’s metrics for measuring its call center performance include service levels and abandoned call rate as defined in General Order 103-A. The service level goal is defined as 80% or greater of calls answered within 30 seconds. The abandoned call rate goal is 5% or fewer of calls abandoned. GO 103-A is the handbook of rules that govern water utility service performance. It includes minimum standards for operation, maintenance, design, and construction. A summary of these key metrics for the last five years is as follows:

Metric	Goal	2018	2019	2020	2021	2022	2023
Calls answered within 30 seconds	>=80%	74.7%	61.9%	67.3%	67.0%	10.9%	40.0%
Abandoned calls	<=5%	2.7%	2.7%	3.3%	3.7%	38.5%	21.4%



2023 numbers are YTD through September 30, 2023

22. Reduced staffing led to other issues. Emails were backlogged and were not responded to promptly. While requests to start and stop service were handled in a timely manner, other emails were backlogged for months. Inefficiencies were observed within the department. Within the CS Department, there were many inefficiencies observed. There were significant backlogs in most administrative tasks since the focus was to put staff on the telephones to deal with the massive call volumes. Response times to calls increased when staff logged off the phones to process leak applications, allocation appeals, CAP applications or any other critical processes.

23. While lack of staffing was a significant factor, work was backlogged due to minimal processes and efficiencies. Things were done in the same manner as always without benefiting from review, revision or omission. There was a lack of a Quality

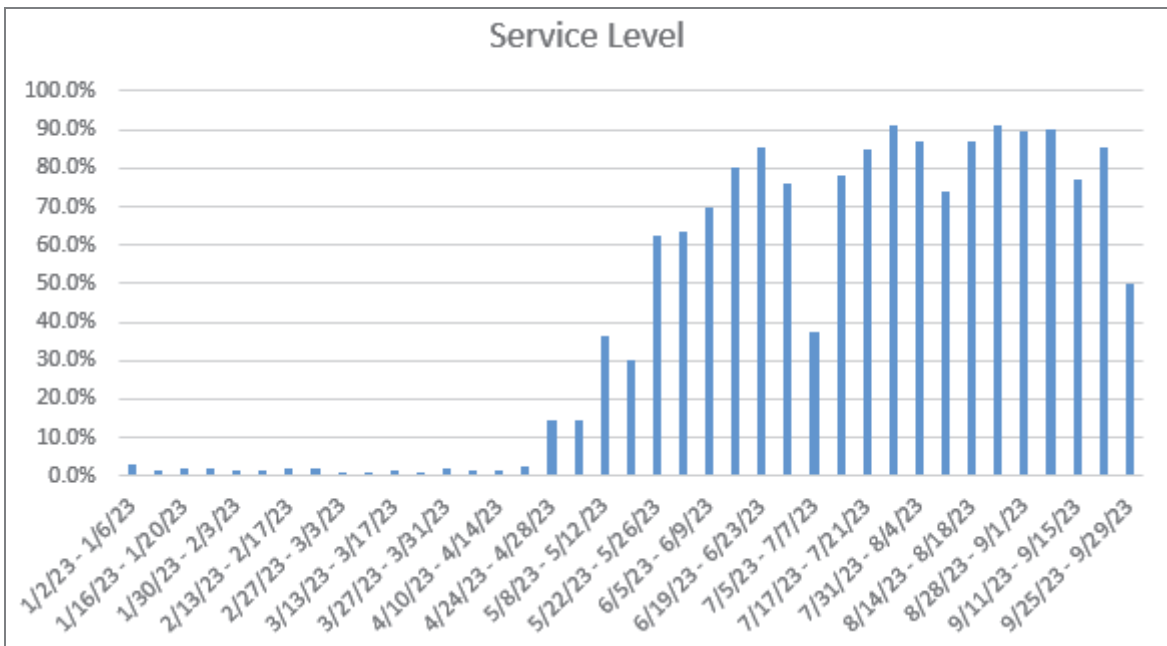
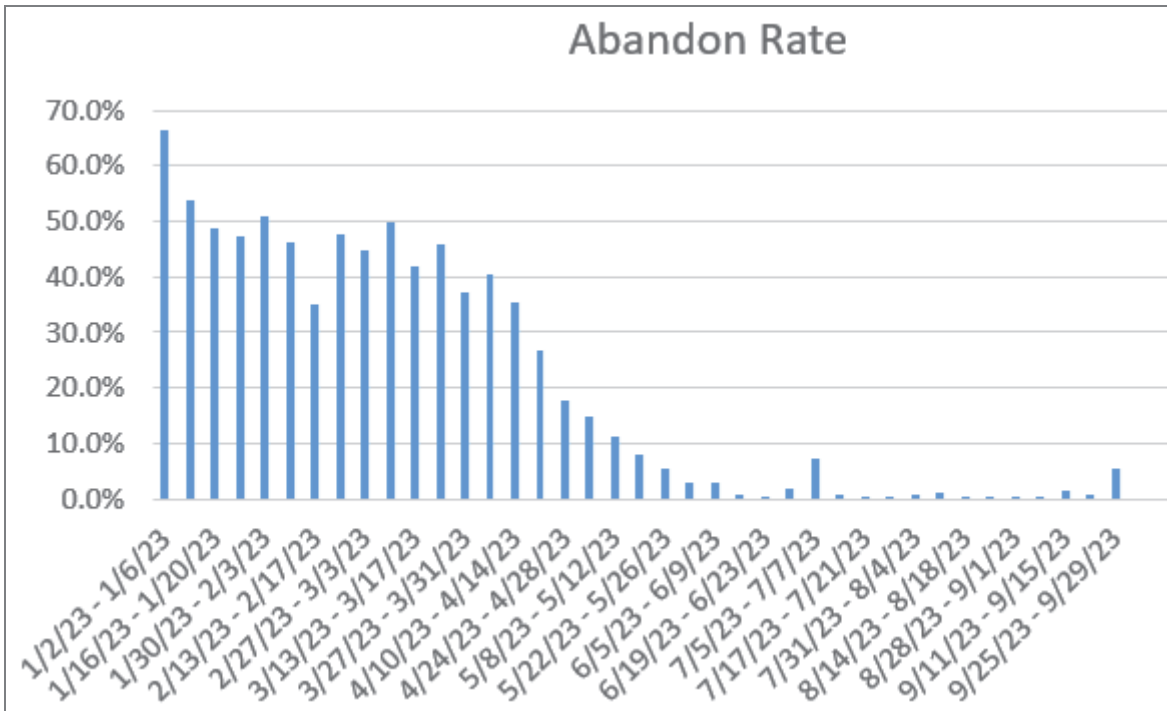
Assurance program. Standard Operating Procedures (SOPs) were either non-existent or out of date. The existing CSA training program took six to eight months to have a new team member handling incoming phone calls. The focus on book learning vs. in-person hands-on activities led to less valuable training. Without a training leader, senior staff all took part in training and emphasized the differences in how individuals handled the same task.

24. Due to security concerns from outdated billing software, customers who wanted to pay their bills automatically through their checking or savings account had to complete a paper form and attach a voided check in order to get automated payment services (APS). This was not in-line with other utilities or business. Customers often commented on this antiquated approach to APS by saying “We are in the heart of Silicon Valley and we have to use a paper form?”

25. There have been many accomplishments since November 2022. A new Customer Service Quality Assurance / Training Supervisor was hired in December 2022. The new interim Customer Service Director was appointed in November 2022 and confirmed as the permanent Director in April 2023. A new Customer Service Supervisor was promoted in March 2023. Eleven new CSRs have been hired (both permanent and temporary) since January 2023. There has been a rolling training program depending on the hire dates and all of the staff are now trained and on the phones helping customers. Expedited CSR training is now two months long vs. the previous six-to-eight month long system.

26. Processes have been improved to benefit the customer. A new drop box for customer payments was completed in January 2023 and is now available to customers. It had been shut down during the pandemic. Cash payments through the CheckFree service is now available. It is publicized on social media, bill inserts, website (www.sjwater.com/CheckFree), and newsletters. New meter test result letters established that clearly outline test results to benefit both internal staff and customers. Payment Plan and Broken Payment Plan letters established with the constraints of again CC&B system.

27. KPI improvements have been noticed throughout 2023. The Abandon Rate is consistently below the 5% goal as stated in GO 103. The Service Levels are increasing towards the 80% level as we strive to answer calls within 30 seconds more than 80% of the time.



28. SJWC has upgraded to Invoice Cloud. Using Invoice Cloud, we will have brand new ways to pay a water bill – making things easier, faster and more secure. Offering more options than check, cash, and one-time credit card payments has been long asked for by customers. In addition, an online Auto Pay option will allow customers to enroll easily and pay with a variety of options. New payment options include Apple Pay, Google Pay, PayPal, Venmo, pay-by-text, and more. Paper-less billing and E-billing can be done more easily now. This is a key part of the move to more self-service options for customers.

29. Expanding our payment plan options was a focus in 2023. The 2011 version of CC&B did not allow for more than a pay plan with a letter at the time of establishment, no flexibility, and a letter when the plan was broken. The lack of customer communication was frustrating for both customers and employees. In Q1 2024, the Company anticipates rolling out a new program with a company called Promise Pay. It allows the Company to help customers tackle their existing debt and avoid water service interruptions while offering flexible payment plans, expanded customer engagement by using technology, and freeing up the Company CSAs for other duties. The customer impacts include self-service options, availability to handle everything on their phone, text and SMS reminders for bills and payment plans, convenient payment types (credit/debit, ACH, Apply Pay, Google Pay, and Venmo), affordable and flexible payment options and access to Promise Pay customer service staff for questions. It offers a better customer service experience for customers.

30. SJWC has not returned to shutting off service for customers with past-due balances. We are developing a new process that provides for proper customer notifications as well as considerations for employee health and safety. A new internal process is being developed with the following considerations:

- Empathetic and sympathetic to the customers' needs
- Employee and customer safety
- Provide every opportunity for them to enter into a payment arrangement or pay their bill in full
- Closure of walk-in customer service office for payments/restorals
- Verification of payments with new expanded payment platform

- Updated doorhanger to reflect next steps for customers

Shutoffs are prohibited while utilities are applying for arrearage assistance through the California Water and Wastewater Arrearage Payment Program. SJWC will be applying for this funding shortly. Shutoffs can only resume 30-days after payment from the Program is credited to the customers' accounts and after they have been notified that they can enter into a payment arrangement plan for any remaining due balance. We anticipate the receipt of the arrearage assistance in late first quarter of 2024 and shutoff resumption in second quarter of 2024.

31. Our customers live in the heart of Silicon Valley and are well-versed in technology. We need to meet their high service expectations that they see at other businesses and new CS technology will help us. Several projects are in the works that will help provide better service to both our employees and customers:

- **Invoice Cloud** – new bill payment platform
- **Promise Pay** – payment plan programs for customers
- **Bill print provider** – better bill design for customers with enhanced systems for Billing Department to process/confirm/rebill customers.
- **Automated Metering Infrastructure (AMI)** – smart water meters will provide nearly real-time usage data for customers and provide better online support for both CSRs and customers.

32. Helping our income-eligible customers have access to all available assistance programs is a key part of customer service. The Customer Assistance Program (CAP) offers a 15% discount on the total bill for those customers who meet the income guidelines. With quarterly data exchanges with PG&E, the goal is to ensure the broadest available access to CAP. The program is publicized through the year with our website, social media, bill inserts, e-newsletters, and our CSRs.

33. The Low Income Water Rate Assistance Program (LIHWAP) provides a one-time payment assistance benefit of up to \$15,000 on current or past-due residential water bills for low-income households. Eligibility is based on household size and income. The local community-based service provider Sacred Heart Community Services administers the program. Assistance is paid directly to the Company. The program is publicized through the

year in multiple languages with our website, social media, bill inserts, e-newsletters and our CSRs. Sacred Heart Community Services also does outreach in the community. In May 2023, the Company did a direct-mail postcard campaign to almost 8,000 CAP customers who had an outstanding balance. The postcard was translated into English, Spanish, and Vietnamese. As of July 2023, almost 400 customers have received nearly \$400,000 applied to their water accounts. A second postcard mailing is planned for October 2023 to more than 13,000 CAP customers as the LIHWAP program has been extended to March 2024.

34. The Company is committed to Diversity, Equity and Inclusion (DEI). Our DEI initiatives include ongoing implicit bias training for all employees and adjustments of job descriptions to examine them for potential bias. A DEI Council continues to share personal stories throughout the Company. Since the DEI Council began in 2022, it has launched 12 micro-training topics. Ongoing education continues with the sharing of heritage months, cultural holidays and the importance of a workplace culture that valued DEI. A Town Hall in June 2023 welcomed Jackie Joyner-Kersey and employees who shared their personal stories and ideas to help create a positive work environment. DEI is a valued part of the Company's culture. Additional employee awareness about DEI allows them to better serve the diverse customer population.

F. Operations, Maintenance and Construction

35. Most operation and maintenance work on the Company's distribution system is performed by Company personnel. This includes main and service repairs, hydrant repairs, meter testing and repairs, storage and inventory management of on-hand materials and supplies, and other related work.

36. Maintenance of landscape, wells, pumping equipment, automotive equipment, and repairs to reservoirs and tanks is performed by independent contractors. Most construction related to both company-funded and developer-funded capital projects is performed by outside contractors. Project design, cost estimating and procurement of necessary permits are performed primarily by in-house Engineering Department staff with assistance from outside consultants for special circumstances. Monitoring of construction projects, including administration of construction contracts, is performed by the Construction Department.

37. The Company uses hydraulic modeling software containing all system piping, zone valves, regulators, pumps, tanks, and sources of supply for engineering and operational analyses. The hydraulic model is updated annually to reflect recent pipeline, facility, or operational changes. Model updates include a reallocation of customer demands and a recalibration of minimum, average, and maximum day demand simulations. The hydraulic model is used to size infrastructure, perform source trace for water quality constituents, and run what-if scenarios for planned shutdowns or other operational changes.

37. The Company's Geographical Information System (GIS) contains the Company's entire digitized library of maps and records overlaid with valves, pipes, reservoirs and other water distribution asset information. Through the Geographic Data Integration (GDI, a.k.a. Merlin) mobile application, this data is now available to virtually all employees via the company's intranet and field-deployed laptops, iPad and cell phones. The widespread availability of GIS data has greatly improved planning, maintenance efficiency and customer service.

39. The water system is operated under a public water supply permit issued by the California Division of Drinking Water ("DDW").

40. The water supply from the diversion on Saratoga Creek is treated at the Company's Saratoga Microfiltration Plant. This plant utilizes membrane filtration technology which effectively removes both Giardia and Cryptosporidium which in combination with disinfectant ensures microbiological safety. The production capacity is approximately five million gallons per day ("MGD") when sufficient water supplies are available.

41. The supply from diversions and impounding reservoirs on the Los Gatos Creek and its tributaries is disinfected and filtered at the Montevina Water Treatment Plant. As discussed above, this treatment plant was commissioned in December 2018.

42. The Company takes regular water quality tests at locations throughout the distribution system to insure the safety of the water supply and compliance with increasingly stringent state and federal drinking water regulations. The number of tests made by the Company exceeds the requirements of the DDW.

43. A Water Quality Report summarizing water quality testing conducted throughout the year is prepared and made available to all SJWC customers and to DDW. The report lists

the range of results and average results for all Primary and Secondary Standards, as well as the Maximum Contaminant Level for each parameter detected. This data is presented in a table that is divided into columns based on source type (groundwater, local mountain surface water and imported surface water). A map of the SJWC service area delineates the predominant source type serving various areas of the system. The report also provides information about technologies and programs related to water treatment and water quality that are in place at SJWC. Starting with the 1997 report, this information has also been available on SJWC's web site.

44. The Company operates a Cross-Connection Control Program in accordance with the provisions of the California Code of Regulations, Title 17. About 14,000 individual backflow prevention devices are currently installed at customer services throughout the distribution system. All are tested annually to insure protection of the water supply.

45. The Company continues to be in full compliance with all requirements of the federal Safe Drinking Water Act. Water quality issues are detailed in RO Report Chapter 16.

H. Transmission, Distribution and Storage

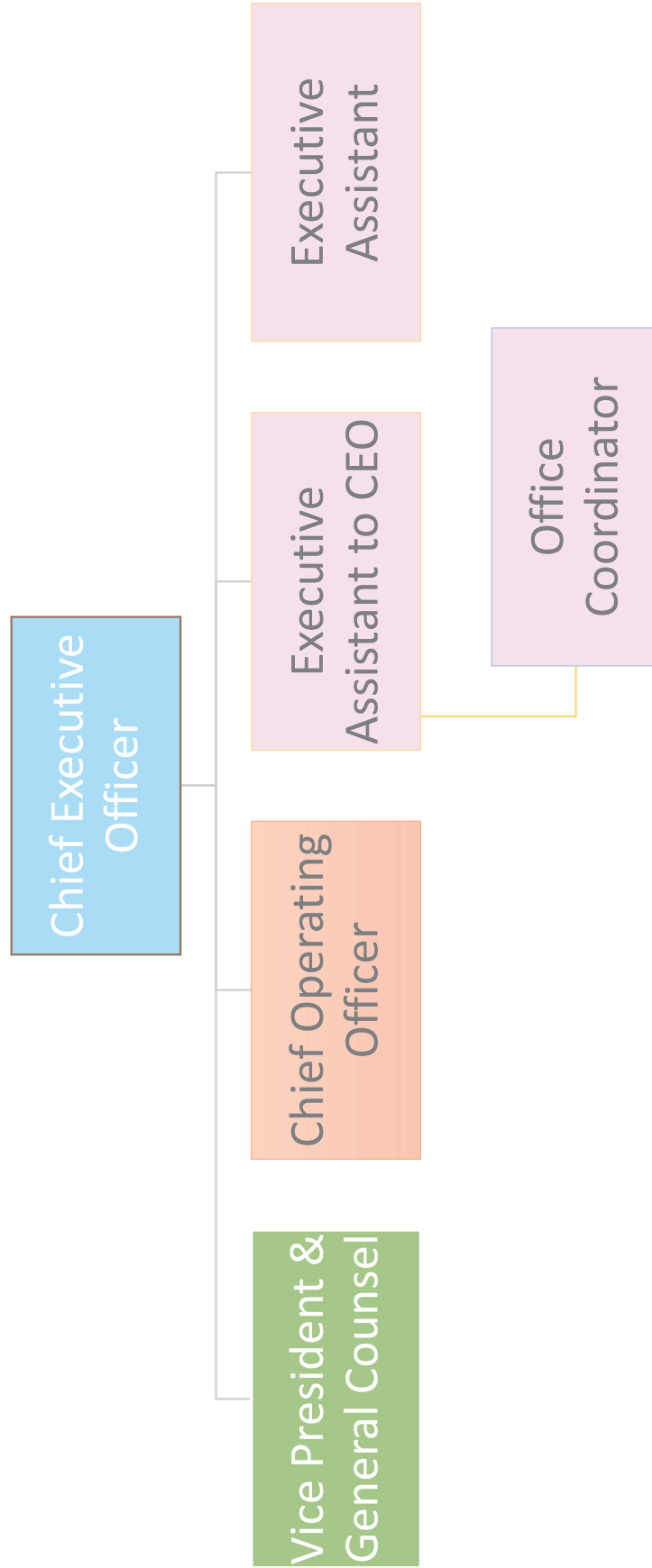
30. As of June 30, 2023 there were approximately 2,400 miles of transmission and distribution mains in the system, ranging in size from 2 inches up to 48 inches in diameter.

31. The Company's mountain reservoirs have a combined storage capacity of over 2.3 billion gallons. The system has distribution storage facilities with a capacity of about 217 million gallons, and over 100 unique pressure zones serving elevations ranging from 28 feet to 2,167 feet above sea level over the 138-square-mile service area.

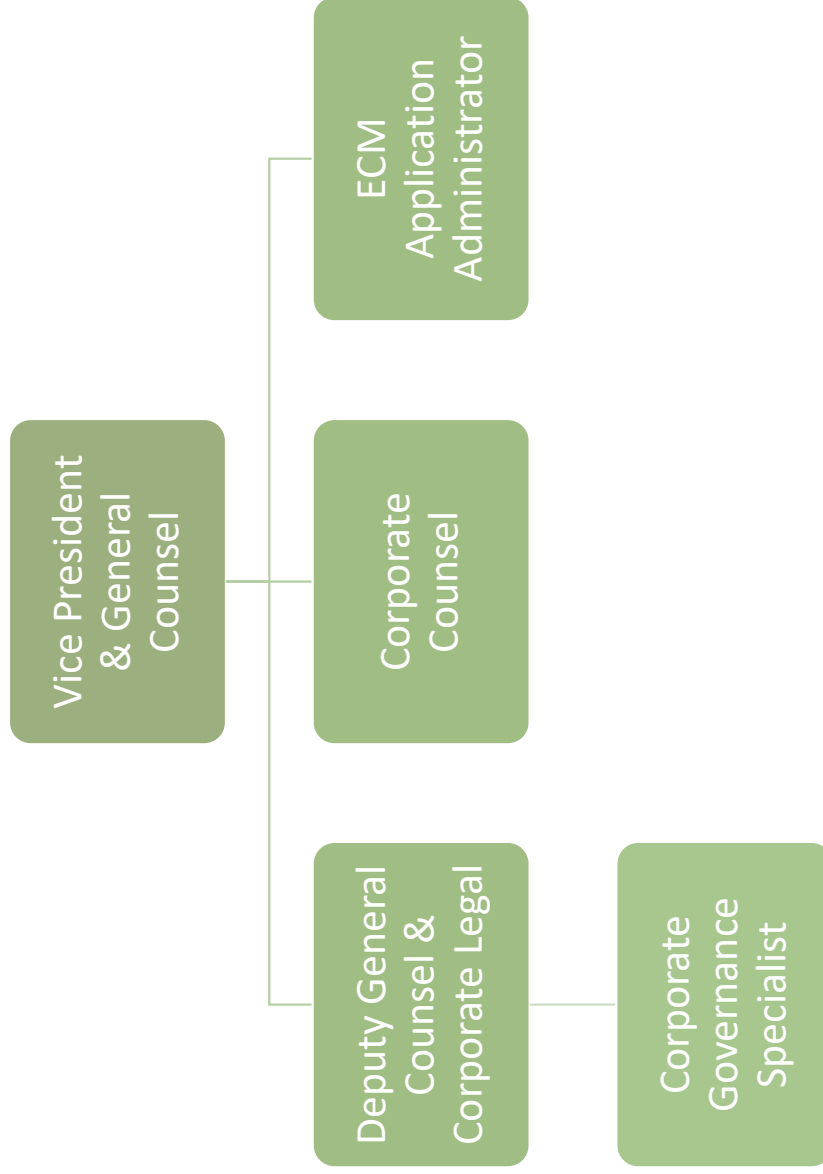
32. For almost 50 years, SJWC has managed its water distribution system operations through a centralized Supervisory Control and Data Acquisition (SCADA) system. All water production, transmission and storage stations are outfitted with Programmable Logic Controllers (PLC) that collect data and execute control functions through interaction with the SCADA system via a dedicated wireless microwave radio network. The SCADA system is accessible to all SJWC system operator staff both in the office and in the field through laptop computers in each vehicle via cellular communications. During routine operations all supply, pumping and disinfection activities are automatically controlled by the SCADA system and regularly monitored by system operators in the field. Pursuant to pre-established parameters and energy management algorithms, the SCADA system will analyze whether existing storage and normal usage will allow to defer pumping to time periods when electrical power is less costly (time-of-day rate schedules set by the electrical energy provider), which supports more strategies for efficient energy use and management of operational costs.

Executive Team

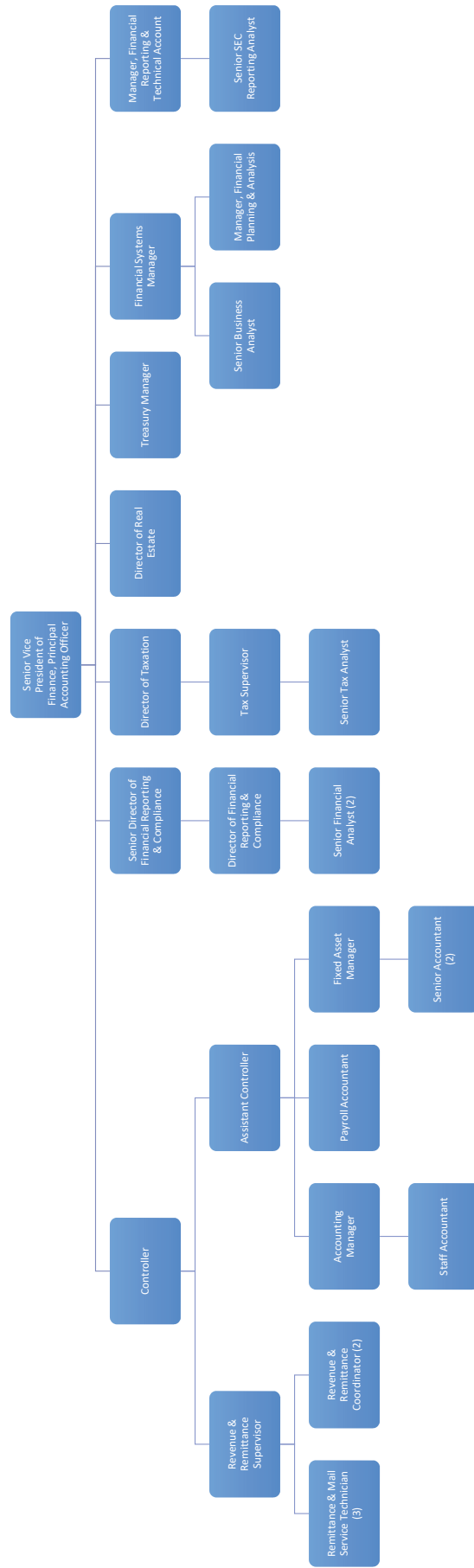
TABLE 3A
Page 1 of 18



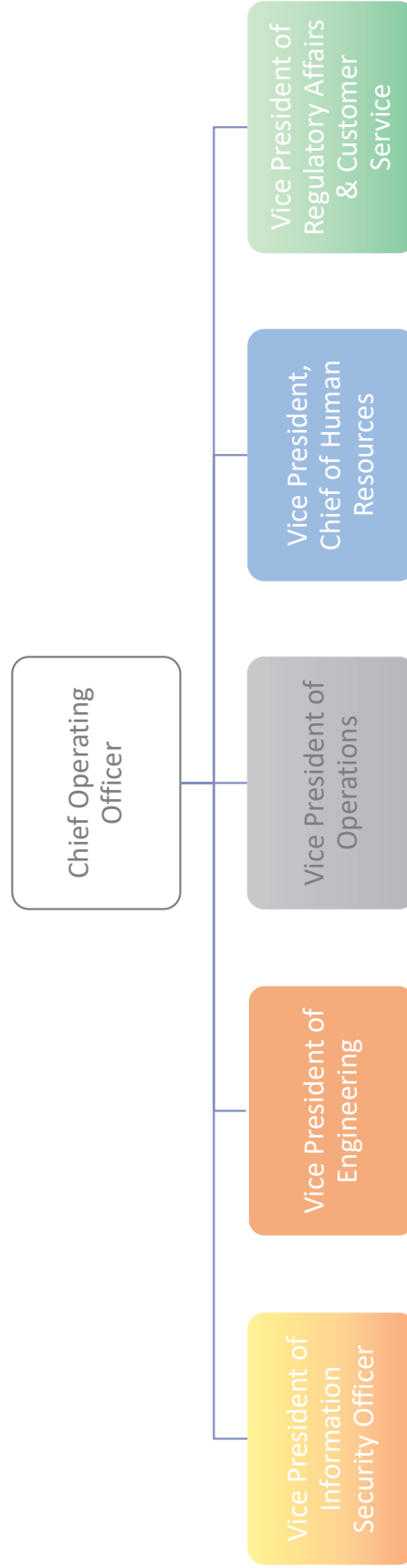
General Counsel Team



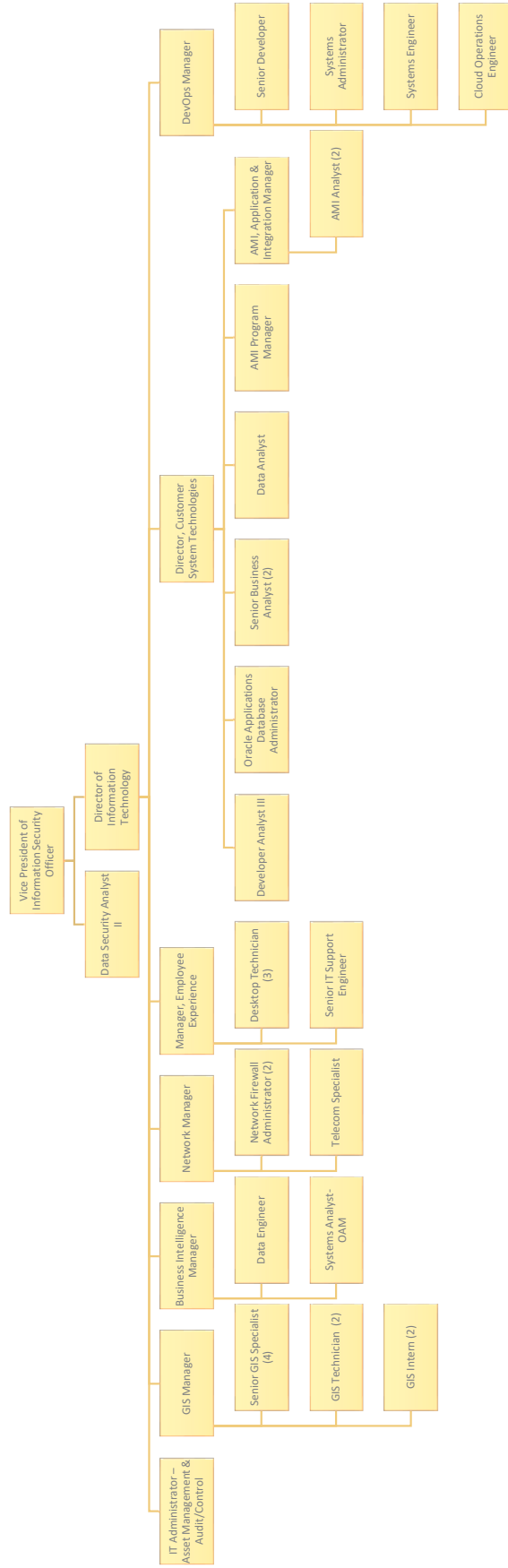
Accounting & Finance Team



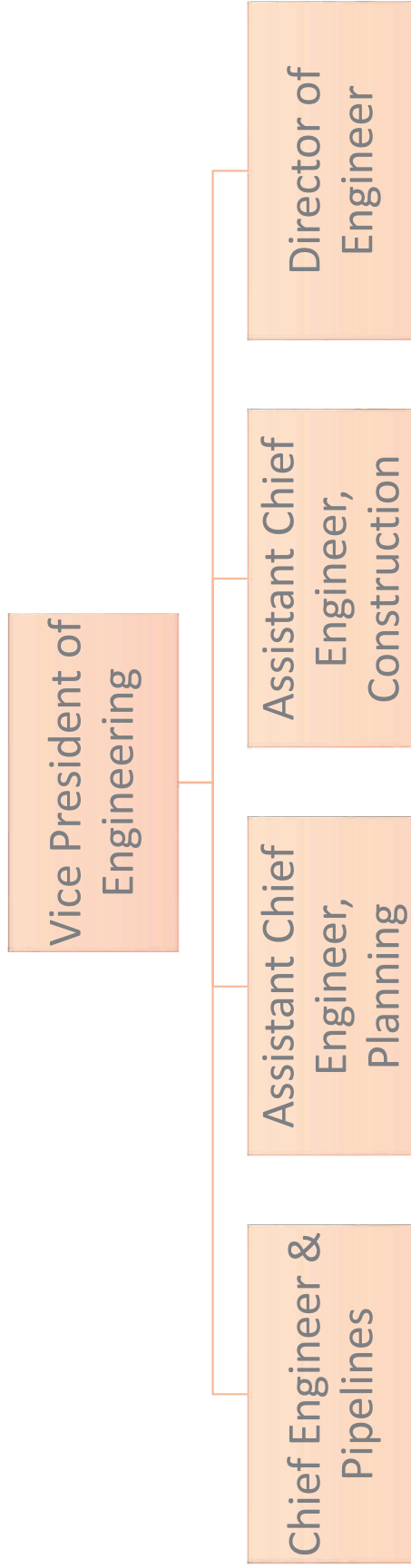
Chief Operating Officer Team



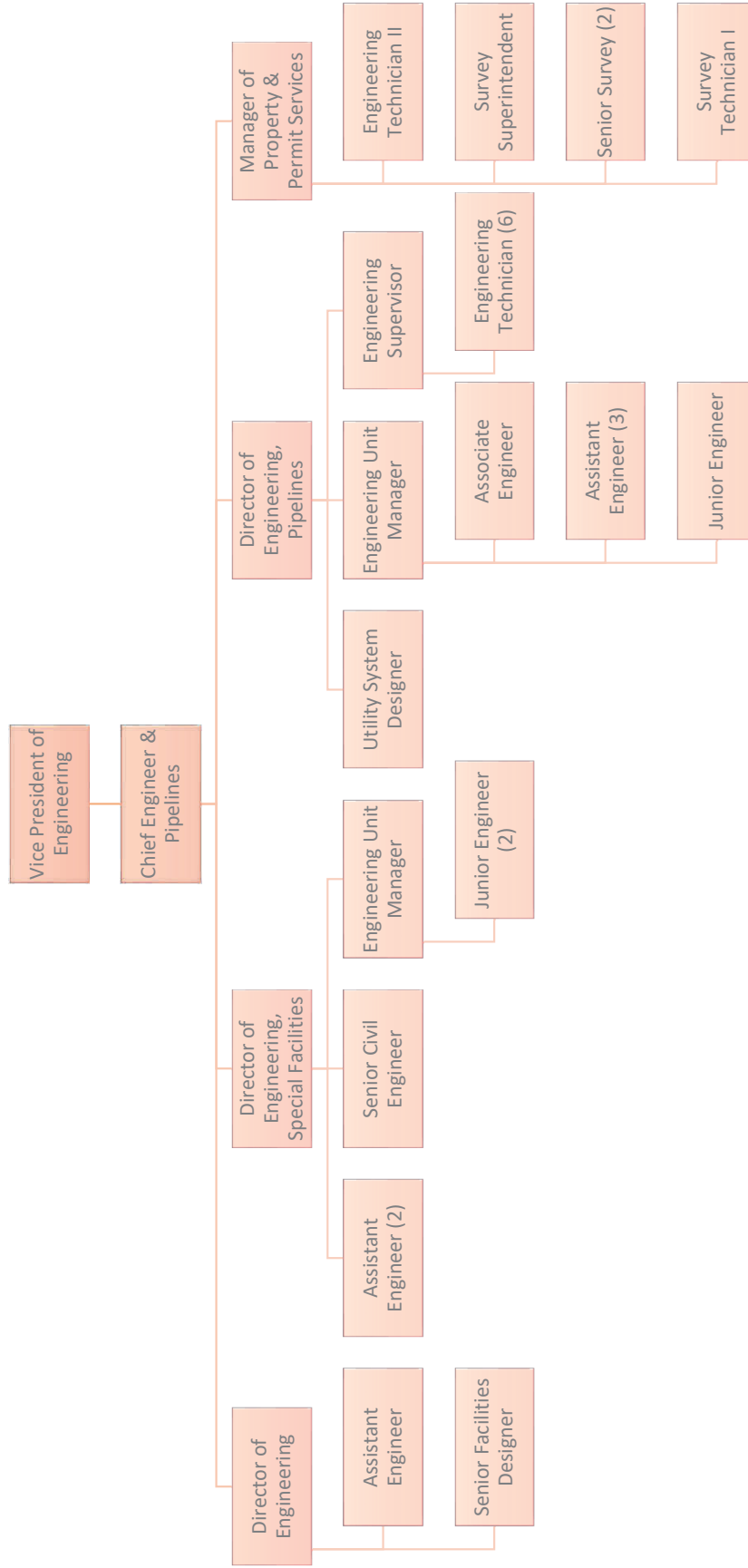
Information Security Team



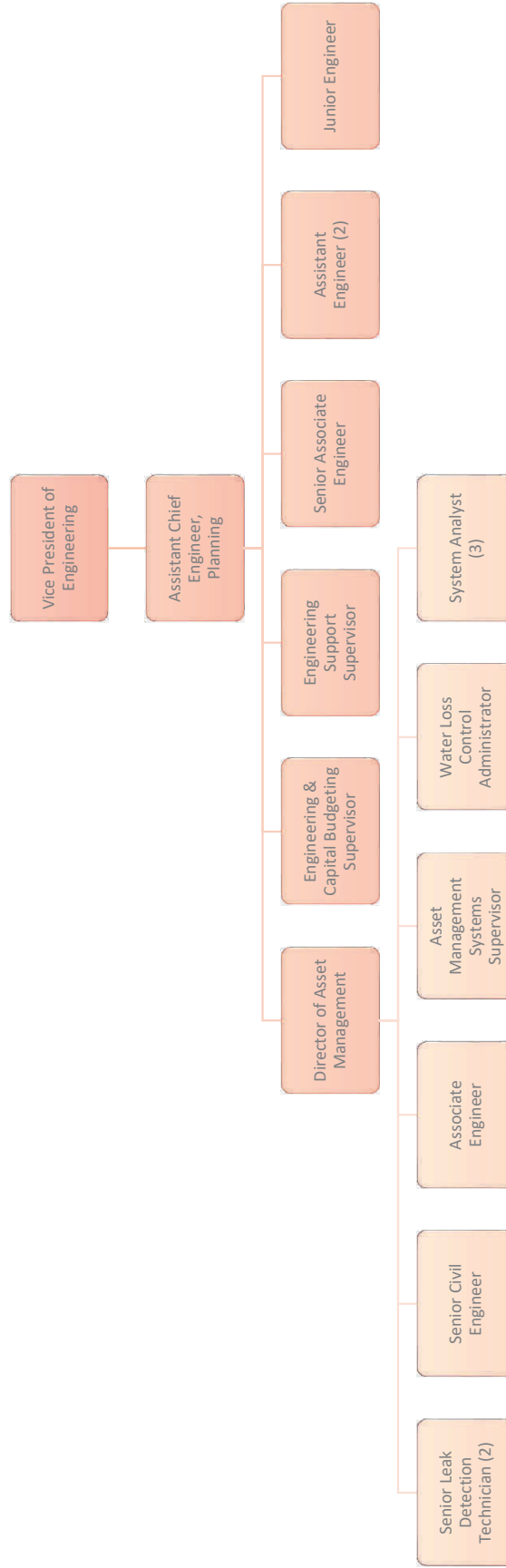
Engineering Team



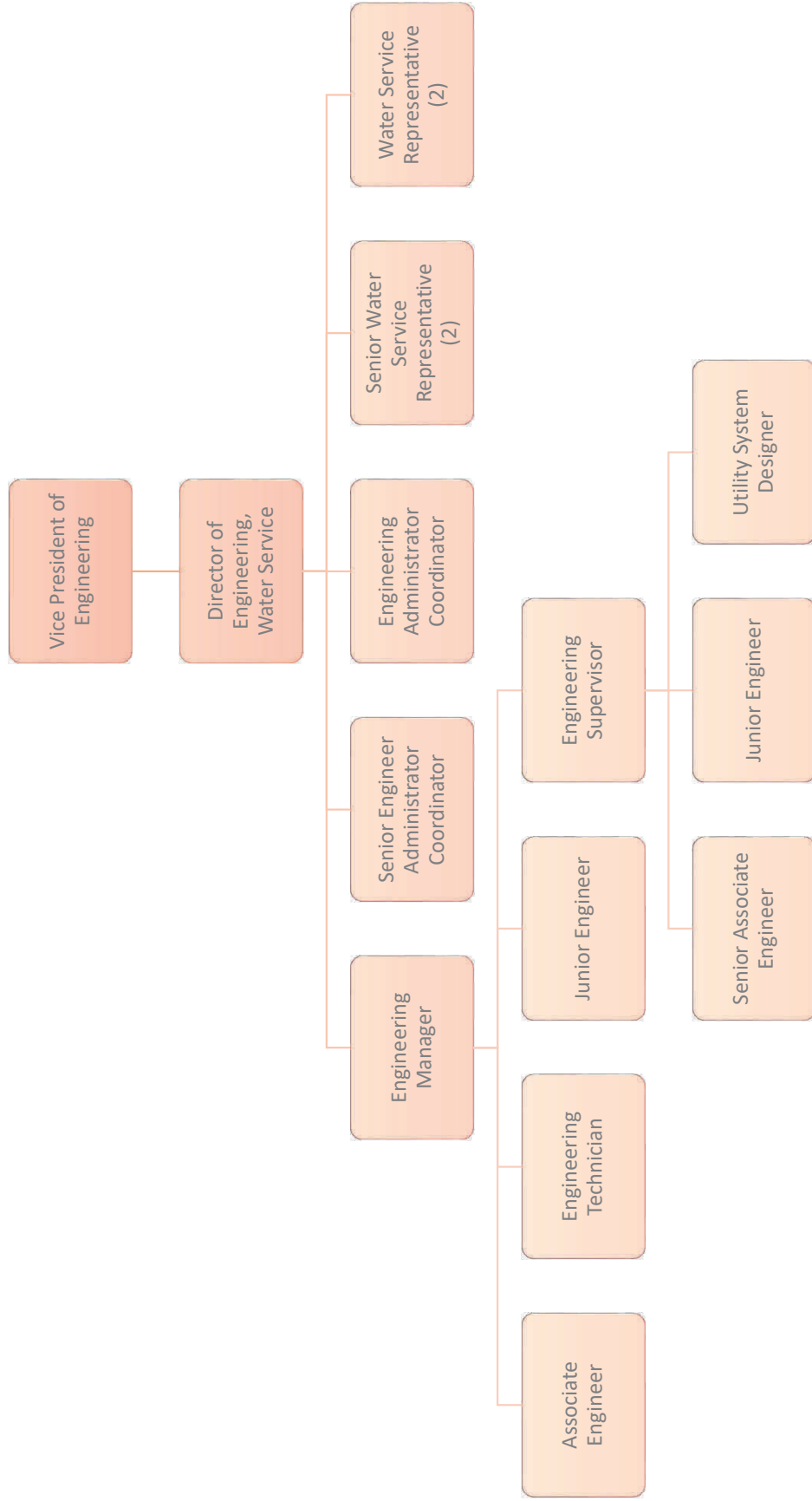
Engineering & Pipelines Team



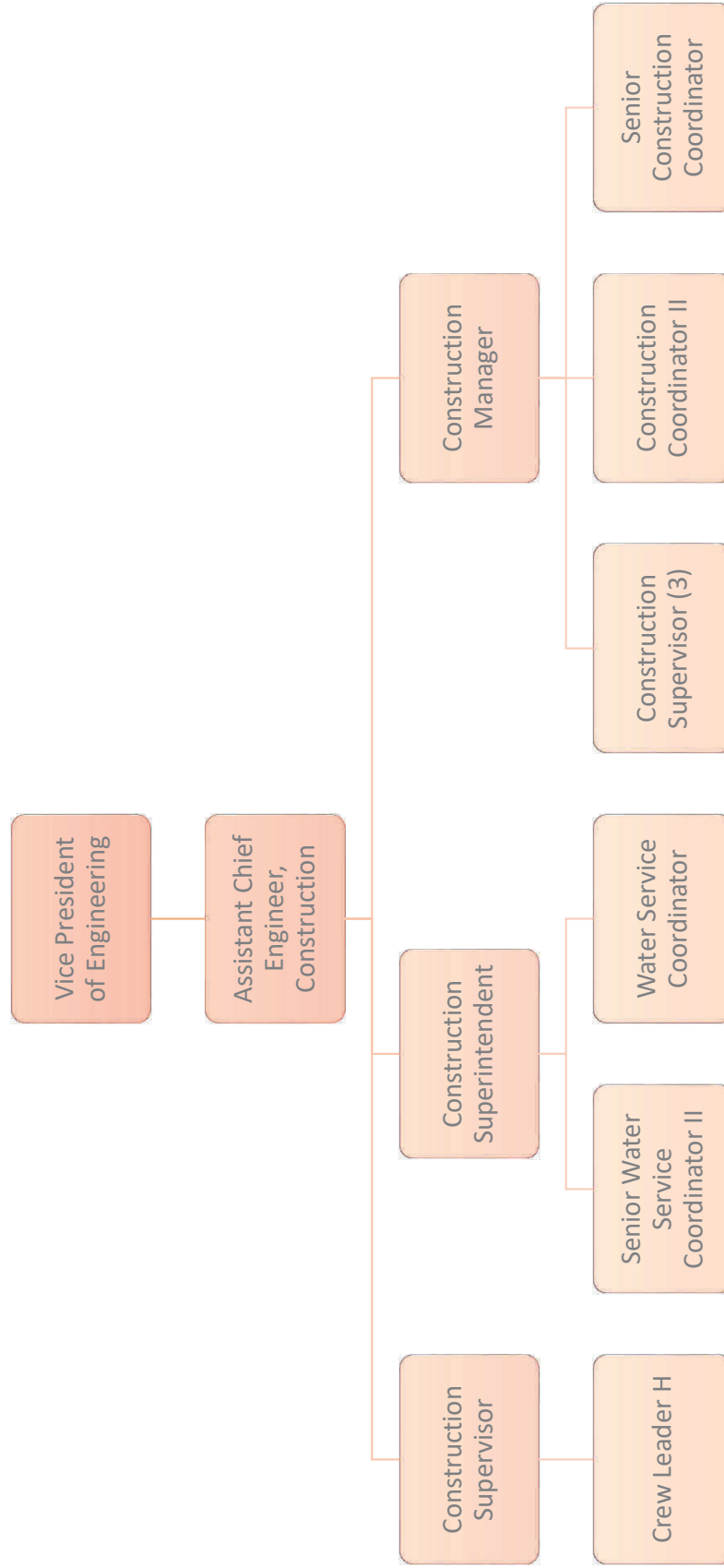
Engineering & Planning Team



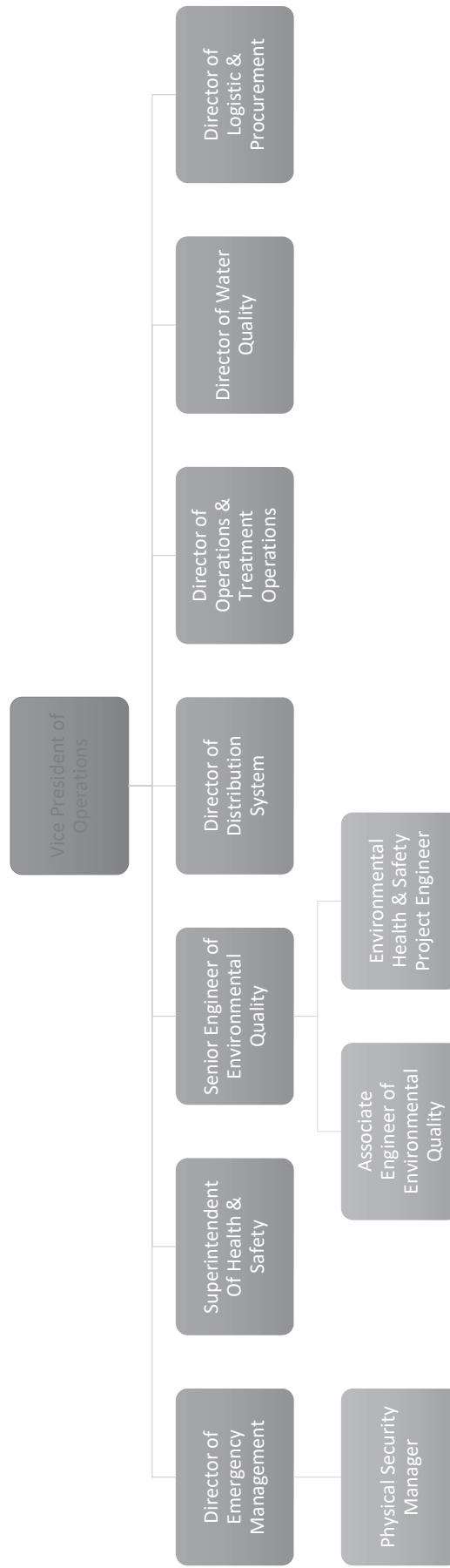
Water Service Engineering Team



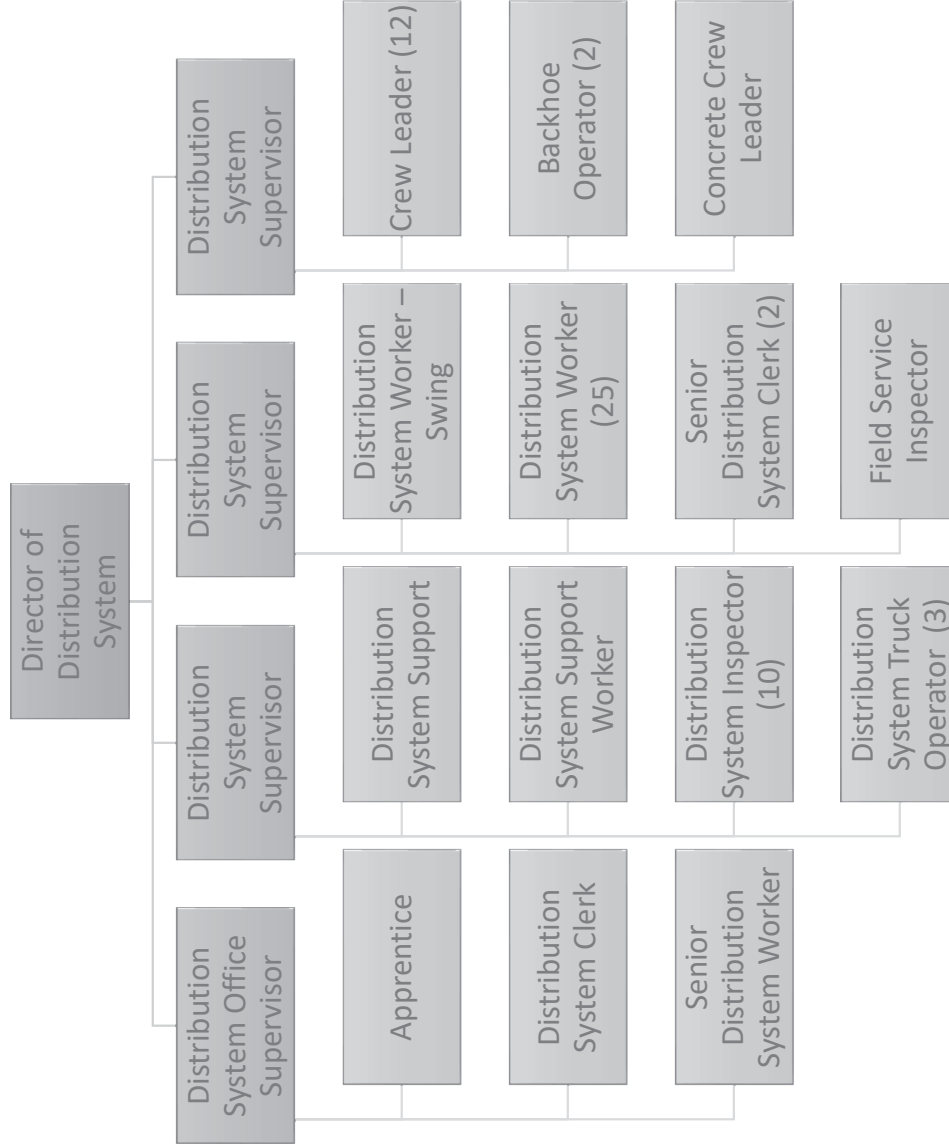
Construction Team



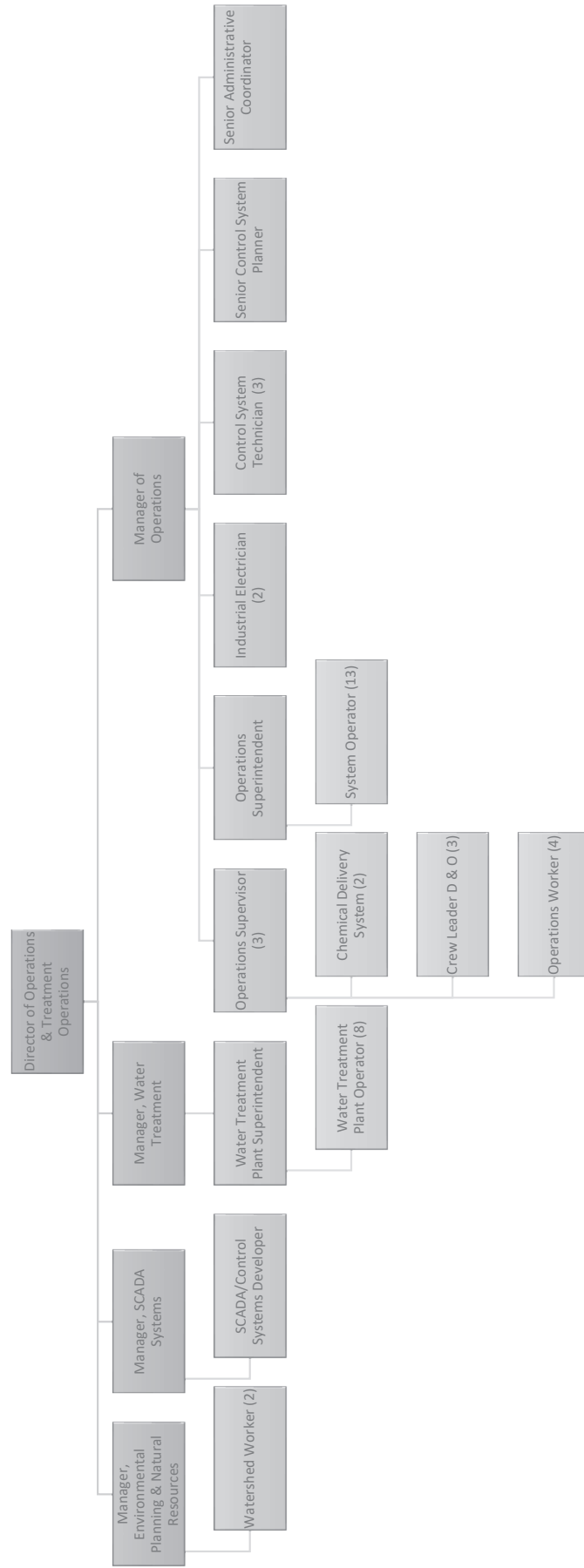
Operation Team



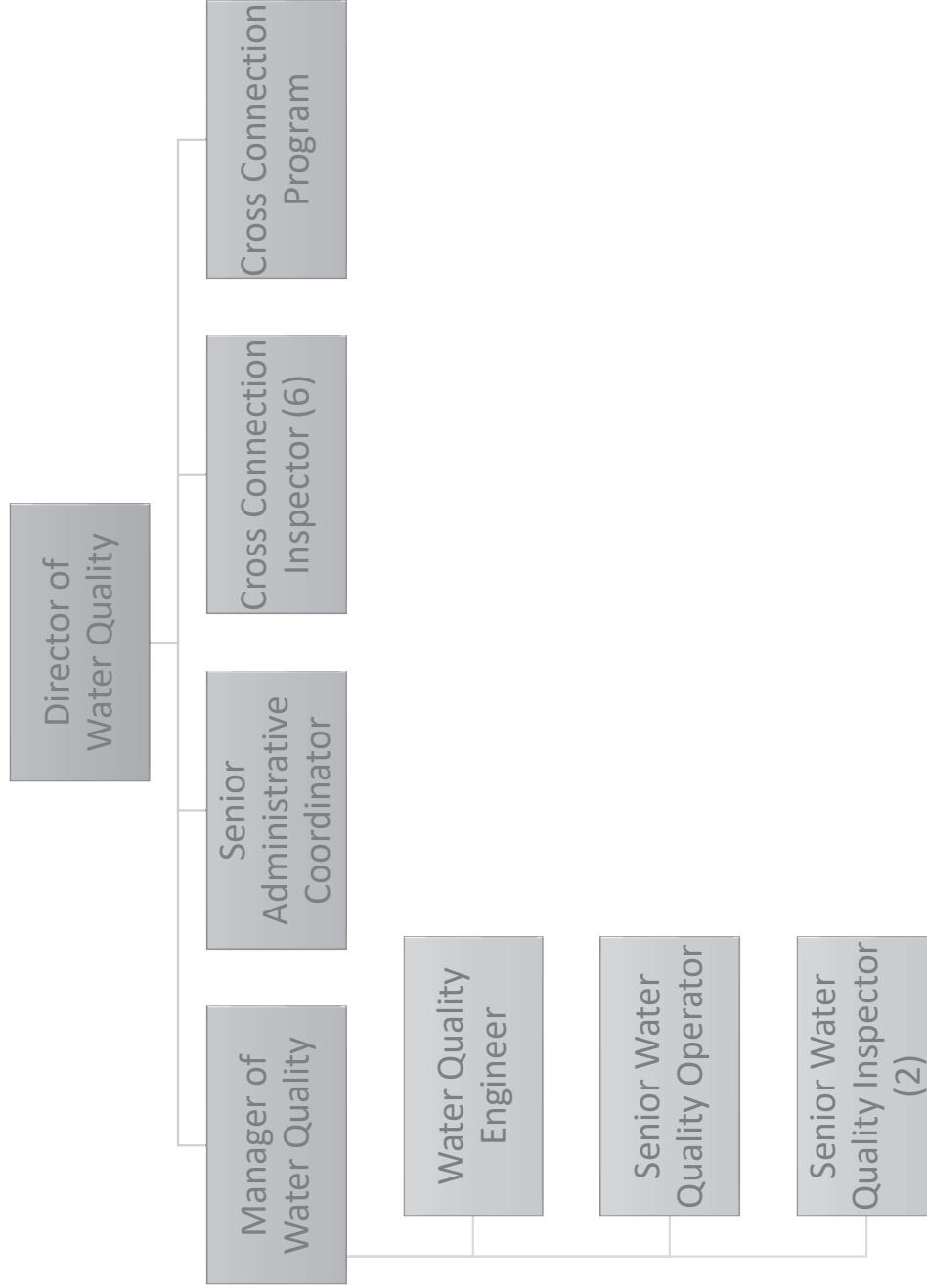
Distribution System Team



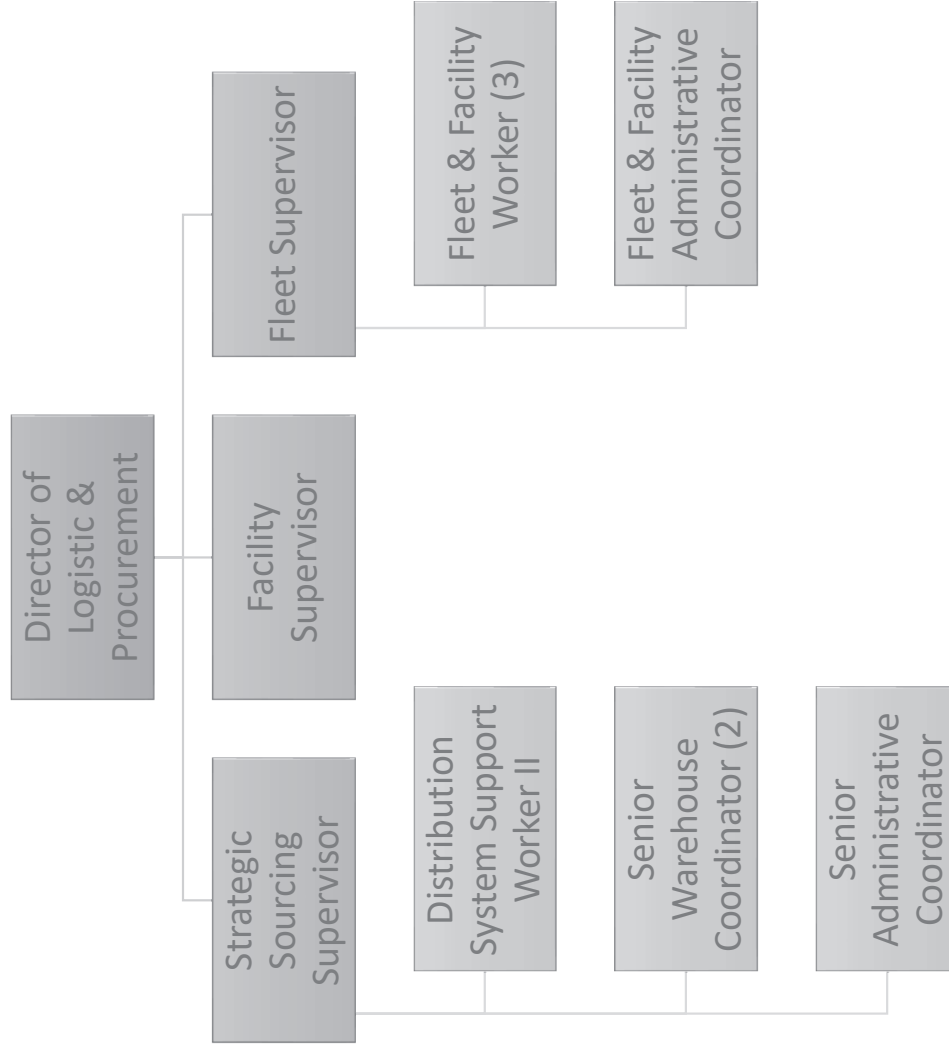
Operation & Treatment Team



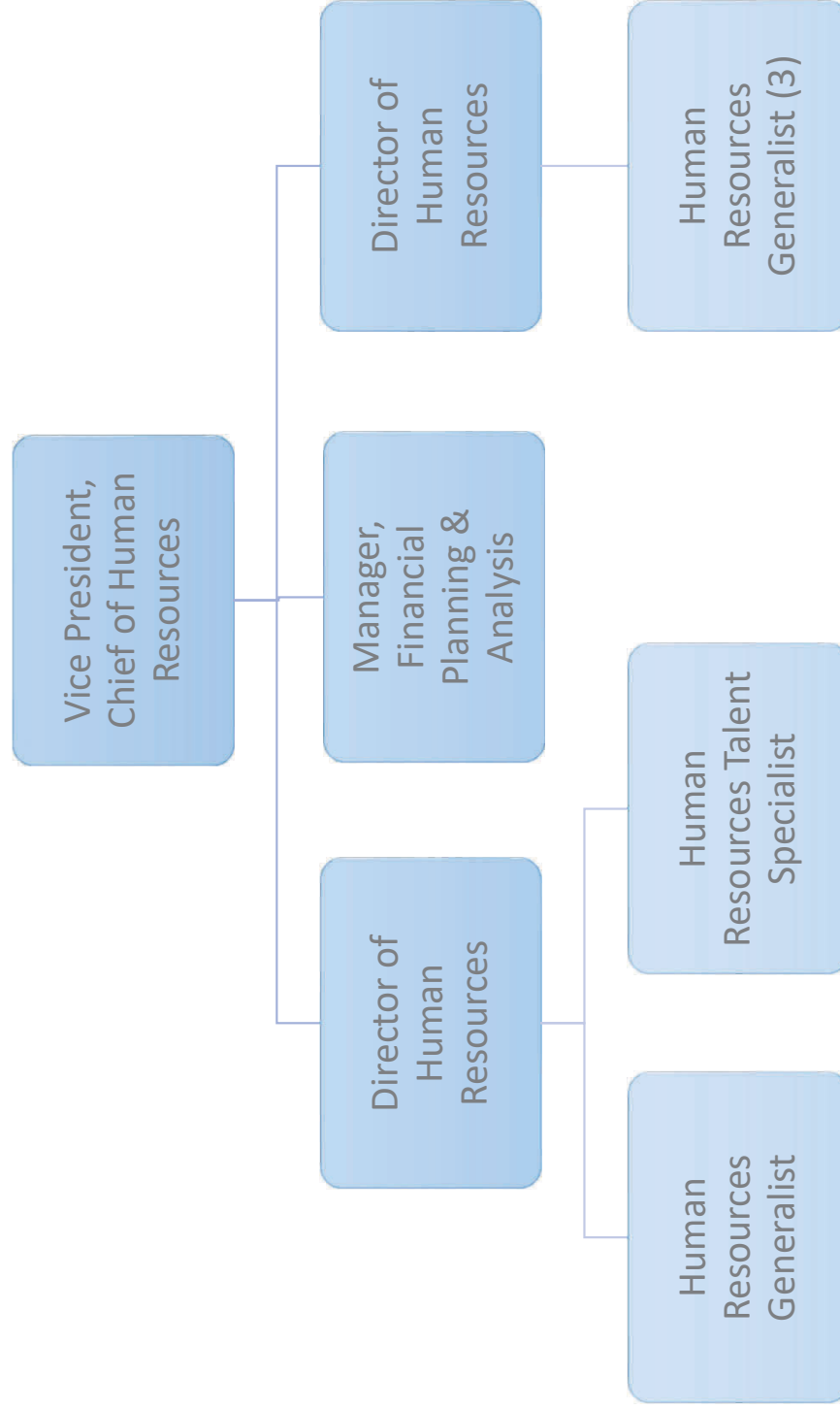
Water Quality Team



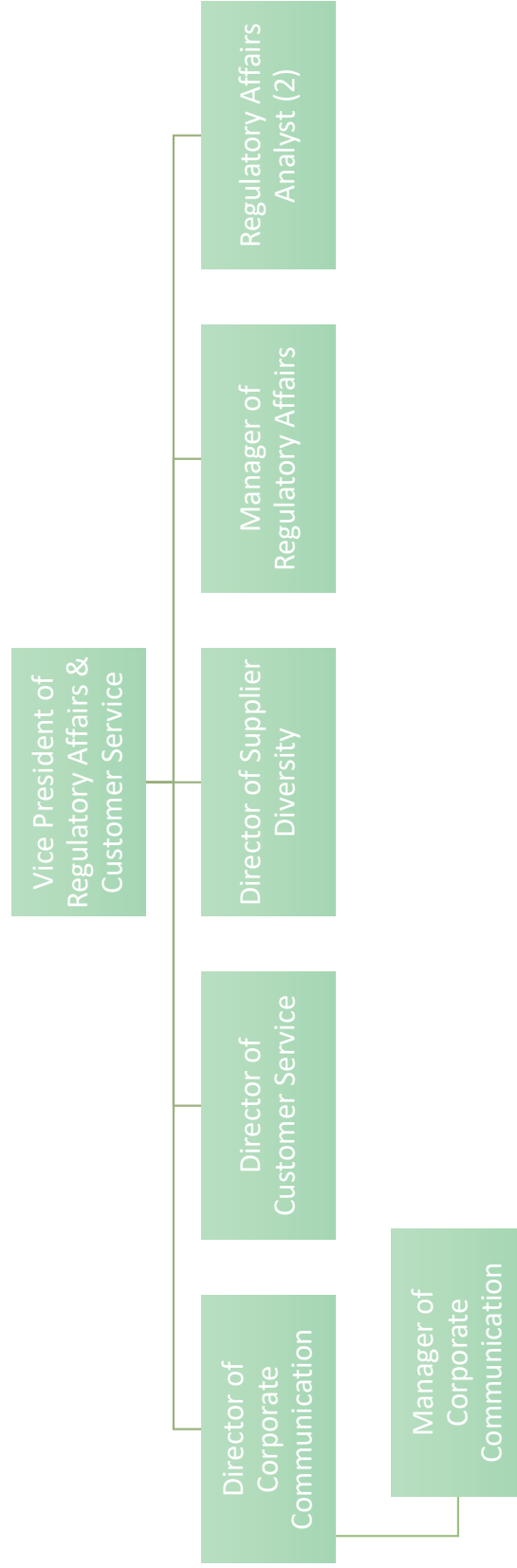
Logistic & Procurement Team



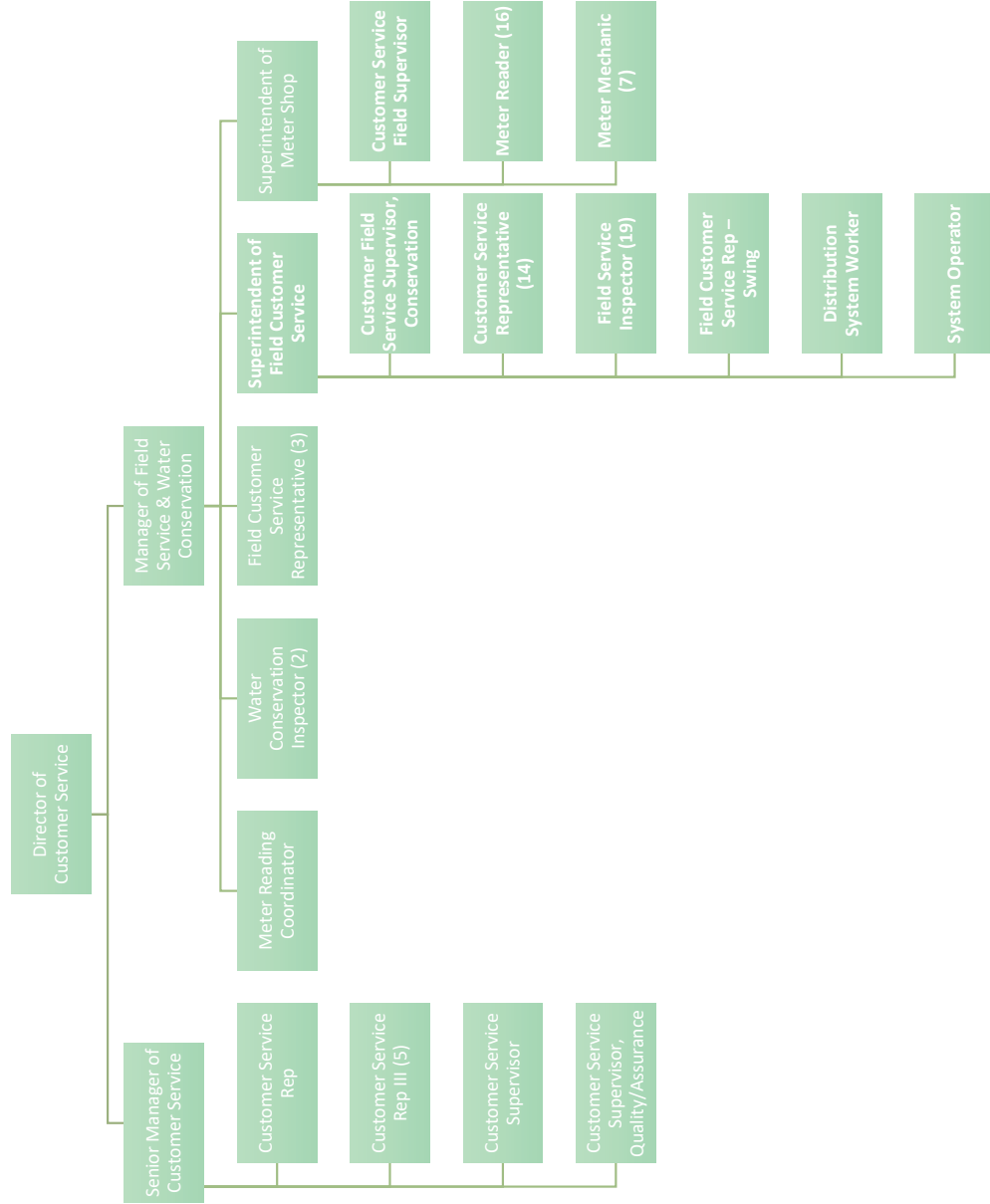
Human Resources Team



Regulatory Affairs & Customer Service Team



Customer Service Team



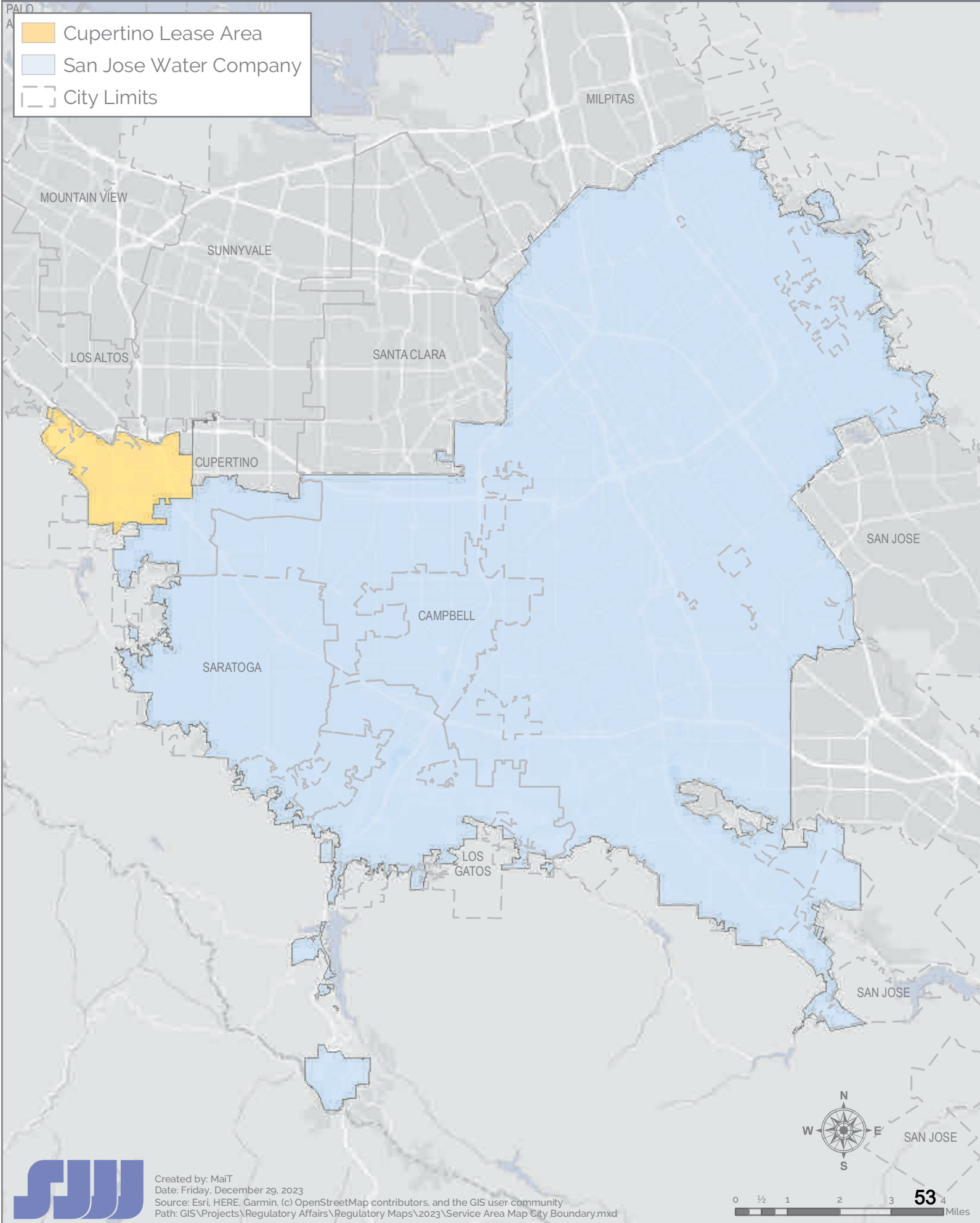


Legend:

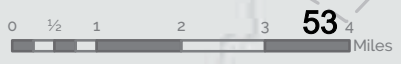
- SJW Service Area
- County Boundary

Legend:

- Cupertino Lease Area
- San Jose Water Company
- City Limits



Created by: MaiT
Date: Friday, December 29, 2023
Source: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Path: GIS\Projects\Regulatory Affairs\Regulatory Maps\2023\Service Area Map City Boundary.mxd



CHAPTER 4

FINANCIAL CONDITION

Prepared by John Tang

1. The financial condition of San Jose Water Company and its recorded results of operation are reported in this chapter. The following tables are presented.

Table 4-A Balance Sheets as of December 31, 2021, 2022 and August 31, 2023

Table 4-C Statements of Income for the years ended December 31, 2021, 2022 and August 31, 2023

SAN JOSE WATER COMPANY
(U-168-W)

BALANCE SHEETS
DECEMBER 31, 2021, DECEMBER 31, 2022 AND AUGUST 31, 2023

(Dollars)

	<u>Dec 31</u> <u>2021</u>	<u>Dec 31</u> <u>2022</u>	<u>Aug 31</u> <u>2023</u>
ASSETS			
Utility Plant:			
Tangible Assets	\$2,102,385,935	\$2,210,899,696	\$2,308,296,301
Intangible Assets	\$1,040,137	\$1,040,137	\$1,040,137
	<hr/>	<hr/>	<hr/>
Total Utility Plant	\$2,103,426,071	\$2,211,939,832	\$2,309,336,438
Less: Accumulated Depreciation	\$737,571,491	\$799,466,570	\$847,595,803
Accumulated Amortization	\$577,337	\$593,676	\$606,099
	<hr/>	<hr/>	<hr/>
Net Utility Plant	\$1,365,277,243	\$1,411,879,586	\$1,461,134,536
Utility Plant Held for Future Use	\$0	\$0	\$0
Nonutility Property	\$149,952	\$149,952	\$149,952
Current Assets:			
Cash and Equivalents	\$1,516,222	\$813,972	\$15,956,787
Accounts Receivable:			
Customers	\$29,395,884	\$34,303,928	\$37,800,830
Other	\$1,202,687	\$1,957,792	\$1,051,517
Accrued Utility Revenue	\$30,933,000	\$31,539,000	\$44,168,000
Material and Supplies, at Average Cost	\$1,063,730	\$1,609,015	\$1,465,941
Intercompany Notes	\$1,598,705	\$19,571,549	\$4,699,519
Regulatory Assets Current Portion	\$31,541,939	\$3,156,526	\$4,476,790
Prepaid Expenses	\$6,294,415	\$6,514,884	\$8,745,041
	<hr/>	<hr/>	<hr/>
Total Current Assets	\$103,546,583	\$99,466,666	\$118,364,425
Other Assets:			
Cupertino Lease, Net	\$3,395,020	\$491,508	\$291,209
Debt Issuance Costs	\$3,561,704	\$3,768,612	\$3,986,456
Regulatory Assets	\$42,316,212	\$31,892,322	\$26,688,340
Other Deferred Charges	\$1,106,673	\$1,819,885	\$1,349,190
	<hr/>	<hr/>	<hr/>
Total Deferred Charges	\$50,379,609	\$37,972,326	\$32,315,194
	<hr/>	<hr/>	<hr/>
Total Assets	<u><u>\$1,519,353,387</u></u>	<u><u>\$1,549,468,531</u></u>	<u><u>\$1,611,964,108</u></u>

SAN JOSE WATER COMPANY
(U-168-W)

BALANCE SHEETS
DECEMBER 31, 2021, DECEMBER 31, 2022 AND AUGUST 31, 2023

(Dollars)

	<u>Dec 31</u> <u>2021</u>	<u>Dec 31</u> <u>2022</u>	<u>Aug 31</u> <u>2023</u>
CAPITALIZATION AND LIABILITIES			
Common Equity:			
Common Stock, \$6.25 par Value, 3,000,000 Authorized;			
One Share Issued and Outstanding	\$6	\$6	\$6
Capitalization:			
Paid-in Capital	\$130,023,572	\$133,564,852	\$136,290,318
Other Comprehensive Income			
Retained Earnings	\$400,626,129	\$416,481,585	\$425,767,505
Total Common Equity	\$530,649,708	\$550,046,443	\$562,057,830
Long Term Debt	\$520,000,000	\$470,000,000	\$500,000,000
Total Capitalization	\$1,050,649,708	\$1,020,046,443	\$1,062,057,830
Current Liabilities:			
Note Payable-Intercompany	\$5,385,000	\$13,783,000	\$19,283,000
Line of Credit	\$0	\$95,000,000	\$42,000,000
Accrued Pump Tax	\$9,927,772	\$11,854,138	\$14,808,395
Purchased Water	\$5,727,001	\$6,285,027	\$16,120,745
Purchased Power	\$680,000	\$721,000	\$1,197,999
Accounts Payable	\$16,423,309	\$18,049,045	\$25,515,199
Accrued Interest	\$8,278,672	\$7,386,325	\$8,222,870
Accrued General Taxes	\$893,525	\$949,025	\$2,857,745
Postretirement Benefits	\$2,372,250	\$1,568,381	\$1,568,381
Current Portion of LTD	\$19,995,363	\$0	\$39,955,057
Income Taxes Payable	\$1,163,052	\$4,332,639	\$13,829,590
Other Current Liabilities	\$23,855,467	\$20,020,942	\$15,008,827
Total Current Liabilities	\$94,701,411	\$179,949,523	\$200,367,809
Deferred Income Taxes	\$67,660,391	\$68,109,709	\$68,440,949
Unamortized Investment Tax Credits	\$894,600	\$1,143,760	\$1,113,760
Other Noncurrent Liabilities	\$2,683,845	\$3,441,429	\$3,560,744
Postretirement Benefits	\$78,518,549	\$45,200,052	\$45,071,736
Advances for Construction	\$83,813,108	\$87,060,059	\$85,136,838
Contributions in Aid of Construction	\$137,062,456	\$141,263,795	\$143,172,262
Deferred Revenue	\$3,369,319	\$3,253,762	\$3,042,180
Total Liabilities	\$468,703,680	\$529,422,088	\$549,906,278
Total Capitalization and Liabilities	\$1,519,353,387	\$1,549,468,531	\$1,611,964,108

TABLE 4-C

**SAN JOSE WATER COMPANY
(U-168-W)**

**STATEMENTS OF INCOME
DECEMBER 31, 2021, DECEMBER 31, 2022 AND AUGUST 31, 2023**

(Dollars)

	<u>2021</u>	<u>2022</u>	<u>Aug 31 2023</u>
	12 Months Ending December 31		
Operating Revenue	\$411,902,801	\$439,645,039	\$461,543,353
Operating Expense and Taxes:			
Operating Expense	\$246,201,044	\$252,738,292	\$250,754,812
Maintenance Expense	\$19,716,551	\$24,234,251	\$22,371,942
Taxes Other Than Income Tax	\$15,485,605	\$16,140,887	\$16,830,730
Depreciation & Amortization	\$66,213,233	\$71,598,124	\$72,718,233
Income Taxes	\$12,078,175	\$13,310,453	\$17,504,600
Total Operating Expense	\$359,694,608	\$378,022,006	\$380,180,318
Net Operating Income	\$52,208,193	\$61,623,032	\$81,363,035
Other Income (Expense):			
Other Income	\$4,485,302	\$4,397,441	\$6,110,121
Sale of Non Utility Propoerty	\$7,222,666	\$6,136,147	\$693,912
Interest on Long-term Debt	(\$23,643,587)	(\$23,296,151)	(\$23,655,347)
Other Interest	(\$856,263)	(\$2,166,062)	(\$4,131,893)
Amortization of Debt Issuance Costs	(\$386,343)	(\$446,383)	(\$480,898)
Miscellaneous Deductions	(\$369,202)	(\$371,795)	(\$324,775)
Total Other Income (Expense)	(\$13,547,426)	(\$15,746,803)	(\$21,788,881)
Net Income	\$38,660,767	\$45,876,229	\$59,574,155

CHAPTER 5

PAYROLL, PERSONNEL, EMPLOYEE BENEFITS, AND EXECUTIVE COMPENSATION

Prepared by Stephanie Orosco

A. Payroll Expense

1. As of December 15, 2023, the San Jose Water Company has 403 personnel positions, of which 167 are executive, managerial, supervisory or administrative personnel, 236 are union positions. In January 2023 San Jose Water Company reached a three-year collective bargaining agreement with the Utility Workers Union of America (UWUA), representing the majority of all union employees, and the International Union of Operating Engineers (OE), representing certain employees in the Engineering department. These agreements cover the period from January 1, 2023 through December 31, 2025. The agreements include 6%, 3.5% and 5.5% wage adjustments for union workers for calendar years 2023, 2024 and 2025, respectively, and include a 5% employee contribution towards the lower co-pay medical plan. This is reasonable since a) the 2023 Employee Pay Trends research conducted by Willis Towers Watson¹ projected increases in base pay for US workers to be 4.6% in 2023; b) the latest Society for Human Resources Management (SHRM) research released in November 2022 reported the projected increase in base pay for US workers to be 4.6% in 2023; c) the Bay Area Consumer Price Index (CPI) (San Francisco-Oakland-Hayward) for All Urban Consumers is listed as 5.2% since December 2022², and d) the Wage Escalation Rates published by the PUC in September 2022 (during union contract negotiations) listed 8.1%, 3.9%, and 2.2% for 2023, 2024, and 2025, respectively.

2. SJWC maintains a Short Term Incentive Plan (STI) that awards annual cash incentives to reward superior performance and reinforce the Company's short and long-term

¹ <https://www.wtwco.com/en-ch/insights/2023/01/2023-employee-pay-trends#:~:text=The%20United%20States%20is%20projecting,able%20to%20maintain%20these%20levels>

² https://www.bls.gov/regions/west/news-release/ConsumerPriceIndex_SanFrancisco.htm

strategic goals and objectives. The procedure for aligning performance with specific cash incentive amounts include: a) establishing well-defined, clearly disclosed capital improvement targets (i.e., goals and objectives) b) regulatory compliance, e.g. environmental, SEC, etc., c) operational metrics, e.g. customer service, response time, water quality, and d) delivery of specific programs, plans, and objectives as identified and documented at the beginning of each year. Managers and above are currently eligible for the formal STI program, approximately 51 employees at this time. Fourteen field supervisors are eligible for a 24 hour on-call bonus, paid at the rate of \$3.99 per hour at year end, and a limited number of administrative employees are given spot bonuses ranging from \$500 - \$5,000 for superior accomplishments. Since customer service, response time and water quality, are key metrics utilized for determining company performance, the STI program is a significant benefit to our customers in that it focuses employees on delivering superior customer service. Executive compensation is addressed in below.

3. As detailed below, Total Payroll for 2025 through 2027 is estimated by escalating current years Total Payroll by annual payroll escalation factors and including the proposed addition of 30 employees in 2025. Total Payroll is then allocated between Expensed Payroll and Capitalized Payroll based on recorded historical allocations. The payroll and employee detail is provided in Exhibit F, Chapter 8, WP 8-7 through WP 8-11.

4. San Jose Water Company (SJWC) has estimated its total annual payroll expense for beginning of the year 2024 based on the existing number of positions at December 15, 2023 (403) at their current December 15, 2023 salary (wage) rate. For ratemaking purposes in 2024, the Company has used the 3.5% contract agreement increase for union employees and 4% for administrative employees. The requested new positions for 2025 are then added to that result. The Company then used the PUC published forecast for 2026 and 2027.

5. Temporary labor is provided for in the union contracts to provide relief during peak summer months and is necessary to complete maintenance projects at a much lower cost than that of full-time permanent employees, not only in wages, but also in benefits since temporary employees are not eligible for any benefits. Temporary employees and part-time

employees are also necessary for providing relief during extended absences and assistance for mandated projects. SJWC has historically included forecasted expenses related to temporary and part-time employees in GRCs.

B. Requested New Positions

In this application, the Company is seeking rate recovery for 30 positions as follows and summarized in Exhibit F, Chapter 8, WP 8-8 :

Cyber Security Administrator

Over the last year the number of Vendor Business email compromises that we have been subject to has increased by 700%. Although all new vendors do run through a cyber check we have many older vendors that have not been through this process. Additionally new regulations are being enforced at both a national and state level that require us to enhance our Vendor Cyber Security Program. This additional work will require additional staffing.

Further we are very cognoscente of our responsibility to protect and secure our customers data. Tools that we utilize (Such as Varonis) allow us to better understand where customer data resides and allows us to maintain tighter controls, which will reduce the likelihood and impact of any incident that may occur.

Applications Administrator

As technology continues to play a vital role in our operations it is crucial to ensure that we have dedicated personnel with expertise and skills to effectively manage and administer our applications.

Key justifications for the establishment of this position:

1. Increasing complexity: our organization application landscape has grown significantly in recent years leading to increased complexity in managing and maintaining these systems. The addition of a dedicated application administrator will allow us to streamline our operations, enhance application performance, and ensure optimal system availability.
2. Security and compliance: with the growing number of cyber threats and the ever-evolving regulatory landscape, it is imperative that we have of dedicated resource focus on application security and compliance. An application administrator will be responsible for implementing and monitoring security measures performing regular audits and ensuring that our applications adhere to industry standards and compliance requirements.
3. User support and training: our application serves as critical tools for our employees and customers enabling them to perform their task efficiently having an application administrator will enable us to provide better user support address technical issues

- promptly and deliver comprehensive training programs to enhance user proficiency and maximize productivity.
4. System performance and optimization: the application administrator will be responsible for monitoring application performance, identifying bottlenecks, and implementing optimization strategies. By proactively addressing performance issues we can improve user experience minimize downtime and maximize efficiency of our applications.
 5. System upgrades and integration: as technology advances, applications upgrades and integration with other systems becomes necessary to stay competitive. An application administrator will play a crucial role in coordinating system upgrades testing new features and ensuring smooth integration with existing applications, minimizing disruption, and reducing the risk of data loss.
 6. Documentation and knowledge management: maintaining comprehensive documentation and knowledge management systems is essential for smooth application administrator and knowledge transfer within the organization. An application administrator will establish standardized procedures document system configurations and create centralized knowledge repository enabling efficient troubleshooting onboarding and knowledge sharing.

There are several applications and systems running outside of the IT umbrella and we are only consulted or asked for support when required or when the solution is completely down. This takes additional time and effort to restore the functionality, so we would like to change that approach getting involved on the architecture and design, support and training of those systems or applications. Some examples of these solutions are FSC Itron, Meter Shop, Utilisphere, etc.

In conclusion the establishment of a dedicated application administrator position will address the increasing complexity of our application landscape, enhance security and compliance measures, provide better user support, optimize system performance, facilitate system upgrades and integration, and ensure effective documentation and knowledge management.

AI & ML Engineer

This role will help in Build ML / AI models or algorithms/scripts based on various data sources. Provide analytical insights, recommendations, and decision-making actions to senior management and data science/engineering teams. Work with data engineers to implement and improve ML models, involved in implementing and designing feedback for model improvement. Key responsibilities include driving innovation and excellence in software engineering by designing, developing, testing, deploying, documenting, maintaining, and enhancing software solutions; building software solutions and automation processes that deliver high impact business value; and working with data engineers/scientists to implement

and improve ML models, involved in implementing and designing feedback for model improvement

Expert Technical Lead

To support business integration projects with AMI, enterprise asset management, business intelligence, and implementing GIS solutions to multiple departments. Key responsibilities include database and system administration support, developing and maintaining system integration applications with business systems, and ensuring best practices for the life cycle of IT projects.

IT Infrastructure Specialist

Key responsibilities to include:

1. Support AMI Infrastructure and Network 25%
2. Support Meter Shop Infrastructure and Network 25%
3. Support Fuel System Equipment and Network 25%
4. Support EOC Infrastructure and Network 25%

Employee & Development Analyst

To support Employee Experience projects and implementing the solutions to multiple departments nationwide. Key responsibilities to include collecting, compiling and analyzing employee feedback data; working with the employee experience manager to develop company-wide action planning, developing different web-based applications, and creating documentation outlining application use.

Web Developer

To maintain internally developed web-based applications and support integrations with AMI, enterprise asset management and GIS.

Key responsibilities to include updating applications to mitigate cybersecurity risks, maintaining functionality, adding features and developing new applications.

Office Coordinator

This role is distinguished by the scope of responsibilities originating from this upper management administrative level requires the frequent use of supervision, discretion, initiative, independent judgment, and a high degree of tact and prudence.

Responsible for providing administrative support to the corporate staff by performing complex administrative and clerical duties

Recommend improvements in workflow, procedures, and use of equipment to improve effectiveness and efficiency

Manages day-to-day operations of corporate office and coordinates with administrative assistants at other company campuses as needed

Recommends improvements in workflows, procedures, use of building/campus space, and use of equipment to improve effectiveness and efficiency

Receives and screens telephone calls, greets staff and visitors in a professional manner

Assists with facilities maintenance by reporting issues to the facilities department and scheduling repair services

Assists with the implementation and maintenance of Company-wide records retention system

Provides backup assistance in support of the CEO and executive staff in absence of Executive Assistants

Provides backup assistance in reviewing finished materials, often of a highly confidential nature, for completeness, accuracy, format, and correct spelling and grammar

Organizes and manages receipts and processes expense reports for vendor accounts and provides back up assistance for executive accounts

Acts as corporate office Building Emergency Coordinator

Emergency Management Specialist

The justification for additional personnel for the Office of emergency management (OEM) is primarily based on the need to improve the ability of the office to respond effectively to emergencies and disasters.

1. Increased emergencies and disasters: Rise in incidents affecting communities and water utilities, such as wildland fires, earthquakes, physical attacks, sabotage attempts, or terrorist activities, it becomes necessary to strengthen the emergency management posture. San Jose Water Company has experienced natural disasters, infrastructure emergencies, security incidents and breaches resulting in multi-day downtime of water production facility supplying water to at-risk and underserved communities, threats of gun violence upon employees, and theft of materials and tools resulting in the death of a burglar by electrocution, and vehicle theft. Hiring an emergency management specialist can be a proactive mitigation, preparedness, response, and recovery of future incidents. They can analyze past incidents, identify vulnerabilities and implement appropriate security measures to mitigate future risks.

2. Population Increase: Additionally, the increase in population density in the San Jose greater service area. The number of multi-housing complexes currently in construction will have a direct impact on the emergency preparedness, response, and recovery to sustain and maintain the proper water service not only for drinking water but also for fire response. An emergency management specialist will help assess the vulnerabilities, assist in the development of comprehensive emergency response plans, and implement mitigation countermeasures. This will ensure SJWC can respond effectively to all incidents and emergencies.

3. Emergency Risk and Resiliency Assessments: Regulatory requirements instruct all water utilities to conduct periodic risk assessments is crucial to identify potential threats and vulnerabilities within the utility's environment. The emergency management specialist can perform comprehensive evaluations and recommend necessary changes or improvement

4. Regulatory requirements: Regulations and compliance standards mandate emergency management and preparedness for all water utilities. The complex ecosystem required to protect today's water systems, the ever-increasing confluence of incidents, including natural disasters, physical and cyber systems in remote locations, and the significant investment in emergency management capital and operational projects necessitate the emergency management specialist resource. The regulatory requirement also requires ongoing planning and preparedness, enhanced coordination, and increased community engagement.

a. Planning and preparedness: The OEM is responsible for planning and preparedness activities, such as developing emergency response plans and conducting training exercises. These key functions are administratively and operationally intensive, requiring a long cycle (6-12 months). Additional personnel will improve the regulatory timeliness, quality, and scope of these activities, which can, in turn, improve the overall readiness of the community.

b. Enhanced coordination: During emergencies and disasters, the OEM must coordinate with a wide range of stakeholders, including other government agencies, non-profit organizations, and private sector partners. Additional personnel can help to improve the OEM's ability to coordinate effectively and ensure that all necessary resources are brought to bear on the emergency response. This enhanced coordination will have a direct impact on SJWC employees, customers, and other stakeholders.

c. Increased community engagement: The OEM is also responsible for engaging with the community to ensure residents are prepared for emergencies and disasters. The requested additional personnel will improve the quality and frequency of community outreach efforts, which can, in turn, improve the overall level of preparedness within the community and ensure SJWC meets its Equity and Social Justice goals as outlined by the CPUC.

5. Technological advancements: Advancements in technology, such as the interoperability of communications, common operating platforms, and emergency mass notification systems, requires specialized expertise to ensure the appropriate readiness status of these systems. An emergency specialist will help design and implement emergency management protocol and ensure SJWC's readiness to respond and recover from incidents.

6. Infrastructure expansion and upgrades: San Jose Water Company has undergone expansion and infrastructure upgrades, and it presents an opportunity to reassess and enhance the emergency management infrastructure and investments have yet to keep up with infrastructure capital improvements. A specialist can thoroughly evaluate, identify gaps, and propose improvements aligned with the expansion plans.

Overall, hiring an emergency management specialist at a water utility is essential to protect critical infrastructure, prevent and mitigate potential risks in light of evolving risks, threats, and regulatory requirements. Additional personnel will ensure that the SJWC is better equipped to respond to emergencies and disasters and improve the overall level of preparedness within the community.

Physical Security Specialist

Several new circumstances necessitate hiring a San Jose Water Company physical security specialist:

1. Increased threat landscape: Rise in security threats targeting water utilities, such as physical attacks, sabotage attempts, or terrorist activities, it becomes necessary to strengthen the physical security measures. A specialist can help assess the vulnerabilities, develop comprehensive security plans, and implement countermeasures.

2. Regulatory requirements: Regulations and compliance standards mandate physical security at water utilities. The complex ecosystem required to protect today's water systems, the ever-increasing confluence of physical and cyber systems in remote locations, and the significant investment in security-related capital projects necessitate the security specialist resource.

3. Technological advancements: Advancements in technology, such as the integration of automation systems, Internet of Things (IoT) devices (SCADA), and remote monitoring systems, require specialized expertise to ensure the security of these systems. A physical security specialist will help design and implement security protocols to protect these technologies from unauthorized access or manipulation.

4. Infrastructure expansion and upgrades: San Jose Water Company has undergone expansion and infrastructure upgrades, and it presents an opportunity to reassess and

enhance the physical security measures as physical security investments have yet to keep up with infrastructure capital improvements. A specialist can thoroughly evaluate the existing security infrastructure, identify gaps, and propose improvements aligned with the expansion plans.

5. Incident or breach history: San Jose Water Company has experienced security incidents and breaches resulting in arson (including multi-day downtime of water production facility supplying water to at-risk and underserved communities, threats of gun violence upon employees, and theft of materials and tools resulting in the death of a burglar by electrocution, and vehicle theft. Hiring a physical security specialist can be a proactive measure to prevent future occurrences. They can analyze past incidents, identify the vulnerabilities that led to the breaches, and implement appropriate security measures to mitigate future risks.

6. Security risk assessments: Conducting periodic security risk assessments is crucial to identify potential threats and vulnerabilities within the utility's premises. A physical security specialist can perform comprehensive evaluations, including physical access controls, perimeter security, surveillance systems, and response protocols, and recommend necessary changes or enhancements.

Overall, hiring a physical security specialist at a water utility is essential to protect critical infrastructure, prevent security breaches, and mitigate potential risks in light of evolving threats and regulatory requirements.

Emergency Management Administrative Assistant

The justification for a Confidential Administrative Assistance for the Office of emergency management (OEM) and Security Department is primarily based on the need to improve the ability of the office to respond effectively to emergencies and disasters. The current support to OEM & Security is a shared resource with 15 other individuals, including directors, managers, and supervisors.

There is a significant administrative burden associated with managing an Office of Emergency Management and Security.

- A Confidential Administrative Assistance will assist in managing the documentation unit (part of the Incident Management Team) during incidents.
- The AA would also assist with sensitive documentation as it relates to security investigations.
- Manage all documentation related to design and implement emergency management and security protocols and ensure SJWC's readiness to respond and recover from incidents.
- Manage documentation related to Emergency Management and Security risk assessments, response plans, training & exercises, collection of data from incidents, after-action-reports, improvement plan,

Below are key factors affecting the workload and needed support from a dedicated Administrative Assistance.

1. Increased emergencies and disasters: Rise in incidents affecting communities and water utilities, such as wildland fires, earthquakes, physical attacks, sabotage attempts, or terrorist activities, it becomes necessary to strengthen the emergency management posture. San Jose Water Company has experienced natural disasters, infrastructure emergencies, security incidents, and breaches resulting in multi-day downtime of water production facility supplying water to at-risk and underserved communities, threats of gun violence upon employees, and theft of materials and tools resulting in the death of a burglar by electrocution, and vehicle theft.
2. Population Increase: Additionally, the increase in population density in the San Jose greater service area. The number of multi-housing complexes currently in construction will have a direct impact on the emergency preparedness, response, and recovery to sustain and maintain the proper water service not only for drinking water but also for fire response.
3. Emergency Risk and Resiliency Assessments: Regulatory requirements instruct all water utilities to conduct periodic risk assessments is crucial to identify potential threats and vulnerabilities within the utility's environment.
4. Regulatory requirements: Regulations and compliance standards mandate emergency management and preparedness for all water utilities. The complex ecosystem required to protect today's water systems, the ever-increasing confluence of incidents, including natural disasters, physical and cyber systems in remote locations, and the significant investment in emergency management and security capital and operational projects necessitate an AA resource. The regulatory requirements also requires ongoing planning and preparedness, enhanced coordination, and increased community engagement.
 - a. Planning and preparedness: The OEM is responsible for planning and preparedness activities, such as developing emergency response plans and conducting training exercises. These key functions are administratively and operationally intensive, requiring a long cycle (6-12 months). Additional personnel will improve the regulatory timeliness, quality, and scope of these activities, which can, in turn, improve the overall readiness of the community.
 - b. Enhanced coordination: During emergencies and disasters, the OEM must coordinate with a wide range of stakeholders, including other government agencies, non-profit organizations, and private sector partners. Additional personnel can help to improve the OEM's ability to coordinate effectively and ensure that all necessary resources are brought to bear on the emergency response. This enhanced coordination will have a direct impact on SJWC employees, customers, and other stakeholders.

- c. Increased community engagement: The OEM is also responsible for engaging with the community to ensure residents are prepared for emergencies and disasters. The requested additional personnel will improve the quality and frequency of community outreach efforts, which can, in turn, improve the overall level of preparedness within the community and ensure SJWC meets its Equity and Social Justice goals as outlined by the CPUC.
5. Technological advancements: Advancements in technology, such as the interoperability of communications, common operating platforms, and emergency mass notification systems, requires specialized expertise to ensure the appropriate readiness status of these systems.
6. Infrastructure expansion and upgrades: San Jose Water Company has undergone expansion and infrastructure upgrades, and it presents an opportunity to reassess and enhance the emergency management infrastructure and investments have yet to keep up with infrastructure capital improvements.

Overall, hiring an AA at SJWC is essential to protect critical infrastructure, prevent and mitigate potential risks in light of evolving risks, threats, and regulatory requirements. Additional personnel will ensure that the SJWC is better equipped to respond to emergencies and disasters and improve the overall level of preparedness within the community.

Supplier Diversity Manager

SJW Group Building Blocks include Community as one of our foundations. Supplier Diversity directly and positively affects the communities that we serve. In addition, by virtue of SJW being a California regulated utility, the California Public Utilities Commission, by virtue of GO 156, mandates our supplier diversity program. It is important to the CPUC that we have a robust supplier diversity program that supports the communities we serve. This new position will directly affect our ability to have a positive impact on our communities.

Supplier Diversity fits squarely under the ESG umbrella through the “Social” aspect of ESG. This position will increase efficiencies in the following way:

- Allow for increased utilization of suppliers that express interest in doing business with us. We will forego our current supplier registration portal in favor of a process that is more flexible. We will categorize suppliers in ways we do not currently categorize, allowing for a more seamless match of supplier capability and internal opportunity.
- The position will allow us to implement new and much needed strategies including both SJW internal and external recognition programs. We currently do not have the resources to adequately recognize our diverse suppliers, our contributing prime suppliers and the multiple internal champions that support our supplier diversity program.

- We will be able to strengthen our current Prime Supplier Program by increasing needed focus on our primes and diverse subcontractors. This position will have all responsibility to run the SJW Prime Supplier program, allowing for increased communication with Primes and diverse suppliers, implement standard prime and diverse subcontractor meetings (that do not take place today) and provide much needed training to all prime suppliers.

The California Public Utilities Commission (CPUC) has consistently increased their requests over and above the required Supplier Diversity Annual Report and Plan. In the last several years the CPUC has added both LGBT and Disabled Owned business to the GO 156 programs. These adds require additional reporting and tracking and require additional outreach to the associated Community Business Organizations (CBOs). This position will allow SJW to keep pace with these new CBO's. In addition, the CPUC has increased their requests outside of the Supplier Diversity Annual Report and Plan, with requests around economic impact and workforce diversity topics. This new position will allow us to seamlessly react to these additional requirements.

The CPUC will soon be releasing their audit findings of the SJW 2021 Annual Supplier Diversity Report and Plan. There will be findings that require us to insure compliance moving forward. This new position will support the mitigation of the CPUC supplier diversity audit.

The current supplier registration portal is not being utilized in an optimal way. This position will allow for a new process, allowing SJW to categorize incoming capability statements by function, with centralized storage of these capability statements, allowing for easy access by those making procurement decisions. Once implemented, SJW will save \$40K per year by managing the registration in house with no third party portal contract.

It is currently very time intensive to maintain all data around our suppliers with the E1 system. This new position will be responsible for managing all supplier diversity data within E1. Currently, the data is reviewed at the end of the year in preparation for filing our CPUC Supplier Diversity Annual Report and Plan. This new position will allow us to audit and update supplier information on a monthly basis, allowing for real time efficiencies, resulting in more accurate and timely reporting of our supplier diversity metrics.

It is currently difficult to meet the multiple request for supplier diversity reporting. With the implementation of a corporate supplier diversity Key Performance Indicator (KPI), comes an increased emphasis on timely and accurate reporting of our progress. This new position will allow for this timely and accurate reporting throughout the year. The primary difficulty comes from obtaining timely and accurate reporting from our Prime Suppliers, on their diverse supplier subcontracting efforts. The new position will manage this process in a way that cannot be achieved today.

Benchmarking with other CWA Class A Water utilities:

Of the 7 water utilities, 3 of them have additional headcount that support their supplier diversity efforts. They are:

California American Water (2022 results: 45.9%)
Suburban Water (2022 results: 67.7%)
San Gabriel Valley Water (2022 results: 34.3%)

The water utilities with the best results have additional personnel supporting their program.

This position provides for succession planning for the lead supplier diversity position at SJW and potentially SJW Group. As the current lead of our supplier diversity program, I plan to be working for the next several years. Brining in an additional resource now will allow for a seamless transition of supplier diversity leadership.

As SJW Group grows its supplier diversity program (in particular, the programs at Maine, Connecticut and Texas), this position can help with SJW Group reporting, programs, outreach, prime supplier program and other areas associated with growing our national supplier diversity program.

Customer Service Representatives (7)

With existing telephony data, we calculated the monthly CS staffing levels to handle phone calls only based on 2022 and YTD 2023 call levels. Planned vacation, sick days, LOA, and other out-of-office requirements were considered. No coordinators were included in this analysis because that position includes other higher-priority duties outside of phone calls. Staffing goals took into account a 7 minute call time. Longer call times are anticipated since SJW does not take payments over the phone. We will need to assist and direct customers with the new technologies such as Invoice Cloud. In particular, new customers will need education on the process and our older, less technology-savvy customers will also require extra guidance. Walking customers through new payment portals is time-consuming. Also, there are many upcoming projects that will impact phone levels such as implementation of Invoice Cloud to replace Kubra, severance restart, Promise Pay, and new bill formats. Other issues that will impact call levels include future drought, rising rates, water quality, and any technological changes. All will impact talk times.

Our goal is to have 25 permanent CSAs and 2 coordinators. Currently, there are 15 permanent CSAs, 5 temporary CSAs and 2 coordinators. It may take several rate case cycles to achieve full staffing due to limitations with approvals of new positions.

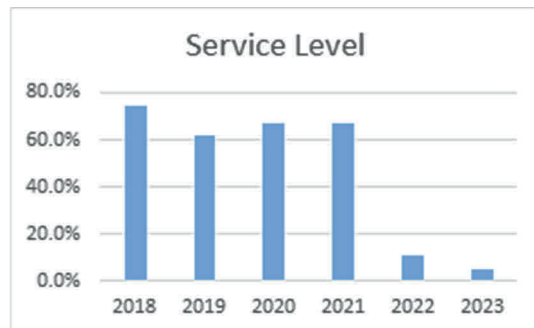
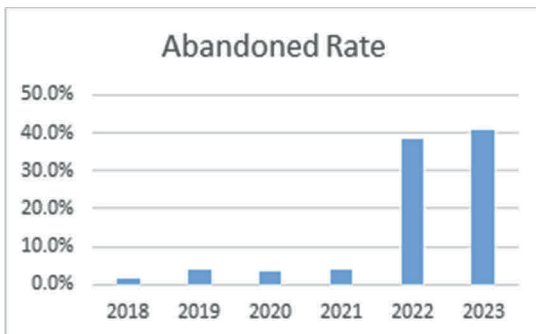
Normal Staffing (Planned Vacation, Sick, LOA, ETC)											
2022	Average Calls/Day	Calls/15 Min Interval	Staff Needed	Vacation + Sick	Adjusted Staff	2023	Average Calls/Day	Calls/15 Min Interval	Staff Needed	Vacation + Sick	Adjusted Staff
January	554	15.0	15	6	21	January	830	22.0	16	5	21
February	516	14.0	15	4	19	February	663	17.0	16	2	18
March	500	13.0	13	3	16	March	587	15.0	15	2	17
April	550	14.0	15	4	19	April	546	14.0	15	2	17
May	660	17.0	16	4	20	May	504	13.0	13	4	17
June	600	16.0	16	4	20	June					0
July	720	19.0	17	5	22	July					0
August	517	14.0	15	3	18	August					0
September	612	16.0	16	3	19	September					0
October	667	18.0	17	4	21	October					0
November	725	19.0	17	6	23	November					0
December	940	25.0	23	6	29	December					0

Historical KPIs (2018-2022)

SJW metrics for measuring its call center performance include service levels and abandoned call rate. The service level goal is defined as 80% or greater of calls answered within 30 seconds. The abandoned call rate goal is 5% or fewer of calls abandoned. These metrics are used throughout the SJW Group organization and the former also happens to be a General Order 103-A requirement. GO 103-A is the handbook of rules that govern water utility service performance. It includes minimum standards for operation, maintenance, design, and

construction. A summary of these key metrics for the last five years is as follows:

Year	Abandoned Rate	Service Level
2018	1.4%	74.7%
2019	3.7%	61.9%
2020	3.3%	67.3%
2021	3.7%	67.0%
2022	38.5%	10.9%
2023 YTD	40.7%	5.3%



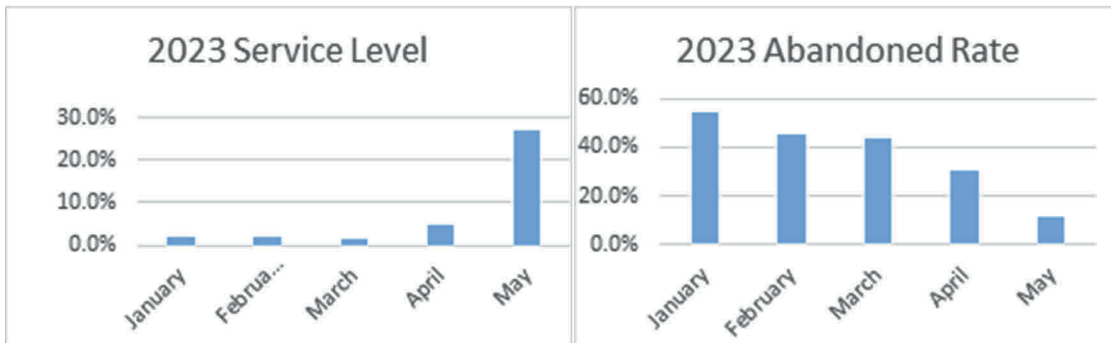
All 2023 numbers are year-to-date through June 1, 2023.

The goal of additional permanent staffing is to have the CSRs required to meet our CPUC-required KPIs, provide world-class service to our customers, and to build a team of professionals that can meet the many technological advances in the coming years.

2023 has been a rebuilding year so far. We have trained additional staff and are already seeing a resulting increase in our KPIs. The improvements over time are due to new staff on the phone and getting to the authorized staffing of 15 CSRs. But we are still not meeting our KPIs.

KPI Improvements

Year	Month	Abandoned Rate	Service Level
2023	January	54.2%	1.9%
2023	February	44.9%	1.7%
2023	March	43.9%	1.3%
2023	April	30.4%	5.0%
2023	May	11.4%	26.9%



Field Service Supervisor

We are requesting a single additional Field Service Supervisor to report to the Field Service Superintendent. Currently there are 2 Field Service Supervisors, one oversees the Meter Reading Department and the other oversees the Conservation and Recycled Water programs as well as the Field Customer Service Representatives. These two Field Service Supervisors along with the Field Service Superintendent all work together to supervise approximately 40 employees as well as rotate the on-call responsibilities every three weeks.

The Field Service Superintendent has the most employees that directly report with 20 employees as well as being responsible for on call duties once every 3 weeks. Additionally, the other two Field Service Supervisors have their own department tasks, goals, and responsibilities to maintain. This new Field Service Supervisor’s primary tasks will be to assist the Field Service Superintendent in supervising the Field Service Inspectors and take over the direct supervision of the Field Customer Service Representatives. The addition of this new

position will also allow for the on-call rotation to be once every 4 weeks versus once every 3 weeks. This change will align the Field Service Department with Distribution Services and the Operations team. The 3-week rotation of on-call has proven to be challenging and disruptive to each department and hinders the ability to get normal tasks completed.

The addition of this position will also allow for the current Field Service Supervisor who oversees Conservation and Recycled Water to work more closely on Conservation and Recycled Water initiatives such as implementation of the upcoming Drought Framework and expansion of the Recycled Water System. Our goal by adding this new position will be to better serve our customers by providing quicker follow up by administrative staff with customers on challenging cases that involve high bills, leaks, and other interactions that the field staff cannot resolve. This will also provide a better training program for the employees in the Field Service Department by allowing for more time to develop training standard operating procedures (SOPs) in not only the Field Service Department, but also the Conservation and Meter Reading Departments.

The benefits of an additional Field Service Supervisor specifically tasked with providing direct assistance to our field employees, customers, and other departments will lead to quicker response times and better collaboration. This will also allow for faster response to emergencies such as water quality events, potential earthquakes, or other natural disasters.

Distribution System Supervisor

Executive summary

Founded in 1866, San Jose Water is an investor owned public utility, and is one of the largest and most technically sophisticated urban water system in the United States. We serve over 1 million people in the greater San Jose metropolitan area with high quality, life sustaining water with an emphasis on exceptional customer service. The SJW Distribution System department is interested in increasing productivity for the company. In this effort, we strive to provide top customer service and have enough employees and resources if an emergency or disaster occurs.

Introduction

Even at the first level, a supervisor must be able to think and act in terms of the total system of operation. This includes defining and assigning priorities, planning and organizing, and programming and coordinating the operating tasks of a department so that the objectives of both the department and the company as a whole are achieved (HBR, Sasser Earl and Leonard S. Frank, 2).

Furthermore, the first-level supervisor must excel in interpersonal skills. More and more, the trend is for employees to be a heterogeneous group of individuals, many of whom are not especially dedicated to their jobs, their departments, or their companies. Handling the variety of attitudes and values in this multiple-generation worker base has become extremely difficult (HBR, Sasser Earl and Leonard S. Frank, 2).

The Distribution System Supervisor position has evolved in all facets of responsibilities. This involves safety, water quality compliance, training, customer service claims, human resource support, CIP, monitoring jobsites, preventive maintenance, excavation laws, hazardous material handling and reporting, accounting tasks, BMP regulations, personnel training and many other functions.

The Distribution System Department is the largest operating group in the company. DS Supervisors perform several key roles in the day to day operations of the business. Three Supervisors and one Superintendent are responsible to oversee crews and assign work. Currently, the supervisory staff oversees operations and work for 76 field personnel; equates to roughly 25 employees per supervisor. The suggested business practices are between 10-12 employees per supervisor. They are also responsible to cover after hour, weekend and holiday shifts for emergencies. The DS supervisor position is one of the most vital areas of obligation within the organization as; customer service, system integrity, public and employee safety are at the forefront of their duties.

Background

New regulations and compliance have been incorporated to the water utility industry in recent years. This includes amendments to excavation safety laws like; CA 4216, Health and Safety, Water Quality, Environmental Compliance regulations and new company initiatives.

Health and Safety

- CA4216-Construction companies are being held accountable for not following CA4216 protocol regarding underground construction and procedures which specify complying with the requirements to “Call before You Dig”. Contractors are being penalized and being held liable for damaging other underground infrastructures. Moreover, new articles (SB661) in the current standards will require steeper penalties for organizations not in compliance.

The responsibilities based on the Injury & Illness Prevention Program (IIPP):

- Supervisors & Superintendents
 - Familiarize them with the Company IIPP and attend its annual safety training.
 - Promote and provide specialized safety training to employees on ongoing basis.
 - Consistently and fairly enforce all Company safety rules with disciplinary action.
 - Review all accidents, incidents and near misses as to ensure that a thorough accident investigation is completed and an appropriate corrective action is taken to prevent repetition.
 - See that all injuries, no matter how minor, are treated immediately. Proper forms are to be completed and sent to the Human Resources Department to ensure prompt reporting to the insurance carrier.
 - Inspect work areas often to document unsafe conditions and work practices at least monthly.
 - Expected to look for and recognize safe and healthful work practices by employees. Employees in compliance with safe and healthful work practices will be recognized with positive reinforcement. This recognition will be forwarded to

Capital Improvement Programs

Through the end of 2023, the DS department will have supported over \$8 million in annual capital projects for SJW. These improvements will ensure that San Jose Water continues providing reliable water to the community we serve and enhance the integrity of the system.

These projects include:

- Hydrant Replacement Program
 - Replace outdated legacy hydrants
 - 100/year
- Valve Replacement Program
 - 30/year
- Air Valve Replacement Program
- Service Replacement
 - 800 service replacements/year
 - Replace lines and meters
- Sampling Stations
 - 35/year
- Main Installation
 - 500 – 1,000 FT pipe replacements
- Main cut-in sections
 - Replacement of pipe during repair operations

Conclusion

In conclusion, the increase in technical leadership, direct field supervision and regulatory compliance justifies the need for an additional Distribution System Supervisor. The only way to properly align and direct field activities to maintain the infrastructure is to have adequate supervision. Proper Supervision will insure that the company is always adhering to changing standards and properly managing employee and business activities, and ensuring safe, efficient and compliant operations.

Other Distribution System position requests include:

DS Crewleader

DS Worker I



TECHNICAL MEMORANDUM

To: Sarah Richardson,
San Jose Water Company

Subject: Distribution System Flushing Cleaning
Efficiency Summary & Recommendations

From: Alex Mofidi PE and Andrew Hill PE,
Confluence Engineering Group LLC

Date: June 29, 2023

Project: Data-Driven, Intelligent Mains Cleaning
Tool Development

1 EXECUTIVE SUMMARY

San Jose Water Company (SJW) contracted with Confluence Engineering Group LLC (Confluence) to complete an independent study identifying methods to optimize SJW's Neutral Output Discharge Elimination System (NO-DES) truck-mounted distribution system mains cleaning system. Findings from this study quantified cleaning needs based upon multiple zones in the system and their water quality influences from groundwater, surface water, mixes of the two sources, and wells that cause sanding. Based on field trials, NO-DES operation was found to effectively remove hydraulically mobile accumulated deposits (HMA) at a pipe flushing velocity as low as 2 feet per second (fps), although somewhat enhanced main cleaning performance was achieved at higher flushing velocities. Based on field-derived deposit re-accumulation rates, recommended system cleaning frequencies range from every 18 months (for areas impacted by sanding wells) to every 60 months (for groundwater fed areas). Applying the findings to the available 1,766 miles of pipe that is 10-inch or smaller in diameter results in a system-wide equivalent flushing need of 50 pipe-miles/month. Based upon historical usage, SJW's current NO-DES truck has achieved a cleaning rate averaging 13 miles/month.

To optimize SJW's mains cleaning capabilities, this study is also being used to develop an intelligent mains cleaning tool to improve the planning and frequency surrounding repeat flushing needs over time. The target for using the tool is that it will improve SJW's mains cleaning knowledge base and provide improved targeting of areas in highest need of cleaning while also likely reducing the system-wide equivalent cleaning frequency below 50 miles/month. However, as SJW's current capability is significantly lower than the identified need, it is recommended that action be taken now to increase cleaning rates.

Two options were identified to increase cleaning rates, both requiring hiring of two new crew (safe truck operation requires two full-time staff members). The options include choosing a parallel (two crews each using a separate truck) or series (two crews using the same truck at different times) cleaning approaches. Parallel operation would require a capital investment now to procure a second NO-DES truck. To operate in series, it needs to be determined if the down-time of the current truck can be taken advantage of for doubling its usage with two crews. However, even if the truck is available for double

operation, this option may only defer capital expenditures while the truck more rapidly approaches its end-of-life.

Recommendation: To maintain recommended cleaning needs and avoid unknowns from increased single truck use, SJW should hire a second cleaning crew, purchase one new NO-DES truck, operate two truck crews in parallel, and implement the intelligent mains-cleaning tool to optimize cleaning practice.

2 SYSTEM BACKGROUND INFORMATION

SJW provides their 140-square mile service area of approximately 1 million people with water from three major water sources. These include groundwater (from more than 100 wells), mountain surface water (treated at two water treatment plants), and imported surface water provided by Santa Clara Valley Water District (SCVWD) which can include surface water treated from various State or Federal conveyance systems or from the San Francisco Public Utilities Commission. The SJW distribution system¹ includes approximately 2,449 miles² of distribution main pipelines with the following characteristics:

- Major pipe types include 41 percent (%) of the system having steel pipe, 33% ductile iron, 16% asbestos-concrete, and 9% cast iron.
- 100 pressure zones³ receiving either surface water, groundwater, or a mix of both waters; and
- Areas operating with free chlorine or chloramine residual or alternating between the two.

2.1 Zero-Discharge Mains Cleaning

Due to the historical frequency of drought across California and the resulting discouragement for large systems like SJW to use more traditional mains cleaning techniques that discharge water to the street (like unidirectional flushing), SJW has purchased and used a Neutral Output Discharge Elimination System (NO-DES) truck-mounted flushing process to perform main cleaning. The NO-DES truck mounted system is promoted as allowing flushing to occur without discharging to the street (and having nearly zero waste). It achieves this by using recirculatory flushing, filtering all water passing through the truck system to remove scoured deposits, allowing the option to dose chlorine during the flushing process, monitoring turbidity of the flush stream to know when the flush is complete, and the ability to monitor flow and pressure in order to hit flushing targets and maintain system integrity.

Over the past several years, SJW has gained significant experience operating the NO-DES system to perform maintenance cleaning of the distribution system. SJW contracted with Confluence to analyze NO-DES cleaning efficiencies, legacy deposit accumulation inventories, and develop concepts that can optimize NO-DES flushing scheduling and mains-cleaning applications and estimate flushing cost estimates for planning purposes. This Technical Memorandum (TM) applies concepts developed during NO-DES pilot studies to estimate cleaning efficiencies and schedules needed to meet water quality level of service (LOS) goals. The larger project conducted by Confluence for SJW (and not fully described in this TM), is designed to identify an optimized approach to flushing the distribution system based on key

¹ Most information is based upon the 2016 Pipeline Infrastructure Risk Study (San Jose Water Company).

² This is the total length of pipe. The amount of flushable pipe is described below in Section 2.2.

³ An updated list of pressure zones was confirmed with SJW in June 2023.

variables such as truck performance, localized accumulation rates for solids in the system, and refinement of LOS goal triggers.

2.2 Supply Zones

As summarized in Table 2-1, SIW's distribution system includes a total of 100 pressure zones. The amount of pipe that is flushable in each of these zones is categorized based on the major source type that influences the zone. These source types are groundwater, surface water, a mix of both groundwater and surface water, and (within the groundwater and mix zones) approximated lengths of pipe in areas influenced by wells that contribute elevated sand ("sanding wells"). These categories and water quality types are important for use in estimating flushing needs later in this TM. The length of pipe influenced by sanding wells were estimated by applying a 2% multiplier against all pipe in both the Mercedes (a smaller zone with respect to length of pipe, having one identified sanding well) and Dow Zones (a larger zone, with two identified sanding wells). Therefore, it should be noted that the sanding well areas are a subset that is taken from the groundwater and mixed supply zones and should not be double counted when calculating total pipe (i.e., the total pipe in the system = groundwater + surface water + mixed).

Table 2-1: Cumulative total and flushable^{††} pipes per supply zone based on sourcewater type:

Source water Type	Zones (No.)	Pipe ≤6 in (miles)	Pipe >6 & ≤8-in (miles)	Pipe >8 & ≤10-in (miles)	Pipe >10-in (miles)	Total Pipe (miles)
Groundwater						
Total	1*	130.1	140.1	45.1	113.2	428.5
Flushable†	-	125.1	136.6	43.8	0	305.5
Surface water						
Total	90	344.5	364.1	99.7	219.6	1,027.9
Flushable†	-	319.1	347.9	95.7	0	762.7
Mixed						
Total	9	353.9	289.9	84.2	264.2	992.2
Flushable†	-	336.7	280.5	81.0	0	698.2
Sanding wells†						
Total	**	3.0 ††	3.2 ††	1.0 ††	2.4 ††	9.6 ††
Flushable†	-	2.8	3.1	0.9	0	6.8
Grand Total						
All Pipe	100	828.5	794.1	229.0	597.0	2,448.6
Flushable†	-	780.9	765.0	220.4	0	1,766.3

Pipe lengths, diameters, and locations were downloaded from updated SIW geographical information systems data in May 2023.

* DOW zone was the only zone marked as predominantly fed with groundwater.

** Wells causing localized sanding are in Mercedes (Mixed; Franco Ct well) and DOW (Groundwater; Bascom 5 and 3 Mile 10-wells) zones.

† For purposes of estimating impact of sanding, it was assumed that those wells impact 2 percent of each of their zone.

†† These pipe lengths are a subset of, and already included in, the Mercedes (Mixed) and Dow (groundwater) zone calculations above.

‡ Flushable pipe is determined both by pipe size (10-inch in diameter and smaller) and SIW staff determined system location (between two hydrants, truck accessible, etc.)

Total system pipe of 2,449 miles is categorized per source water type and includes pipe ranging from the smallest diameter reported (0.75 inch diameter) up to a maximum of 48.5 inches in diameter. The resulting pipe that is available for flushing is based upon two key factors: (1) pipe that is 10-inches or smaller in diameter (which can be flushed with the current NO-DES truck at a velocity of 2 fps or more) and (2) pipe that is accessible by the NO-DES truck and therefore is located between two hydrants and

in areas where the truck has physical access (in some mountain areas/streets, there are too few hydrants and/or streets are too small to support flushing truck access).

2.3 Current NO-DES Truck Usage

SIW started using its current NO-DES truck in 2015. The current truck can achieve 600 gallons/minute of flow when compensating for pressure losses through truck filtration and hose connections. The historical average truck usage has been 110 days/year due to downtime for servicing and for staff to perform other duties and take leave. At an average daily cleaning rate of 1.43 pipe-miles per day, truck cleaning averages 157 miles of pipe per year and is always attended by two operators to maintain safe operation. Based upon historical data, the truck uses an average of 2,900 filters per year (each filter costs \$18 in Y2023 dollars).

3 APPLYING STUDY FINDINGS

In 2021, Confluence worked with SIW staff to perform pilot testing to evaluate the capabilities of the NO-DES truck. Results from this testing are being compiled into a final report and an intelligent (data-driven) mains cleaning optimization tool that has not yet been completed. However, a subset of these results as they apply to the purposes of this TM, are presented below in Table 3-1.

Table 3-1 Summarized hydraulically mobile accumulation (HMA) data and resulting recommended initial flushing frequencies

Predominant Water Type for a Pressure Zone or Area in a Zone	Normalized HMA Percent Removed per Velocity Step			Time* for HMA to reach Unflushed Status	Months** to reach Reference Level (RL) Multiplier	Recommended Initial Frequency to Flush at ≥2 fps†
	2 fps	4 fps	6 fps	Months	Months to 2x RL	
Groundwater	45%	33%	22%	264	45	60
Surface water	69%	17%	14%	69	37	48
Mixed water	81%	13%	6%	87	21	24
Sanding Well Area	84%	8%	8%	24	6	18

* Calculated by dividing the inventory present in previously unflushed areas by the deposit re-accumulation rates observed for previously flushed areas (averaged for TSS, Fe, and Mn). This assumes that the inventories in unflushed areas are at a steady state level.

** The water quality and accumulated inventory reference levels (RL) are: TSS 5 mg/L (a best practice goal), Fe 0.3 mg/L (the secondary MCL), and Mn 0.05 mg/L (the secondary MCL). Therefore, the 2x RL numbers for TSS, iron, and manganese are 10 mg/L, 0.6 mg/L, and 0.1 mg/L, respectively. Following flushing, these 2x RLs would theoretically be reached in the HMA inventory after the months of accumulation shown. This estimate is an average calculation for all three accumulation rates for TSS, Fe, and Mn based on rate of accumulation measured during pilot testing after cleaning system pipe in each water type influence zone.

† Based on setting a maximum recommended flushing frequency not to exceed 3 years, then estimating values for other areas based on relative times to reach unflushed status and the RL multiplier. A minimum frequency of 18 months was subjectively chosen as it was in-between the unflushed and RL multiplier numbers.

This table summarizes hydraulically mobile accumulation (HMA) removal rates that the NO-DES truck was observed to achieve⁴ at various flushing velocities and the HMA accumulation rates (combined data for TSS, iron, and manganese) to reach either an unflushed state (maximum accumulation) or a water

⁴ Data was collected on the removal and accumulation rates for TSS, iron, and manganese. Resulting recommendations are based upon the behavior of a combined assessment for the control of TSS, iron, and manganese accumulation.

quality reference level (RL). This RL multiplier is an estimated LOS goal that is twice the level for a TSS best practice goal and twice the level for the secondary maximum contaminant level (SMCL) for both iron and manganese. The practicality of the RL is that it estimates time to possible system upset based upon the observed accumulation rate (an estimated time where, if a hydraulic upset occurred and caused HMA to be released, the multiplied RL value would be measured in the bulk water of that pipe). The unflushed status is a maximum level of steady-state accumulation observed based on measurements in the SJW system (i.e., SJW pipes can accumulate much more material than 2x the RL). Therefore, the data show that groundwater dominated areas take the longest amount of time to reach their unflushed status, and take the longest amount of time to reach the 2x RL estimate. Material from sanding wells (mostly comprised of TSS) accumulates at the fastest rate. All accumulation rates and time estimates to reach unflushed status are based upon pilot work completed in 2021 in the SJW system.

The resulting recommendation of flushing (with a baseline of the truck operating at a flush velocity of at least 2 fps) is an estimate of a maximum flushing frequency recommendation of 5 years (based upon Confluence's experience working on projects with utilities across the country) and the SJW-specific accumulation rates that lead to either the unflushed level or the 2x RL LOS goal. The result gives recommended flushing rates for zones/areas influenced by groundwater, surface water, mixes of ground and surface water, and sanding wells at 60, 48, 24, and 18 months, respectively.

Based on these flushing rates, **Table 3-2** provides the calculated resulting flushing activity required according to a zone's source water influence type. The flushing frequencies recommended per source water type result in slightly more than 50 miles/month of a requisite equivalent flushing rate. Using the current flushing truck (13.1 miles/month average flushing capability), SJW can clean the system at an average "efficiency" of 26 percent (meaning 26 percent of the total recommended miles/month are able to be flushed with the current truck and operation). The 13.1 miles/month average truck flushing efficiency estimate would apply similarly/equally to the current truck and/or any new truck that may be considered for purchase.

Table 3-2 Flushing capabilities for the current NO-DES truck based on recommended flushing frequency

Source water Type	Flushable Pipe* (MRes)	Recommended Cleaning Frequency (Months)	Resulting Cleaning Needed (Miles/Month)	Current Cleaning Efficiency
Groundwater	299.4 [†]	60	5.0	7%
Surface Water	762.7	48	15.9	19%
Mixed	697.4 [†]	24	29.1	35%
Sanding Well Area	6.8	18	0.4	3%
Total	1,766.3	—	50.3	13.1 miles/month**
Percent of being on-track with total miles of flushing needed				26%^{††}

* Pipe in each zone is considered flushable if it is up to 18 inches diameter, allowing a 2 fps flush velocity at a truck flow rate of 600 gallons per minute (gpm)

** Flushing truck capability is based on a reported historical average of 15.7 miles/year or 13.1 miles/month

† Remaining flushable pipe in the zone after subtracting the estimated pipe influenced by the sanding wells

†† Average percentage of being on schedule with cleaning the total recommended miles of pipe each month

4 SUMMARY AND RECOMMENDATIONS

Based on historical flushing records combined with field test data collected by SJW and Confluence during the 2021 NO-DES truck pilot study, current NO-DES truck capabilities allow the SJW flushing crews to achieve a 26% efficiency rating with system flushing recommendations (i.e., at the current rate, it takes SJW four-fold longer than recommended to clean the entire system). To be more in-line with findings from this flushing study and reduce water quality risks associated with legacy deposit buildup, it would be best to double this capacity as soon as possible, allowing SJW crews to clean at least half of the system in the recommended time. Reasons for this efficiency target, and the benefits and challenges of two options to get there, are described below.

4.1 Choosing an Efficiency Target of at least 50%

Confluence and SJW are completing this project and implementing an intelligent (data informed/driven) mains cleaning tool. The purpose of the tool will be to house and visualize mains cleaning data in a way that allows SJW staff to optimize cleaning practices. By using the tool to optimize system cleaning, planning and data gathering, it is within consideration that the overall 50 miles/month cleaning recommendation may be reduced. Although it is not expected to be reduced to a rate that only one truck can manage, it is very possible that efficiency gains will support successful long-term use of two NO-DES trucks. Therefore, it is prudent to implement a cleaning regime that targets a near-term cleaning program at a rate of at least 50% efficiency and is followed by optimizing cleaning practices with the mains cleaning tool that is expected to (eventually in the future, following consistent use) recalculate a revised (higher, more efficient) cleaning rate.

4.2 Options to Increase Cleaning Efficiency

It is assumed that the best possible options for SJW to meet a minimum 50% efficiency rate for cleaning the distribution system include either (a) doubling the use of the current truck and delaying purchase of a new truck, or (b) purchasing a second flushing truck now to operate in parallel with the current truck.

4.2.1 Run Two Crews in Series (Delay New Truck Purchase)

If (A) doubling the use of the current truck and operating crews in series, the following is assumed:

- Two staff are needed to run the truck at any time, and the 13.1 miles/month is based on operating for 110 days/year.
- Within any one SJW staff member's working year, there are approximately 250 available days of work. After subtracting holidays and approximate vacation and sick leave, available time for staff to work is 220 days/year. Half of the 220 days are spent in the field and half are spent in non-field activities of planning, training, and other responsibilities. During this non-field work of 110 days, the truck completes regular maintenance.
- SJW will run two flushing crews in series with the current truck, as follows:
 - Two additional persons need to be hired to operate the truck. This results in each of the two, two-person crews working in the field for 110 days/year and the truck operating for 220 days/year. Two additional persons (one crew leader and one operator) equate to \$330,720/year in burdened salary.

4.2.2 Run Two Crews In Parallel (Purchase New Truck Now)

If (B) purchasing a second truck now and running two crews in parallel, the following is assumed:

- Doubling the cleaning efficiency is much easier to achieve due to the ability for two trucks to operate and be maintained under normal, year-round work scheduling.
- Two additional hires are needed to operate the second truck at \$330,720/year burdened salary.
- Purchase of a truck will incur approximately \$670,000 in capital cost.
- Consumable costs (fuel, filters, and other consumables) will double.
- More manageable coordination needs and scheduling, allowing for truck downtime and servicing.
- An added benefit of the new truck (expected to be able to operate at 2,000 gallons per minute (gpm) compared to the current truck's 600 gpm) will be to give SJW the ability to investigate cleaning of larger diameter (up to 22-inch) pipe main. Although cleaning this larger diameter pipe is not identified as a requirement at this point, it will be valuable to determine if spot-cleaning of larger pipe in various areas of the system provides extended benefits to the overall mains cleaning program.

4.3 Recommendation

Historically, SJW has only experienced infrequent water quality upsets based upon the release of accumulated deposit material in the distribution system. These upsets have been primarily due to known problem areas that may already be known to require increased cleaning. Because these water quality upsets are not a systemic problem in the water system, it is likely that HMA can remain under control while cleaning efficiency is improved (by implementing the data-driven intelligent mains cleaning tool) and an option is exercised to double the system cleaning rate.

Confluence recommends SJW purchase a second NO-DES truck now, which provides the following notable benefits (relative to the alternative) while better achieving LOS goals compared to current conditions:

- Result in the same staffing and truck consumable costs.
- Likely result in the same maintenance and repair costs (and possible have lower maintenance costs due to the lower operating stress on the trucks).
- Allow SJW to choose to clean some larger pipe sections, up to 22-inches in diameter (this assumes that the new truck has larger capacity than the current).
- Allow continued cleaning operations during truck downtime and avoid operating a truck to failure point.
- Provide redundancy in case there is failure of a critical component of the current truck.
- Allow for more manageable staff and truck scheduling, coordination, and downtime needs.

Based upon the recommended cleaning needs for SJW's system, it is recommended that staffing is increased to support a doubling of the cleaning program. Furthermore, based upon and the above benefits of purchasing a new truck sooner rather than later, it is recommended that SJW purchase a new NO-DES truck and operate it in parallel with the existing truck, while also implementing the intelligent mains-cleaning tool that will optimize cleaning practices.

TECHNICAL MEMORANDUM

To: Sarah Richardson,
San Jose Water Company

Subject: Distribution System Flushing Cleaning
Efficiency Summary & Recommendations

From: Alex Mofidi PE and Andrew Hill PE,
Confluence Engineering Group LLC

Date: June 29, 2023

Project: Data-Driven, Intelligent Mains Cleaning
Tool Development

1 EXECUTIVE SUMMARY

San Jose Water Company (SJW) contracted with Confluence Engineering Group LLC (Confluence) to complete an independent study identifying methods to optimize SJW's Neutral Output Discharge Elimination System (NO-DES) truck-mounted distribution system mains cleaning system. Findings from this study quantified cleaning needs based upon multiple zones in the system and their water quality influences from groundwater, surface water, mixes of the two sources, and wells that cause sanding. Based on field trials, NO-DES operation was found to effectively remove hydraulically mobile accumulated deposits (HMA) at a pipe flushing velocity as low as 2 feet per second (fps), although somewhat enhanced main cleaning performance was achieved at higher flushing velocities. Based on field-derived deposit re-accumulation rates, recommended system cleaning frequencies range from every 18 months (for areas impacted by sanding wells) to every 60 months (for groundwater fed areas). Applying the findings to the available 1,766 miles of pipe that is 10-inch or smaller in diameter results in a system-wide equivalent flushing need of 50 pipe-miles/month. Based upon historical usage, SJW's current NO-DES truck has achieved a cleaning rate averaging 13 miles/month.

To optimize SJW's mains cleaning capabilities, this study is also being used to develop an intelligent mains cleaning tool to improve the planning and frequency surrounding repeat flushing needs over time. The target for using the tool is that it will improve SJW's mains cleaning knowledge base and provide improved targeting of areas in highest need of cleaning while also likely reducing the system-wide equivalent cleaning frequency below 50 miles/month. However, as SJW's current capability is significantly lower than the identified need, it is recommended that action be taken now to increase cleaning rates.

Two options were identified to increase cleaning rates, both requiring hiring of two new crew (safe truck operation requires two full-time staff members). The options include choosing a parallel (two crews each using a separate truck) or series (two crews using the same truck at different times) cleaning approaches. Parallel operation would require a capital investment now to procure a second NO-DES truck. To operate in series, it needs to be determined if the down-time of the current truck can be taken advantage of for doubling its usage with two crews. However, even if the truck is available for double

Leak Detection Technician

Leak Detection Technicians play a central role in the operations of SJW's leak detection system and leak detection program. The leak detection system is comprised of many leak detection sensors which are necessary to proactively monitor mains, reduce water loss, and prevent catastrophic breaks. They function by capturing the sound profile of the monitored pipe(s) and send alerts for potential leaks that must be investigated before becoming catastrophic breaks. Investigation of potential leaks by Leak Detection Technicians require proficiency in the use of specialized equipment and detection methods, knowledge of mains and services in the distribution system, and familiarity with the acoustic leak detection system.

Up until early 2023, SJW had installed approximately 8,300 acoustic leak detection sensors on hydrants throughout the distribution system. SJW is currently in the process of installing approximately 5,600 more and will have a total of nearly 14,000 by the end of 2023. There are currently two leak detection technicians on staff, but with the upcoming 67% increase in sensor count, there will be a significant increase in leak investigations and other sensor related field activity. Other sensor related activity includes proper installation, activation, and decommissioning of sensors, all of which must be performed on a constant basis due to the continual construction activities, hydrant repairs, and strategic sensor relocation efforts. Therefore, one additional leak detection technician is required to support leak detection program and ensure a well-functioning leak detection system.

The leak detection program has proven to be impactful in reducing water loss over recent years. In 2022 alone, it is estimated that about 203 million gallons of water were saved, which amounts to approximately \$945,000 saved based on the cost of water per million gallons calculated in the 2021 SJW 2021 Water Audit. This is also equivalent to over 90,500 kg CO_{2e} saved according to some estimates. SJW anticipates further increases in water savings from the leak detection program with the addition of a Leak Detection Technician to support the large increase in sensors. Small pipe leaks or leaks at fittings and joints can go undetected for long periods of time and waste large amounts of water. By catching such leaks through an effective, properly staffed leak detection program, SJW can avoid production costs on lost water, a prudent business practice as the value of water increases. Table 1 shows anticipated water savings and cost savings with a fully operational and fully staffed leak detection program, which amounts to \$1.83 million of annual savings by 2026. Other benefits include increased customer satisfaction, greenhouse gas reductions due to less pumping, and improved system efficiency and integrity. Small leaks often become large main breaks when left unaddressed. Identifying leaks before they become large breaks provides numerous benefits including reduced health and safety risk for employees and the public, less disruptions for customers, lower repair costs, and reduced water loss. The addition of a Leak Detection Technician position provides clear and significant benefits to SJW and its stakeholders and should be approved.

Table 1. Cost Savings Anticipated with Fully Operational Leak Detection Program

Description	2024	2025	2026
Groundwater Production Charge Percent Increase ^(a)	15.0%	15.0%	9.9%
Anticipated Gallons Saved Through Leak Detection Program ^(b)	270 M	270 M	270 M
Anticipated Cost Savings Through Leak Detection Program ^(c)	\$1.45 M	\$1.66 M	\$1.83 M

Notes:

(a) Groundwater production charge percentages provided by Valley Water.

(b) Baseline for gallons saved was year 2022, which resulted in an estimated 203 million gallons saved with ~8,300 sensors when assuming non-surfacing leaks are ongoing for 3 months before being discovered and addressed. For years 2024-2026 there will be a 67% increase in sensor count, which is assumed to increase leak detection water loss savings by 33%, bringing the estimated gallons saved from 203 million gallons to 270 million gallons.

(c) Baseline rate for water cost is from the 2021 SJW Water Audit, which was \$4,724.89/MG. Calculations in this table conservatively assume \$4,724.89/MG for 2023. For 2024 through 2026, rates were calculated using the groundwater production charge rates increases shown in the first row.

GIS Data Quality Analyst

An increase in pipeline replacement and special facilities CIP projects require data validation and quality assurance. Spatial adjustment project will require quality control to ensure data is snapped properly. Key responsibilities include performing data review and analysis of GIS data and applications; ensuring procedures and workflows are followed and address data quality issues; as-built coordination - engaging with Engineering and Construction departments to ensure as-builts are delivered and correctly inputted into GIS; creating and implementing methodologies for quality control and perform data validation; and supporting the standardization of digitization workflow.

GIS Specialist

The pipeline replacement program and special facility has increased. This position will allow GIS Group to more efficiently address the increased backlog. The decrease in backlog has a direct benefit on on every department that relies on GIS data to do their work.

Data Governance & Privacy Manager

Key responsibilities include GIS data capture - interpret engineering as-builts and inputting assets and facility 50 data into GIS database system; map creation and support for GIS applications including the GPS program, EAM/GIS integration, Merlin, and Project Editor; spatially adjusting the GIS data to match newly captured GPS points; providing staff training on GIS applications such as GDI Desktop, Merlin, GIS Data; correction tickets; and supporting IT migration and upgrade projects.

Justification for the Data Governance & Privacy Manager is (i) the need to invest in a dedicated resource to comply with consumer privacy laws in California and Connecticut and reduce the risk of adverse impacts of non-compliance and data breach, (ii) inadequate staffing levels to apply records retention requirements to sustainably advance the Commission's approved SJWC Information Governance Initiative, and (iii) the ongoing evolution of technology

necessitating the need to proactively govern and manage the company's data, including personal identifying information (PII).

The Data Governance & Privacy Manager will coordinate with the cyber, ITS, customer service, legal and other departments in the required and ongoing strategic initiatives to identify and reduce unnecessary PII thereby reducing the costs of storing and managing, and the risk of retaining such PII unnecessarily. The position requires multiple competencies pertaining to privacy law, information governance, business technology, project management, and leadership not possessed by a current employee. Current processes to identify, collect and review consumer privacy requests under California and Connecticut privacy laws are disruptive to current staff, heavily manual, and time-consuming. The position will enable the company to establish a systematic, comprehensible, and measurable data governance and privacy compliance program.

Consumer privacy and cyber-risk are Board oversight areas that are served by this position.

In addition to servicing consumer rights requests, California privacy consumer law and the new Connecticut Data Privacy Act (CDPA) require companies to make reasonable efforts to minimize the amount of PII that they store that is not necessary to carry out its business purposes.

The California Consumer Privacy Act ("CCPA"), as amended by the California Privacy Rights Act ("CPRA"), includes purpose limitation and data minimization rules. § 7002 of the CPPA regulations establishes restrictions on the collection and use of personal information. The California Privacy Protection Agency explained that this "means businesses must limit the collection, use, and retention of your personal information to only those purposes that: (1) a consumer would reasonably expect, or (2) are compatible with the consumer's expectations and disclosed to the consumer, or (3) purposes that the consumer consented to, as long as consent wasn't obtained through dark patterns. For all of these purposes, the business' collection, use, and retention of the consumer's information must be reasonably necessary and proportionate to serve those purposes."

In Connecticut, companies are required to limit the collection of personal data to only what is adequate, relevant, and reasonably necessary for the disclosed purposes for which the data is processed.

The California privacy law applies to all data that the company has as of January 1, 2022 going forward, so there is a critical need to reduce the company's PII repository to only that which is necessary and systematically dispose of unnecessary PII. The status quo will result in continued growth of PII in the company's possession without a sustainable way to manage this growth.

Non-compliance will result in harsh penalties, loss of customer and employee trust, reputational damage, and potential whistleblower complaints. Penalties under the California law are \$7,500 per intentional violation and \$2,500 per unintentional violation. There is no cure period in California. The penalty under the Connecticut law is \$5,000 per violation. Until January 1, 2025, violations in Connecticut may be cured in 60 days after which there will be no cure period. Although the company is not a big data (PII) broker, it collects and stores a significant amount of PII which carries risk should it be found non-compliant of if there is a data breach. This position will serve the company's ongoing readiness for compliance.

A dedicated resources such as a Data Governance & Privacy Manager also serves as a cyber hygiene function to augment the company's current cyber security team and practices. The less PII and other data the company unnecessarily retains such as old customer PII, redundant and obsolete data, the less data exposed to data breaches, information and litigation document requests and subpoenas. Sustainable data governance and privacy law compliance cannot be achieved by current staff attending to efforts when they have adequate time which in most cases is not possible.

New privacy law requirements, effective in 2023 in California and Connecticut, the need to sustainably execute information governance in multiple states, and evolving technology make the Data Governance & Privacy Manager a necessary staff position.

C. Employee Benefits

1. **Medical:** In Q3 2022, the Company worked with its broker, Willis Towers Watson, to market our plans (medical, vision, dental, life, long-term disability and flexible spending plans) against other providers for similar, less costly coverage. In 2023, the renewal of the medical plans resulted in an increase of 6.7% for Kaiser and 9.57% for Sutter Health, the two primary employee plans. The increase is due to a credibility rate of over

90% (utilization of benefits) which may be attributed deferred care as a result of the coronavirus pandemic, an aging workforce as well as a few catastrophic illnesses. Employees who opt-out of this coverage, receive \$200 per month. Please refer to Attachment 1 for the last 5 year premium history.

2. For purposes of this GRC, the 2024 finale quoted increase of 19.21% from our primary medical provider, Kaiser, has been included for 2024, and then escalated by 5% for the years of 2025, 2026 and 2027; an average cost of \$2,830.71 (2025 rate) per month for each of the 33 new positions escalated by 5% per year has also be included. Please refer to Chapter 05 – Attachment 1, Medical & Dental Premium History.

3. **Dental:** During the 2022 calendar year, the Company worked with its broker, Willis Towers Watson, on the renewal of its dental plan. As of January 1, 2023, the renewal for the plan was a rate pass or 0% increase. For purposes of this GRC, the five year average decrease of -1.07% has been applied for 2024 and the escalation factor of, 0.4%, 0.9%, and 1.3% has been included for 2025, and 2026 and 2027, respectively (as per the Public Advocates Office’s July, 2023 estimate); an average cost of \$174 per month for each of the 33 new positions escalated by 1.5% per year has also be included. Please refer to Chapter 05 – Attachment 1, Medical & Dental Premium History.

5. **Pensions** – The following tables show the estimated pension expense for Qualified, SERP and PBOP for 2022, 2023, 2024, 2025 and 2026:

Plan	2022	2023	2024	2025	2026
Qualified	4,076,079	5,494,664	4,946,000	4,560,000	4,181,000
SERP	3,766,156	2,623,245	2,929,000	2,818,000	2,606,000
PBOP	1,013,073	755,156	787,000	809,000	823,000
Total	8,855,307	8,873,065	8,662,000	8,187,000	7,610,000

The numbers shown above are calculated using estimates in two main areas: 1) interest rate environment and 2) gains and losses stemming from plan census experience. The latter is particularly true for the SERP plan.

USI actuarial assumptions for 2023-2026 include the following:

- Discount rate
 - o Qualified: 4.99%
 - o SERP: 4.95%
 - o PBOP 4.96%

- Mortality
 - o Qualified: Pri-2012 Total Dataset (amount-weighted), MP-2021 Projection Scale
 - o SERP: Pri-2012 White Collar (amount-weighted), MP-2021 Projection Scale
 - o PBOP: Pri-2012 Total Dataset (headcount-weighted), MP-2021 Projection Scale

- EROA
 - o Qualified: 6.00%
 - o SERP: N/A
 - o PBOP: 6.00%

- Salary Scale
 - o Qualified: 4.50%
 - o SERP: 4.50%
 - o PBOP: N/A

- Cash Balance interest crediting rate
 - o Qualified: 4.00%
 - o SERP: 4.00%
 - o PBOP: N/A

14. **Worker’s Compensation Insurance:** For the period 8/1/23 to 7/31/24, the Company renewed coverage with Traveler’s with the CA premium including assessments of \$567,673, an increase of 14.49% over the prior 12-month period. Please note that the numbers do not directly tie in with expense figures given that the policy year and the fiscal year are not similar. For purposes of this GRC, the five-year average decrease (2019-2024) of -1.37% has been included for 2025 through 2027 and includes new positions. However, it is expected that these costs will significantly increase in future years given the aging workforce and risk of injury. Please refer to Chapter 05 – Attachment 2, Workers’ Compensation Premium History.

D. Executive Compensation

This testimony establishes the philosophy and objectives for setting compensation for SJWC’s officers. In addition, this testimony describes the process used to determine officer compensation for 2023.

Compensation Philosophy and Objectives

SJW Group (the “Company”) has established an over-arching pay for performance compensation philosophy in its officer compensation programs designed to achieve the following objectives:

- Recruit, motivate, and retain officers capable of meeting operational and stakeholder³ objectives;
- Align the interest of officers with the long-term interest of stakeholders; and
- Provide incentives to achieve superior performance.

The Company seeks to achieve these objectives primarily by:

- Establishing a compensation structure for its officers that is both market competitive and internally fair;
- Linking a substantial portion of compensation to the Company’s and San Jose Water Company’s (“SJWC”) operational and financial performance and the officer’s contribution to that performance; and
- Maintaining a compensation structure designed to provide below-target compensation for under achievement and upward-target compensation for exceptional performance;
- Meeting operational and financial performance objectives is necessary to achieve target compensation.

The principal factors that the Company considers when setting officer compensation levels are as follows:

- Competitive benchmarking;
- Long-term retention;
- Management’s recommendations;

³ The referred to stakeholders are SJWC’s ratepayers and employees, and SJW Group stockholders.

- Advice from the Executive Compensation Committee of the Board of Directors (the “Committee”) and the Company’s independent compensation consultants and human resource representatives;
- Results from the most recent stockholder say-on-pay proposal;
- Feedback from stockholders and stockholder advisory groups;
- Comparison of the Company and SJWC’s performance against certain operational and qualitative goals;
- Individual performance;
- The cost of living in the San Francisco Bay Area;
- Tenure;
- Future potential; and
- Internal pay equity.

Setting Officer Compensation

The Committee is responsible for setting Executive Officer compensation. The Company’s Chief Executive Officer and the SJWC President (collectively, “Management”) are responsible for setting compensation for SJWC officers below the Executive level (the “Other Officers”).

Direct Compensation Components

The principal components of direct (i.e., cash and equity) officer compensation are as follows:

- Base salary
- Annual short-term cash incentives (STI)
- Long-term equity awards (LTI)

These components are referred to herein as “total direct compensation”, with STI and LTI representing the “at risk portion of total direct compensation”. In addition, officers are provided with retirement benefits, other market competitive benefits and perquisites, and are

entitled to certain severance benefits if their employment terminates under defined circumstances.

As a general guideline, the Company seeks to establish competitive pay by setting the total direct compensation of each officer based on comparable positions at the selected peer companies and will vary based on location and other factors. There is no pre-established policy for the allocation of compensation between cash and non-cash components or between short and long-term components, nor are there any pre-established ratios between the Chief Executive Officer's compensation and that of the other officers. Instead, the Company determines the mix of compensation for each officer based on its review of the competitive data and its subjective analysis of that individual's performance and contribution to the Company's performance. The processes and guidelines for establishing the individual components of direct compensation are summarized below:

Base Salary - The Committee determines whether any adjustment to each Executive Officer's annual rate of base salary is appropriate based on individual performance, market data from compensation benchmarking studies, and any changes in individual responsibility or internal comparability. A similar assessment is made by Management to determine the appropriate level of Other Officer base salary.

Short Term Incentive Cash Compensation (STI) - Annual cash incentive compensation may be delivered to reward an officer's superior performance and reinforce established short and long-term strategic goals and objectives. The procedure for aligning performance with specific cash incentive compensation amounts includes the following steps:

1. Establish well-defined, clearly disclosed performance targets (i.e., goals and objectives) for both company and individual performance. Annual individual goals and objectives for each Executive Officer are determined by the Committee, with input from the Chief Executive Officer as to Executive Officers other than himself or herself and documented no later than March 30th. Annual and individual goals for Other Officers are determined by Management and are also documented no later than March 30th.

2. Determine individual **STI targets** based on the following:
 - a. Total cash competitive positioning (base salary plus target incentive compensation) vs. peer companies
 - b. Designated ranges of STI as a percent of salary
 - c. Opportunity to create stakeholder value (i.e., potential to contribute value through the individual effort of the officer)
3. Establish the percentage of STI award to be based on the Company's and individual performance.

STI represents the “at risk” component of targeted cash compensation and is viewed as a key component of total direct compensation rather than an incremental incentive bonus.

Long Term Incentive Compensation - A critical component of officer compensation is provided through the Company's Long Term Incentive Plan. To earn long term incentive compensation (LTI), officers must achieve various milestones and/or satisfy service period requirements. The milestones include return on equity and total shareholder return, which are critical measures of the Company's ability to generate income and attract efficient capital primarily used for future utility plant investments. The service period requirements incentivize retention and thus reduce the risk of losing valuable and knowledgeable officers who are increasingly difficult to replace in the utility industry.

LTI is awarded in the form of Restricted Stock Units (RSUs) that are granted at the discretion of the Committee for Executive Officers and Management for the Other Officers. Over the course of the past four general rate cases, total direct compensation has shifted to comprise a larger component of LTI. Like STI, LTI is not “additional” compensation, but is instead a market driven re-allocation of compensation from cash and short-term incentives to “at risk” long-term equity incentives. As noted above, this re-allocation is a significant benefit to SJWC's customers. With the inclusion of the LTI Executive Officer total direct compensation averages at between the 50th and the 75th percentile of the peer group average. Without LTI, cash and short-term incentive compensation would need to be

increased by approximately 10%-30% to be at market, and SJWC would lose the benefit of the LTI as performance, service, and retention incentives.

The granting of RSUs also addresses concerns of groups like Institutional Shareholder Services, Inc. (ISS) and Glass Lewis that a significant portion of officer compensation be based on long-term incentives (equity awards) that align with stakeholder interests.

Setting Compensation for 2023

Executive Officers

For 2023, the Committee made a number of decisions regarding executive compensation on the basis of the 2023 CEO Compensation Recommendation report prepared by compensation consultant Mercer (US), Inc. (Mercer) dated October 5, 2022, and the Executive Officers (ELT) compensation recommended by the CEO and supported by Mercer in its 2023 ELT Compensation Report dated October 5, 2022 (the Mercer reports are submitted under confidential cover as work paper Attachment 3 and 4, Chapter 5). The recommendations were subsequently adopted by the Committee. The reports for the Company's Executive Officers are based on benchmark studies on base salary, total cash compensation, and total direct compensation paid by peer group companies to their similarly positioned named Executive Officers. Mercer compensation data was based on 2022 proxy disclosures aged forward by (4%), to adjust for the historic nature of the collected data. The Mercer recommendations target total direct compensation at between the 50th and the 75th percentile of the peer group in light of the highly competitive San Francisco Bay Area talent market and the higher cost of living in the area relative to peers. Individual positioning relative to market data also considers tenure, performance, future potential, and internal pay equity.

Other Officers

Compensation decisions for the Other Officers (SLT) were made by Management based on the Senior Leadership Team Competitive Market Review report prepared by compensation consultant The Wilson Group on August 17, 2022 (submitted under confidential cover as work paper Attachment 5, Chapter 5). The report summarizes benchmarks for Other

Officers' base salary, total cash compensation, and total direct compensation by position against market data for comparable positions. The Wilson Group report presents recommendations for the Other Officers for the 2023 fiscal year. Like the Mercer report, The Wilson Group recommendations target total direct compensation at between the 50th and the 75th percentile of the peer group considering the highly competitive San Francisco Bay Area talent market and the higher cost of living in the area relative to peers. Individual positioning relative to market data also considers tenure, performance, future potential, and internal pay equity.

Based on discussions with The Wilson Group, 2023 total direct compensation for Other Officers is appropriately aged forward to July 1, 2022, by 3% from 2022 compensation levels to adjust for the historical nature of the information presented.

2023 Compensation Approval

The Executive Officer compensation recommendations were approved by the Committee on October 26, 2022, and are effective for the 2023 fiscal year. The Other Officer recommendations were approved separately by Management and are also effective for the 2023 fiscal year.

CHAPTER 5
ATTACHMENT 1

Medical - Kaiser & Sutter

	2023	2024	2025	2026	2027
HMO \$20 Copay	Current	19.3% increase	10% - 12% increase	10% - 12% increase	10% - 12% increase
Employee	\$799.11	\$953.34	\$1,067.74	\$1,195.87	\$1,339.37
Employee + One Dependent	\$1,598.22	\$1,906.68	\$2,135.48	\$2,391.73	\$2,678.74
Employee + Two or More Dependents	\$2,261.48	\$2,697.95	\$3,021.70	\$3,384.30	\$3,790.42
HMO \$40 Copay	Current	19.3% increase	10% - 12% increase	10% - 12% increase	10% - 12% increase
Employee	\$762.95	\$910.20	\$1,019.42	\$1,141.75	\$1,278.76
Employee + One Dependent	\$1,525.90	\$1,820.40	\$2,038.85	\$2,283.51	\$2,557.53
Employee + Two or More Dependents	\$2,159.14	\$2,575.85	\$2,884.96	\$3,231.15	\$3,618.89
POS 3 Tier	Current	19.3% increase	10% - 12% increase	10% - 12% increase	10% - 12% increase
Employee	\$1,210.31	\$1,443.90	\$1,617.17	\$1,811.23	\$2,028.58
Employee + One Dependent	\$2,420.61	\$2,887.79	\$3,234.32	\$3,622.44	\$4,057.13
Employee + Two or More Dependents	\$3,425.17	\$4,086.23	\$4,576.58	\$5,125.76	\$5,740.86
Summit ML64 HMO	Current	19.8% increase	6 - 8% increase	6 - 8% increase	6 - 8% increase
Employee	\$754.70	\$904.13	\$976.46	\$1,054.58	\$1,138.94
Employee + One Dependent	\$1,509.40	\$1,808.26	\$1,952.92	\$2,109.16	\$2,277.89
Employee + Two or More Dependents	\$2,135.80	\$2,558.69	\$2,763.38	\$2,984.45	\$3,223.21

Dental - Cigna

	2023	2024	2025	2026	2027
HMO \$20 Copay	Current	5%	5%	5%	5%
Employee	\$799.11	\$839.07	\$881.02	\$925.07	\$971.32
Employee + One Dependent	\$1,598.22	\$1,678.13	\$1,762.04	\$1,850.14	\$1,942.65
Employee + Two or More Dependents	\$2,261.48	\$2,374.55	\$2,493.28	\$2,617.95	\$2,748.84

CHAPTER 5
ATTACHMENT 2

ATTACHMENT 2

5 Year Workers' Compensation Premium History

Year	X-Mod	Total Paid Premium	% Increase Decrease
8/1/23-7/31/24	0.79	\$567,673	14.49%
8/1/22-7/31/23	0.77	\$495,825	-10.70%
8/1/21-7/31/22	0.76	\$555,237	-25.34%
8/1/20-7/31/21	1.03	\$743,716	14.72%
8/1/19-7/31/20	1.06	\$648,305	0.00%
		5 Yr Avg	-1.37%

CHAPTER 5
ATTACHMENT 3
(CONFIDENTIAL)

CHAPTER 5
ATTACHMENT 4
(CONFIDENTIAL)

CHAPTER 5
ATTACHMENT 5
(CONFIDENTIAL)



CHAPTER 6

SAN JOSE WATER COMPANY

SALES FORECAST

2024 General Rate Case



Prepared by
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Oakland, CA

October 2023

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Introduction

This report presents service class sales forecasts for the San Jose Water Company for Test Year 2025 and Attrition Years 2026 and 2027. The forecasts are based on forecasts of average use per customer and projections of total customers for the period 2023-2027. Per CPUC Decisions D.16-12-026 and D.20-08-047, the sales forecasts account for the effects of water rates, planned conservation, plumbing codes, economic conditions, and secular trends in water use. Additionally, the forecasts consider the impact of recent droughts on water use as well as the possibility of drought in the test and attrition years.

The remainder of this report is organized as follows. In the next section we review the general approach used in this and the previous GRC to forecast water use as well as the performance to date of the 2021 GRC sales forecast. We then describe the specification of the sales forecast model, the data used to estimate the model, and the estimation results. Lastly, we present the forecasts for customers, average water use, and total water use for each service class.

Sales Forecast Approach and Past Performance

In this section, we describe in general terms the approach used to forecast water use and the performance to date of the 2021 GRC sales forecast.

General Approach

The sales forecast is generated by combining a forecast of customers with a forecast of average use per customer.

- Number of Customers: The forecast of customers is generated by applying the five-year average rate of growth in services to the current number of customers. Adjustments to the growth forecast are made if there are circumstances anticipated to cause growth to be faster or slower than average.
- Average Use per Customer: The forecast of average use per customer is derived from an econometric model of average water use. The econometric model controls for the effects of climate and weather, economic conditions, cost of water, passive and active conservation, drought-related restrictions on water use, and secular trends in water use. Separate models are estimated for each of the primary service classes.

Compliance with D.20-08-047 and D.16-12-026 Forecasting Requirements

D.20-08-047 identified the following factors that general rate case sales forecasts should account for:¹

1. Impact of revenue collection and rate design on sales.
2. Impact of planned conservation programs
3. Changes in customer counts
4. Previous and upcoming changes to building codes requiring low-flow fixtures and other water savings measures, as well as any other relevant code changes.
5. Local and statewide trends in consumption, demographics, climate, population density, and historic trends by ratemaking area.
6. Past sales trends.

¹ D.20-08-047, pages 50-51.

Additionally, both D.16-12-026 and D.20-08-047 require incorporation of drought effects into general rate case sales forecasts.²

Our forecasting methodology addresses each of these requirements as follows:

1. **Impact of Revenue Collection and Rates:** We econometrically estimate class-specific price elasticities using 19 years of data on monthly consumption and rates and apply these elasticities to forecasts of future rates to estimate the effect of marginal water service costs on future sales levels.
2. **Impact of Planned Conservation Programs:** We include an annual trend in all of the forecast models. The estimated trend coefficient captures the long-term trend in average water use due to on-going passive and active conservation, after controlling for the effects of weather, drought, water price, income, and unemployment level on monthly water use. The trend is carried forward in the forecast to account for ongoing effects of passive and active conservation on future sales levels.
3. **Changes in Customer Counts:** The customer forecast incorporates all expected changes in customer counts over the forecast period.
4. **Previous and Upcoming Changes to Building Codes Requiring Low-Flow Fixtures and Other Water Savings Measures:** The ongoing effects of building and plumbing codes are captured in the forecast models trend term.
5. **Local and Statewide Trends in Consumption, Demographics, Climate, Population Density, and Historic (sic) Trend by Ratemaking Area:** The effects on sales level caused by changing demographics and population density are captured in the forecast model's trend component. The effects of climate and weather are captured by the model's seasonal and weather components, which are described in detail later in the report. We use Monte Carlo simulation methods to calculate probability weighted forecasts of sales based on 116 years of monthly weather and hydrology.
6. **Past Sales Trends:** As noted above, the model's trend coefficient captures secular trends in sales after controlling for the effects of weather, drought, water price, income, and unemployment level on monthly water use. Additionally, the model's seasonal component captures changes in seasonal loading over time, as discussed later in the report.
7. **Drought Effects:** We econometrically estimate class-specific effects of drought restrictions on sales. These effects are applied to 116 years of hydrologic and weather data to forecast expected sales conditioned on five year types: (1) non-drought, (2) single dry/critical year, (3) second consecutive dry/critical year, (4) third consecutive dry/critical year, and (5) fourth consecutive dry/critical year. The probability of occurrence of each year type is estimated using historical hydrology. The forecast of expected sales per meter is a probability-weighted average of the conditional sales forecasts. In this way, the forecast incorporates both past and potential future effects of drought on expected water sales in each of the forecast years, as required by D.16-12-026 and D.20-08-047.

² D.16-12-026, page 84.

2018 GRC Sales Forecast Performance

We are using the same forecast model we used to construct the 2021 GRC sales forecast and thus it is useful to examine how that forecast has performed to date.

The 2021 GRC sales forecast spanned the years 2021-2024. Actual versus forecasted values for the number of customers in 2021-2023 are summarized in Table 1.³ Actual versus forecasted values of average use per customer and total water use for 2021-2022 are shown in Tables 2 and 3. To assess forecast performance, we compute the mean absolute percentage error (MAPE) of the forecast relative to the realized value.⁴

Observed average use per customer is normalized for weather and drought effects in order to put it on the same footing as the forecasted values.⁵ Weather normalization is necessary because the forecasts are conditioned on average weather while observed use is conditioned on realized weather. Additionally, drought restrictions were in effect from July 2021 through December 2022. We use the econometric model to normalize observed sales for drought effects.

In terms of forecast performance to date, we note the following:

- Number of Customers: At the service class level, the MAPE ranges from 0.1% to 1.2%, as shown in Table 1. The MAPE for the total number of customers for the four service classes is 0.2%. Thus the customer count forecasts have been highly accurate through 2023, essentially matching observed customer counts.
- Average Use per Customer: The forecasts for the residential, business, and public authority classes, which together account for more than 95% of total sales, have been reasonably accurate. The MAPE for the residential and public authority classes is less than 2% and for the business class it is less than 5%. The MAPE for the industrial class, at 15%, is significantly larger. However, industrial water uses account for only three-tenths of a percent of total sales.
- Total Water Sales: The MAPE for the forecasts of total sales is well under 5% for all service classes other than industrial. The MAPE for the aggregate sales forecast of the four primary service classes is 0.4%. In other words, the aggregate sales forecast essentially matches observed aggregate sales after normalizing for weather and drought.

We conclude that the 2021 GRC sales forecast has performed well to date. This is especially the case for the customer count forecasts, but it is also true for the average and total sales forecasts. The one exception is the forecasts for the industrial class. However, industrial water use in the district is inconsequential, accounting for less than half a percent of total sales. The forecast of aggregate sales across the four customer classes has been highly accurate, differing from the normalized actual sales level by less than half a percentage point thus far.

³ Customer counts for 2021 and 2022 are 12 month averages. The customer count for 2023 is a 5 month average.

⁴ $MAPE = \frac{1}{T} \sum_{t=1}^T |(Actual_t - Forecast_t) / Actual_t|$

⁵ The 2017 GRC forecast of average use per customer is based on average weather conditions and no drought restrictions. The econometric model is used to normalize observed use per customer for differences in weather and drought restrictions.

Table 1. 2021 GRC Forecast Performance: Predicted vs Actual Number of Customers

Residential				Business		
Year	Forecast	Actual	Error	Forecast	Actual	Error
2021	200,254	199,723	-0.3%	20,716	20,576	-0.7%
2022	200,498	200,190	-0.2%	20,808	20,597	-1.0%
2023	200,743	200,794	0.0%	20,900	20,600	-1.5%
		MAPE	0.1%		MAPE	1.1%

Public Authority				Industrial		
Year	Forecast	Actual	Error	Forecast	Actual	Error
2021	1,284	1,273	-0.9%	51.0	51.1	0.2%
2022	1,276	1,271	-0.4%	50.0	49.5	-1.0%
2023	1,269	1,269	0.0%	50.0	48.8	-2.5%
		MAPE	0.4%		MAPE	1.2%

Total Customers			
Year	Forecast	Actual	Error
2021	222,305	221,623	-0.3%
2022	222,632	222,107	-0.2%
2023	222,962	222,713	-0.1%
		MAPE	0.2%

Table 2. 2021 GRC Forecast Performance: Predicted vs Actual Mean Use per Customer (CCF/Yr)

Residential					Business			
Year	Forecast	Actual	Normal-ized	Error	Forecast	Actual	Normal-ized	Error
2021	132	130	131	-0.8%	760	785	789	3.7%
2022	130	114	127	-2.5%	767	746	814	5.8%
			MAPE	1.6%			MAPE	4.7%

Public Authority					Industrial			
Year	Forecast	Actual	Normal-ized	Error	Forecast	Actual	Normal-ized	Error
2021	2209	2163	2194	-0.7%	3565	2709	3036	-17.4%
2022	2246	2124	2315	3.0%	3627	2815	3215	-12.8%
			MAPE	1.8%			MAPE	15.1%

Table 3. 2021 GRC Forecast Performance: Predicted vs Actual Total Water Sales (CCF)

Residential				Business		
Year	Forecast	Normalized Actual	Error	Forecast	Normalized Actual	Error
2021	26,433,528	26,166,751	-1.0%	15,744,160	16,233,668	3.0%
2022	26,064,740	25,385,754	-2.7%	15,959,736	16,771,012	4.8%
		MAPE	1.8%		MAPE	3.9%
Public Authority				Industrial		
Year	Forecast	Normalized Actual	Error	Forecast	Normalized Actual	Error
2021	2,836,356	2,793,769	-1.5%	181,815	155,072	-17.2%
2022	2,865,896	2,941,645	2.6%	181,350	159,128	-14.0%
		MAPE	2.0%		MAPE	15.6%
Total Water Sales						
Year	Forecast	Normalized Actual	Error			
2021	45,195,859	45,349,260	0.3%			
2022	45,071,722	45,257,538	0.4%			
		MAPE	0.4%			

Forecast Model Specification

In this section we describe the forecast model specification. The forecast is generated by combining a forecast of the number of customers with a forecast of expected water use per customer:

$$W_{it} = N_{it} \cdot E(w_{it} | \mathbf{x}_{it})$$

In this equation, i and t index the service class and time period, respectively. W is total water use, N is the number of customers, and $E(w_{it} | \mathbf{x}_{it})$ is expected water use per customer conditional on a vector of covariates \mathbf{x} . We estimate $E(w_{it} | \mathbf{x}_{it})$ using monthly data on water use and the covariates \mathbf{x} .

Customer Forecast Specification

The customer forecast equation is:

$$N_{it} = N_{i0} \cdot (1 + g_i)^t$$

where N_{i0} is the number of customers in the base year of the forecast and g_i is the rate of growth in service class i 's customers. N_{i0} is set to the average number of customers in 2023 and we estimate g_i using customer count data for 2018-2023, as shown in Table 4.

The customer count forecasts are provided in Table 5. Note that the number of resale customers is not expected to change over the forecast period. The customer count forecasts in Table 5 are multiplied by expected use per customer to predict total water use. The econometric model used to estimate expected use per customer is described in the next section.

Table 4. Customer Count Data Used to Estimate 5-Yr Compound Annual Growth Rates (CAGR)

Year	Residential	Business	Industrial	Public Authority	Recycled	Other/ Misc	Resale	Private Fire
2018	199,330	20,650	53	1,308	242	254	38	3,934
2019	199,886	20,658	53	1,300	264	292	38	3,996
2020	199,890	20,605	51	1,289	281	298	37	4,048
2021	199,723	20,576	51	1,273	288	309	37	4,109
2022	200,190	20,597	50	1,271	301	313	37	4,146
2023	200,794	20,600	49	1,269	305	302	37	4,167
CAGR	0.15%	-0.05%	-1.54%	-0.60%	4.74%	3.53%	-1.24%	1.16%

Table 5. Customer Count Forecasts

Year	Residential	Business	Industrial	Public Authority	Recycled	Other/ Misc	Resale	Private Fire
2024	201,089	20,590	48	1,262	318	312	37	4,216
2025	201,383	20,580	47	1,254	331	323	37	4,264
2026	201,679	20,570	47	1,247	344	335	37	4,314
2027	201,974	20,560	46	1,239	357	347	37	4,364

Expected Water Use Specification

We use an econometric model to estimate expected water use per customer for each primary service class. A simplified representation of the model’s functional form is:

$$w_t = \mu + \beta_S \cdot Season_t + \beta_W \cdot Weather_t + \beta_E \cdot Economic_t + \beta_D \cdot Drought_t + \beta_T \cdot Trend_t + e_t$$

In this model, variation in the dependent variable, average monthly water use per customer, is explained by seasonality and weather (rainfall and air temperature), economic conditions (cost of water service, household income, and employment level), restrictions on water use due to drought, and any long-term secular trend in average water use. The model’s error term, e_t , captures any residual variation not explained by the other right-hand-side variables.

Seasonal and Weather Component

The model’s seasonal component is designed to capture the effects of average weather (i.e. climate) on monthly water use. We enact the seasonal component with a Fourier series of sines and cosines to capture the seasonal shape of water use. Specifically, we define the seasonal component as:

$$\beta_S \cdot Season_t = \sum_{j=1}^3 \beta_{sj} \cdot Sinj_t + \beta_{cj} \cdot Cosj_t$$

where:

$$Sinj_t = \sin\left(\frac{2j\pi t}{12}\right) \text{ and } Cosj_t = \cos\left(\frac{2j\pi t}{12}\right)$$

We also could estimate the seasonal component using monthly dummy variables. However, the Fourier series specification is more parsimonious and thus preserves degrees of freedom for model estimation.

The weather component is defined in terms of deviations from normal rainfall and temperature. The specification includes both contemporaneous and one-month lagged rainfall and temperature, as well as seasonal interactions. The seasonal interactions allow for the effects of rainfall and temperature on monthly water use to vary throughout the year.

Specifically, the weather component is:

$$\beta_W \cdot Weather_t = \beta_R \cdot RainDev_t + \beta_{SxR} \cdot RainDev_t \cdot Sin1_t + \beta_{CxR} \cdot RainDev_t \cdot Cos1_t + \beta_{LR} \cdot RainDev_{t-1} + \beta_T \cdot TempDev_t + \beta_{SxT} \cdot TempDev_t \cdot Sin1_t + \beta_{CxT} \cdot TempDev_t \cdot Cos1_t + \beta_{LT} \cdot TempDev_{t-1}$$

where:

$$RainDev_t = Rain_t - \overline{Rain}_t \text{ and } TempDev_t = Temp_t - \overline{Temp}_t$$

$Rain_t$ is cumulative rainfall in inches for month t and \overline{Rain}_t is the long-term average cumulative rainfall for this month. $Temp_t$ is the average maximum daily air temperature in degrees Fahrenheit for month t and \overline{Temp}_t is the long-term average maximum daily air temperature for this month.⁶

Specifying the weather component in terms of deviations allows the model's seasonal component to capture the effects of average weather (i.e., climate) on water use while the weather component explains how water use adjusts to higher or lower than expected rainfall and temperature.

Drought Component

The model's drought component consists of six indicator variables designed to capture the effect of drought-related water use restrictions on monthly use. The indicator variables take the value of 1 when a restriction was in effect and 0 otherwise. The drought indicators are as follows:

2007-09 Voluntary Conservation Order (D1) – this indicator takes the value 1 June 2007 to September 2010 when voluntary conservation orders were in place, and 0 otherwise.

2014 Voluntary Conservation Order (D2) – this indicator takes the value 1 from January 2014 to March 2015 when a statewide 20% voluntary conservation order was in place, and 0 otherwise.

State Conservation Mandate (D3) – this indicator takes the value 1 from April 2015 to June 2016 when statewide mandatory conservation orders were in place, and zero otherwise.⁷

Water Supplier Self Certification (D4) – this indicator takes the value 1 from July 2016 to April 2017 when the statewide mandatory conservation orders were replaced by the water supplier self-certification program, and 0 otherwise.

Post-Drought (D5) – this indicator takes the value 1 from May 2017 to June 2021 when no conservation orders were issued, and 0 otherwise.

⁶ The monthly rainfall deviations are the residuals from a regression of monthly rainfall on the seasonal harmonics. The monthly temperature deviations are the residuals from a regression of monthly temperature on the seasonal harmonics and monthly rainfall. Rainfall is included in the temperature regression because it has a causal effect on temperature. Its inclusion in the regression ensures that the rainfall and temperature residuals are orthogonal to one another. Monthly rainfall and temperature data for the period 1905-2022 are used in these regressions.

⁷ The mandate did not officially take effect until June 2015, however data on urban water use strongly indicate that the announcement of the mandate in March started impacting water use the following month.

2021 Valley Water Conservation Order (D6) – this indicator takes the value 1 from July 2021 through the end of the estimation period and captures the effects of Valley Water’s 15% countywide mandatory conservation order, and 0 otherwise.⁸

Given these indicators, the drought component is:

$$\beta_D \cdot Drought_t = \sum_{i=1}^6 \beta_{Di} \cdot Di_t + \beta_{SxDi} \cdot Di_t \cdot Sin1_t + \beta_{CxDi} \cdot Di_t \cdot Cos1_t$$

The seasonal interactions allow the drought effects to vary seasonally. This is done because most water savings during drought periods are through reduction in landscape irrigation which occurs primarily in the summer months.

Economic Component

The model’s economic component is specified as:

$$\beta_E \cdot Economic_t = \beta_U \cdot Unempl_t + \beta_P \cdot Price_t + \beta_I \cdot Income_t$$

where $Unempl_t$ is the unemployment rate for the San Jose-Sunnyvale-Santa Clara MSA, $Price_t$ is the marginal cost of water service, and $Income_t$ is median household income for Santa Clara County. In the case of the business, industrial, and public authority models, the price variable is set to the non-residential commodity charge. For the residential model, it is set to the rate for the 2nd block of consumption. The price and income variables are converted to 2020 constant dollars prior to model estimation.

Secular Trend Component

The model’s trend component captures any long-term annual trend in average water use due to on-going passive and active conservation, after controlling for the effects of weather, drought, water price, income, and unemployment level on monthly water use.

Specifically, the secular trend component is given by:

$$Secular Trend = \beta_T \cdot Trend_t$$

where $Trend_t$ is an annual time index.

Forecast Model Data

The data used to estimate the model of expected water use per customer are described in this section.

Monthly Water Use

The model is estimated with monthly and bi-monthly billing data spanning the period January 2004 through December 2022. Prior to model estimation, we convert billed water use into estimates of actual water use by calendar month using the following conversion methodology from Mays (2004).

Let N_t be the number of billed customers and W_t be the total volume billed in month t , then for meters read every month, we estimate average use per customer in month t as:

⁸ On April 11, 2023, Valley Water adopted Resolution No. 23-24 which rescinded the mandatory conservation order and replaced it with a voluntary conservation order requesting a 15% reduction in water use compared to 2019.

$$w_t = \frac{W_t}{N_t} \cdot \frac{N_t}{N_t + N_{t+1}} + \frac{W_{t+1}}{N_{t+1}} \cdot \frac{N_{t+1}}{N_t + N_{t+1}}$$

For meters read every other month, we estimate average use per customer in month t as:

$$w_t = 0.25 \cdot \left(\frac{W_t}{N_t} + \frac{W_{t+2}}{N_{t+2}} \right) \cdot \frac{N_t + N_{t+2}}{N_t + 2N_{t+1} + N_{t+2}} + 0.5 \cdot \frac{W_{t+1}}{N_{t+1}} \cdot \frac{2N_{t+1}}{N_t + 2N_{t+1} + N_{t+2}}$$

Residential meters are read every other month while Public Authority and Industrial meters are read every month. Some business meters are read every month and others are read every other month. Thus for the business class, we construct a weighted average:

$$w_t = w_{t,monthly} \cdot monthlyweight_{t,m} + w_{t,bimonthly} \cdot bimonthlyweight_{t,b}$$

where:

$$monthlyweight_{t,m} = \frac{N_{t,m} + N_{t+1,m}}{(N_{t,b} + 2N_{t+1,b} + N_{t+2,b}) + (N_{t,m} + N_{t+1,m})}$$

$$bimonthlyweight_{t,b} = \frac{N_{t,b} + 2N_{t+1,b} + N_{t+2,b}}{(N_{t,b} + 2N_{t+1,b} + N_{t+2,b}) + (N_{t,m} + N_{t+1,m})}$$

Seasonal and Weather Data

The seasonal variables are constructed using the equations described previously. Monthly rainfall and average maximum daily air temperature data are from the Oregon State University PRISM Climate Group and span the period January 1905 to December 2022. The data are at a 4km spatial resolution centered on latitude 37.3313, longitude -121.9137.

Economic Data

Data on the monthly unemployment rate for the San Jose-Sunnyvale-Santa Clara MSA are from the Bureau of Labor Statistics via the St. Louis Federal Reserve Bank website. The data spans the period January 1990 through December 2022. Water rate data were provided by SJWC. Water rates were converted to July 2020 constant dollars using the Consumer Price Index for All Urban Consumers: All Items in U.S. City Average.

Forecast Model Estimation Results

The forecast models were estimated using Stata Version 17 statistical software. Reported standard errors are robust to heteroskedastic and serially correlated error structures. The estimated models explain a large percentage of the observed variation in monthly water use as exhibited by the high r-squares. Estimation results are presented in Tables 6-9 and depicted graphically in Figures 1-4.

Table 6. Residential Model Estimation Results

Linear regression	Number of obs	=	225
	F(32, 192)	=	241.85
	Prob > F	=	0.0000
	R-squared	=	0.9631
	Root MSE	=	.81772

avguse	Coefficient	Robust std. err.	t	P> t	[95% conf. interval]	
sin1	-4.356475	.145047	-30.03	0.000	-4.642565	-4.070385
cos1	-3.588456	.1443035	-24.87	0.000	-3.87308	-3.303832
cos2	.3018648	.0746186	4.05	0.000	.1546873	.4490424
drt						
2007-09 Vol	-.6213483	.1494246	-4.16	0.000	-.916073	-.3266237
2014 Vol	-1.419951	.276163	-5.14	0.000	-1.964654	-.8752485
State Mandate	-4.245121	.4600862	-9.23	0.000	-5.152594	-3.337649
Self Cert	-2.972254	.757452	-3.92	0.000	-4.46625	-1.478258
Post-Drought	-2.669821	.8075898	-3.31	0.001	-4.262708	-1.076934
VW Mandatory	-3.903333	.7777373	-5.02	0.000	-5.43734	-2.369327
drt#c.sin1						
2007-09 Vol	.4610773	.203007	2.27	0.024	.0606671	.8614876
2014 Vol	1.649042	.2656595	6.21	0.000	1.125056	2.173028
State Mandate	2.579428	.2523401	10.22	0.000	2.081714	3.077143
Self Cert	2.371698	.2962018	8.01	0.000	1.787471	2.955926
Post-Drought	1.436517	.259517	5.54	0.000	.9246469	1.948388
VW Mandatory	2.23055	.2994062	7.45	0.000	1.640002	2.821098
drt#c.cos1						
2007-09 Vol	-.0851002	.2068344	-0.41	0.681	-.4930596	.3228592
2014 Vol	1.552194	.2909255	5.34	0.000	.9783733	2.126014
State Mandate	2.174199	.2101813	10.34	0.000	1.759638	2.58876
Self Cert	2.066825	.3130782	6.60	0.000	1.449311	2.68434
Post-Drought	1.910911	.2715182	7.04	0.000	1.375369	2.446453
VW Mandatory	2.626026	.2966916	8.85	0.000	2.040832	3.211219
ppt_dev	-.5346815	.1099141	-4.86	0.000	-.7514757	-.3178873
c.ppt_dev#c.sin1	.1187078	.1157947	1.03	0.307	-.1096853	.3471008
c.ppt_dev#c.cos1	.400139	.1234962	3.24	0.001	.1565555	.6437225
ppt_dev_lag1	-.2598194	.049167	-5.28	0.000	-.3567962	-.1628426
maxtemp_dev	.0242927	.0310534	0.78	0.435	-.0369569	.0855424
c.maxtemp_dev#c.sin1	-.0294428	.0406612	-0.72	0.470	-.1096427	.0507571
c.maxtemp_dev#c.cos1	-.0306471	.0383893	-0.80	0.426	-.106366	.0450717
maxtemp_dev_lag1	.0880497	.030615	2.88	0.004	.0276647	.1484347
price	-.6981875	.1967482	-3.55	0.000	-1.086253	-.310122
income	.0608732	.0224538	2.71	0.007	.0165854	.105161
trend	-.1582641	.0339952	-4.66	0.000	-.2253162	-.091212
_cons	328.8079	67.35013	4.88	0.000	195.9667	461.6491

Figure 1. Residential Actual vs Predicted Monthly Water Use

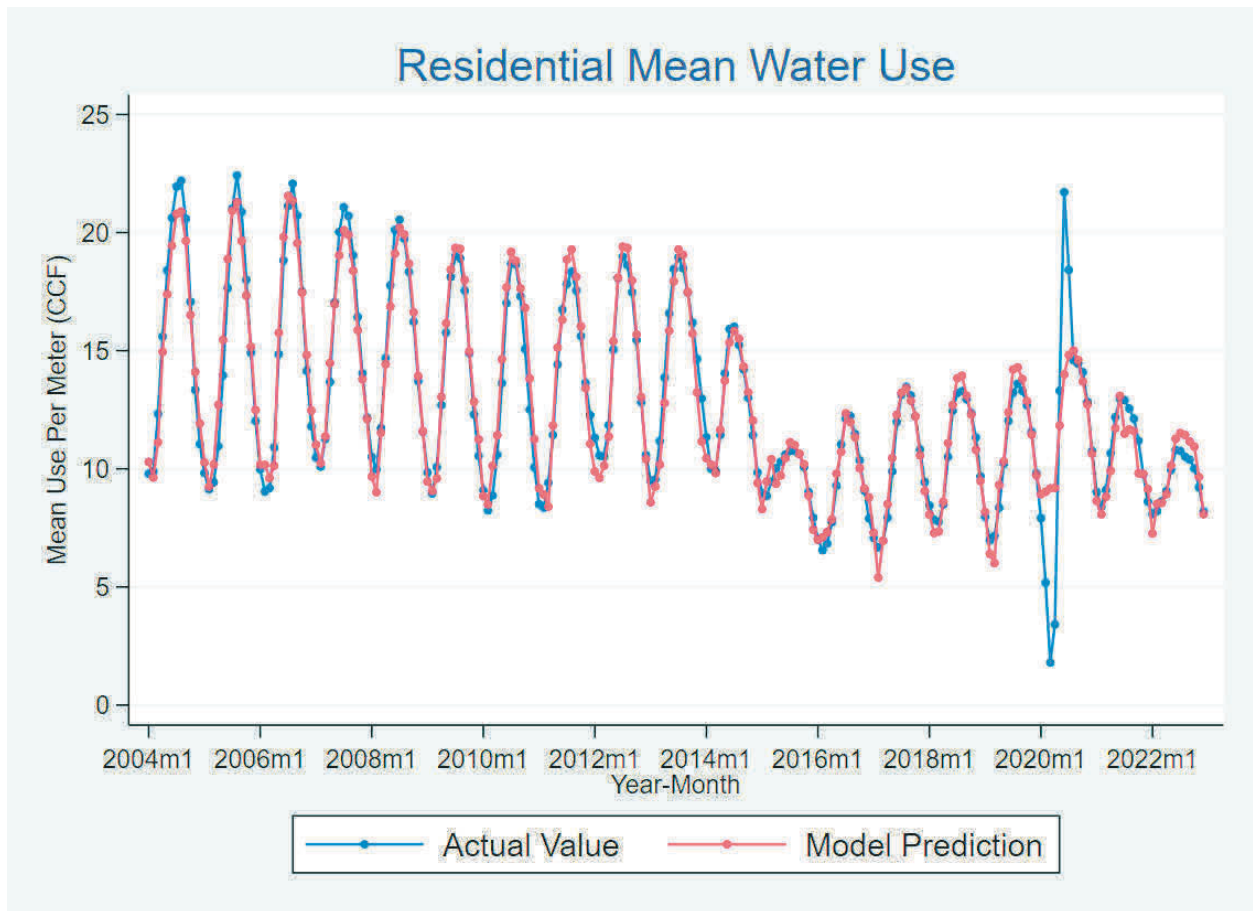


Table 7. Business Model Estimation Results

Linear regression

Number of obs	=	225
F(35, 189)	=	315.07
Prob > F	=	0.0000
R-squared	=	0.9684
Root MSE	=	2.8737

avguise	Coefficient	Robust std. err.	t	P> t	[95% conf. interval]	
sin1	-16.4145	.5458937	-30.07	0.000	-17.49133	-15.33767
sin2	.149823	.2769529	0.54	0.589	-.396493	.696139
sin3	.0527289	.2483206	0.21	0.832	-.437107	.5425649
cos1	-12.24991	.4557105	-26.88	0.000	-13.14884	-11.35098
cos2	.9872013	.2697263	3.66	0.000	.4551406	1.519262
cos3	-.1847047	.3006693	-0.61	0.540	-.7778034	.4083941
drt						
2007-09 Vol	.6298042	.5507768	1.14	0.254	-.4566554	1.716264
2014 Vol	-5.573019	1.303276	-4.28	0.000	-8.143854	-3.002183
State Mandate	-15.62347	1.755718	-8.90	0.000	-19.0868	-12.16015
Self Cert	-9.671436	2.28909	-4.23	0.000	-14.18688	-5.155988
Post-Drought	-8.522967	2.52786	-3.37	0.001	-13.50941	-3.536523
VW Mandatory	-14.08036	2.732181	-5.15	0.000	-19.46985	-8.690878
drt#c.sin1						
2007-09 Vol	.9045351	.6905927	1.31	0.192	-.4577247	2.266795
2014 Vol	5.452747	1.039998	5.24	0.000	3.401251	7.504242
State Mandate	9.092001	1.009408	9.01	0.000	7.100847	11.08315
Self Cert	6.107268	1.019062	5.99	0.000	4.097072	8.117464
Post-Drought	2.30854	.9586724	2.41	0.017	.4174673	4.199612
VW Mandatory	7.024482	1.317066	5.33	0.000	4.426444	9.622519
drt#c.cos1						
2007-09 Vol	-.7891465	.5758998	-1.37	0.172	-1.925164	.3468705
2014 Vol	2.774559	1.010881	2.74	0.007	.7805006	4.768618
State Mandate	5.874738	1.033518	5.68	0.000	3.836026	7.913451
Self Cert	6.177127	1.028734	6.00	0.000	4.147853	8.206402
Post-Drought	6.177428	.6900948	8.95	0.000	4.816151	7.538706
VW Mandatory	6.598959	1.305582	5.05	0.000	4.023574	9.174345
ppt_dev	-1.724293	.4046697	-4.26	0.000	-2.522543	-.9260441
c.ppt_dev#c.sin1	.1875278	.3425567	0.55	0.585	-.4881978	.8632534
c.ppt_dev#c.cos1	1.26859	.4502591	2.82	0.005	.3804108	2.156769
ppt_dev_lag1	-.911076	.1589655	-5.73	0.000	-1.22465	-.5975015
maxtemp_dev	.0566105	.112307	0.50	0.615	-.1649258	.2781468
c.maxtemp_dev#c.sin1	-.2293065	.1594594	-1.44	0.152	-.5438554	.0852423
c.maxtemp_dev#c.cos1	.013251	.1349122	0.10	0.922	-.2528761	.2793781
maxtemp_dev_lag1	.2759289	.1078111	2.56	0.011	.0632612	.4885966
price	-2.154221	.5318824	-4.05	0.000	-3.20341	-1.105033
unemployment	-1.033526	.207209	-4.99	0.000	-1.442265	-.6247862
trend	-.3147733	.1318651	-2.39	0.018	-.5748897	-.0546569
_cons	726.3599	263.6501	2.76	0.006	206.285	1246.435

Figure 2. Business Actual vs Predicted Monthly Water Use

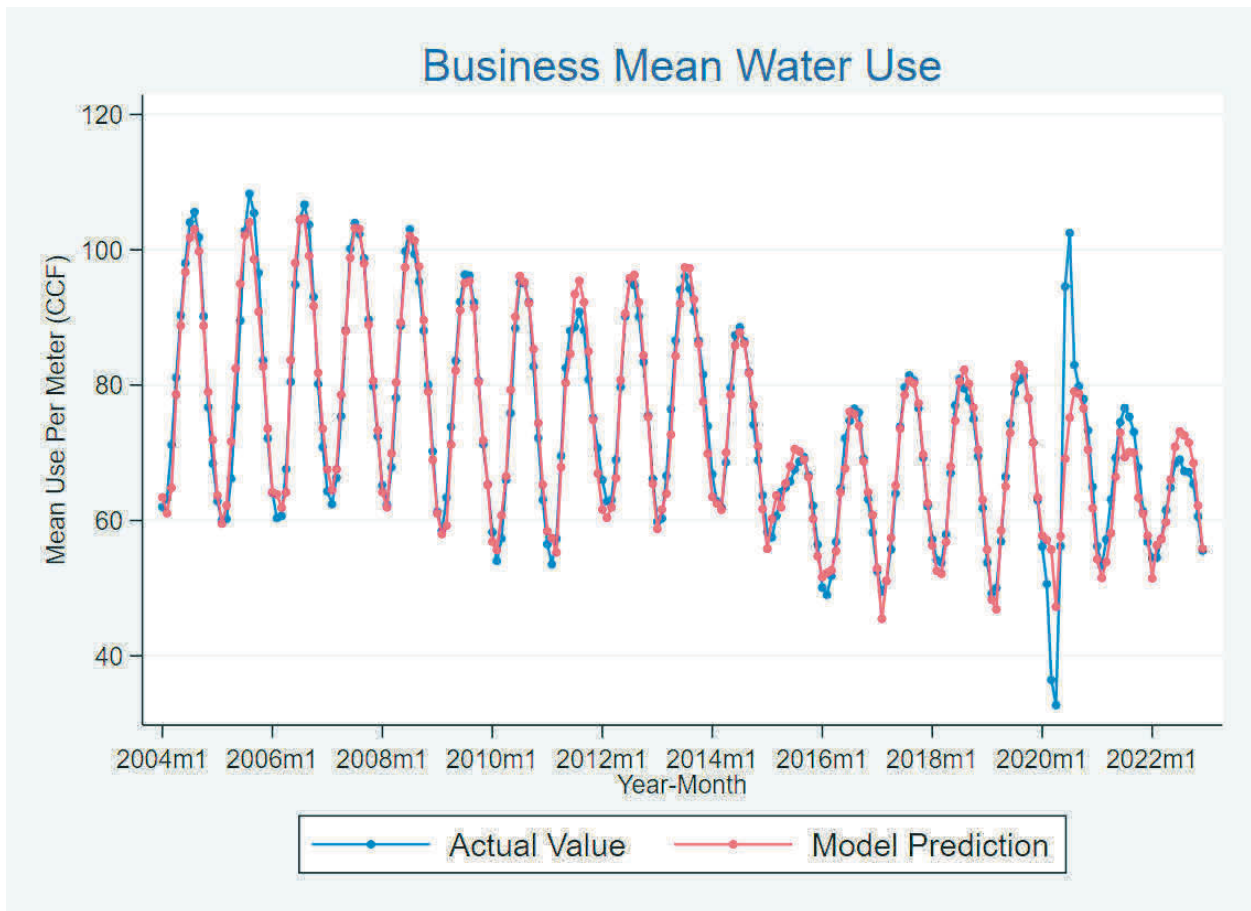


Table 8. Public Authority Model Estimation Results

Linear regression

Number of obs	=	228
F(35, 192)	=	424.82
Prob > F	=	0.0000
R-squared	=	0.9791
Root MSE	=	17.149

avguse	Coefficient	Robust std. err.	t	P> t	[95% conf. interval]	
sin1	-87.99259	3.036689	-28.98	0.000	-93.98214	-82.00303
sin2	8.020624	1.685423	4.76	0.000	4.696301	11.34495
sin3	7.661732	1.629591	4.70	0.000	4.447533	10.87593
cos1	-140.9076	3.400205	-41.44	0.000	-147.6141	-134.201
cos2	5.027877	1.610435	3.12	0.002	1.85146	8.204295
cos3	-4.040201	1.682539	-2.40	0.017	-7.358834	-.721567
drt						
2007-09 Vol	14.75044	3.491553	4.22	0.000	7.86371	21.63716
2014 Vol	-21.12733	7.040993	-3.00	0.003	-35.01496	-7.239696
State Mandate	-64.9542	8.727372	-7.44	0.000	-82.16803	-47.74036
Self Cert	-35.76742	11.97331	-2.99	0.003	-59.38353	-12.15131
Post-Drought	-27.7609	11.24543	-2.47	0.014	-49.94134	-5.580451
VW Mandatory	-49.37127	13.61691	-3.63	0.000	-76.22922	-22.51332
drt#c.sin1						
2007-09 Vol	.7070582	4.934482	0.14	0.886	-9.025697	10.43981
2014 Vol	16.3784	6.141217	2.67	0.008	4.265485	28.49131
State Mandate	26.04834	6.125513	4.25	0.000	13.9664	38.13028
Self Cert	10.84716	8.723438	1.24	0.215	-6.358919	28.05324
Post-Drought	-3.262034	4.534768	-0.72	0.473	-12.20639	5.682326
VW Mandatory	12.41149	7.523866	1.65	0.101	-2.42856	27.25154
drt#c.cos1						
2007-09 Vol	-6.316236	4.659807	-1.36	0.177	-15.50722	2.874752
2014 Vol	27.35928	7.003246	3.91	0.000	13.54611	41.17246
State Mandate	62.94027	6.688243	9.41	0.000	49.7484	76.13214
Self Cert	51.82736	8.294189	6.25	0.000	35.46793	68.18679
Post-Drought	44.84174	5.182697	8.65	0.000	34.61941	55.06407
VW Mandatory	58.82978	6.800728	8.65	0.000	45.41605	72.24351
ppt_dev	-18.23813	3.065114	-5.95	0.000	-24.28375	-12.19251
c.ppt_dev#c.sin1	3.631039	2.55315	1.42	0.157	-1.404785	8.666862
c.ppt_dev#c.cos1	15.27844	3.31293	4.61	0.000	8.744032	21.81285
ppt_dev_lag1	-6.347882	1.187626	-5.35	0.000	-8.690352	-4.005413
maxtemp_dev	.8946344	.6355901	1.41	0.161	-.3590013	2.14827
c.maxtemp_dev#c.sin1	-.7937286	.836609	-0.95	0.344	-2.443853	.856396
c.maxtemp_dev#c.cos1	-.3701694	1.004632	-0.37	0.713	-2.351702	1.611363
maxtemp_dev_lag1	.8239729	.6514676	1.26	0.207	-.4609794	2.108925
price	-3.931973	2.587553	-1.52	0.130	-9.035653	1.171708
unemployment	-4.530554	.6707909	-6.75	0.000	-5.85362	-3.207488
trend	-.6581113	.786627	-0.84	0.404	-2.209652	.893429
_cons	1582.417	1576.135	1.00	0.317	-1526.346	4691.18

Figure 3. Public Authority Actual vs Predicted Monthly Water Use

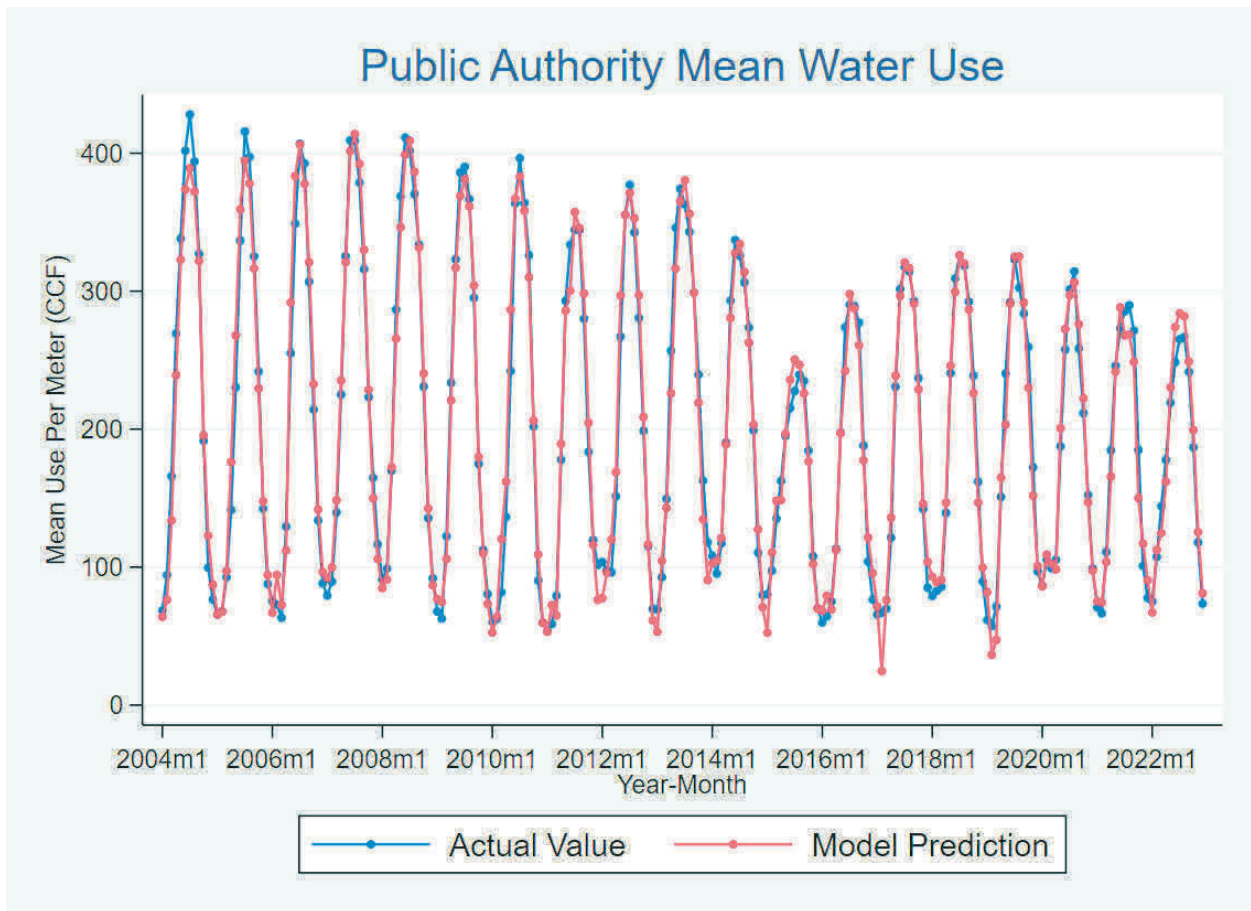
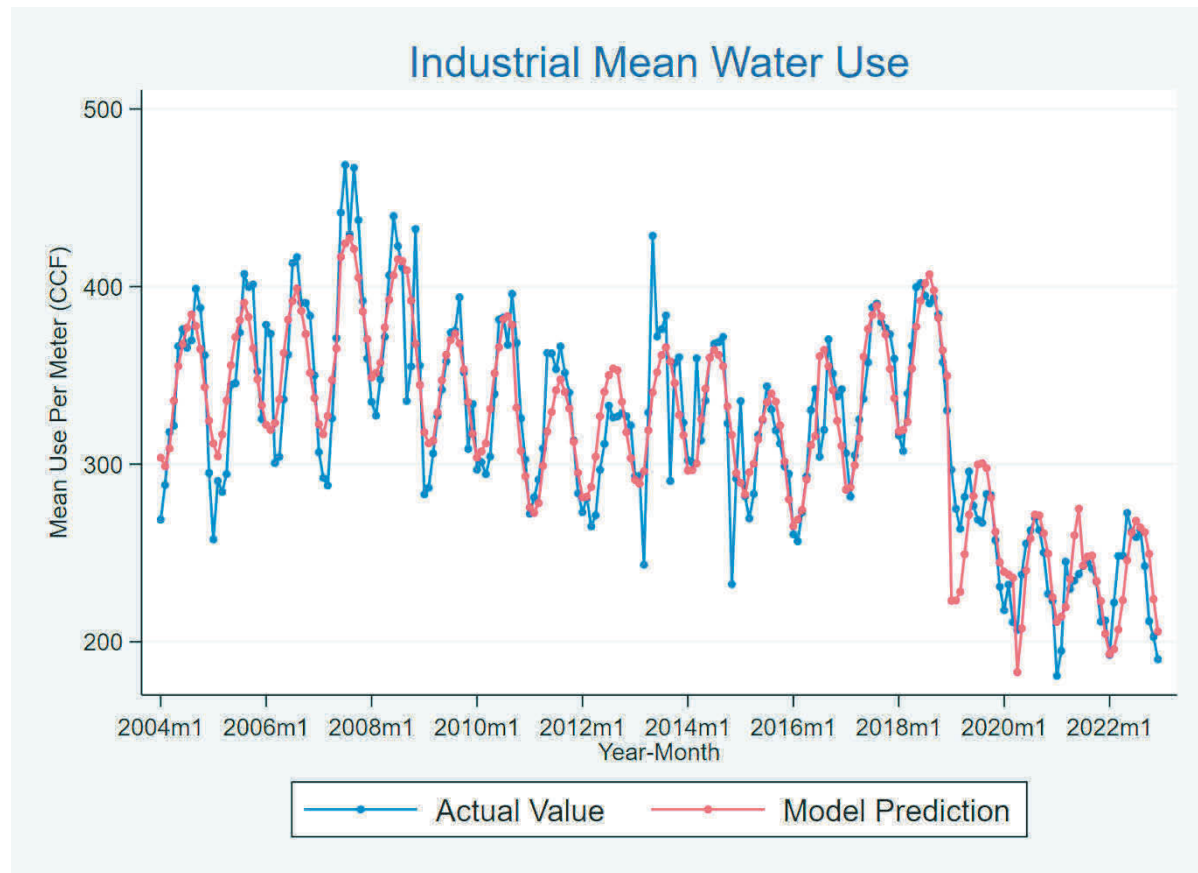


Table 9. Industrial Model Estimation Results

Linear regression	Number of obs	=	228
	F(13, 214)	=	93.58
	Prob > F	=	0.0000
	R-squared	=	0.8261
	Root MSE	=	25.186

avguse	Coefficient	Robust std. err.	t	P> t	[95% conf. interval]	
shift	-110.9645	10.2823	-10.79	0.000	-131.232	-90.69694
sin1	-30.12076	2.433605	-12.38	0.000	-34.91766	-25.32385
cos1	-22.97224	2.399764	-9.57	0.000	-27.70245	-18.24204
drt						
2007-09 Vol	37.65017	5.478856	6.87	0.000	26.85074	48.4496
2014 Vol	-5.377099	10.47464	-0.51	0.608	-26.02379	15.26959
State Mandate	-17.91863	15.38196	-1.16	0.245	-48.23819	12.40092
Self Cert	25.30333	24.96819	1.01	0.312	-23.91175	74.5184
Post-Drought	50.7569	23.45405	2.16	0.032	4.526352	96.98744
VW Mandatory	10.00344	25.69443	0.39	0.697	-40.64313	60.65002
ppt_dev	-.8530899	1.269562	-0.67	0.502	-3.355538	1.649359
maxtemp_dev_lag1	.9720645	.8989352	1.08	0.281	-.7998368	2.743966
unemployment	-7.532148	.7995528	-9.42	0.000	-9.108156	-5.95614
price	-17.60971	6.700704	-2.63	0.009	-30.81755	-4.40188
_cons	440.6665	19.82471	22.23	0.000	401.5897	479.7432

Figure 4. Industrial Actual vs Predicted Monthly Water Use



Discussion of Estimation Results

In this section we discuss what the model estimation results tell us about the influence of different factors on average water use.

Economic and Trend Effects

The model’s price, income, and unemployment coefficients measure the influence of these variables on average water usage. It is conventional to express price and income coefficients as an elasticity, which measures the percentage change in demand given a one percent increase in the underlying variable. The unemployment response, on the other hand, is more intuitively expressed as a semi-elasticity, which indicates the percentage change in demand given a one percentage point increase in the unemployment rate. The estimated elasticities and semi-elasticities are summarized in Table 10.

Residential demand is estimated to be roughly twice as sensitive to changes in marginal water service cost (price) as the other classes of service. The estimated residential income elasticity is in line with typical values reported in the literature (Baumann, Boland, and Hanemann, 1998). The estimated unemployment semi-elasticities indicate that non-residential water use is fairly sensitive to the level of economic activity. Using unemployment data for the last 33 years, we estimate that year-to-year variation in unemployment can cause non-residential sales per meter to fluctuate, on average, by +/-3% for the business class, +/-6% for the public authority class, and +/-4% for the industrial class.

The model’s trend term estimates the secular trend in water use due to water efficiency codes and standards, conservation programs, or other unobserved factors, such as changes in household size and housing density. Both the residential and business classes have statistically significant negative trends in water use per meter. Over the period of estimation, residential use decreased at an annual average rate of 1.4% while business use decreased by 0.4%. Statistically significant trends were not detected in the public authority or industrial classes.

In the sales forecast, the model’s economic parameters are combined with forecasts of marginal water cost, household income, and unemployment to incorporate these effects into the forecast. In order to account for ongoing active and passive conservation, we assume the secular trend in residential and business sales continues through the forecast period.

Table 10. Estimated Own-Price Elasticity of Demand

Service Class	Price (elasticity)	Income (elasticity)	Unemployment (semi-elasticity)	Trend (semi-elasticity)
Residential	-0.26	0.59	NA	-0.014
Business	-0.13	NA	-0.015	-0.004
Public Auth.	-0.12	NA	-0.032	NS
Industrial	-0.11	NA	-0.020	NS

The price and income elasticity coefficients measure the percentage change in average use given a one percent increase in the value of the underlying variable. The unemployment semi-elasticity coefficient measures the percentage change in average use given a one percentage point increase in the unemployment rate.

Drought Response and Rebound

The drought response coefficients can be expressed as semi-elasticities, which indicate the percentage effect of the drought restriction on base period water use after controlling for climate, weather, and economic conditions. These are shown in Table 11. For example, the effect of the state conservation mandate, which operated from April 2015 through June 2016, was to reduce average water use per meter by 16 to 33 percent, depending on the service class.

Table 11 also indicates that there was a substantial recovery in demand after the mandate ended. However, except for industrial water uses, demand did not fully rebound and remained 11 to 19 percent below its pre-drought level.

Additionally, we observe that the Valley Water Conservation Order had a notable effect on water consumption, leading to a 9 to 13 percent reduction in water use per meter relative to the post-drought period, depending on the service class.⁹

These results demonstrate the significant impact of drought restrictions on water sales and therefore the need to factor into the sales forecast the possibility of drought in the test and attrition years. This is addressed in a subsequent section of the report.

⁹ If X is the change in pre-drought usage in the post-drought period and Y is the change in the Valley Water mandatory conservation period, then the percentage effect during the mandatory conservation period relative to post-drought usage is $(1+Y)/(1+X) - 1$.

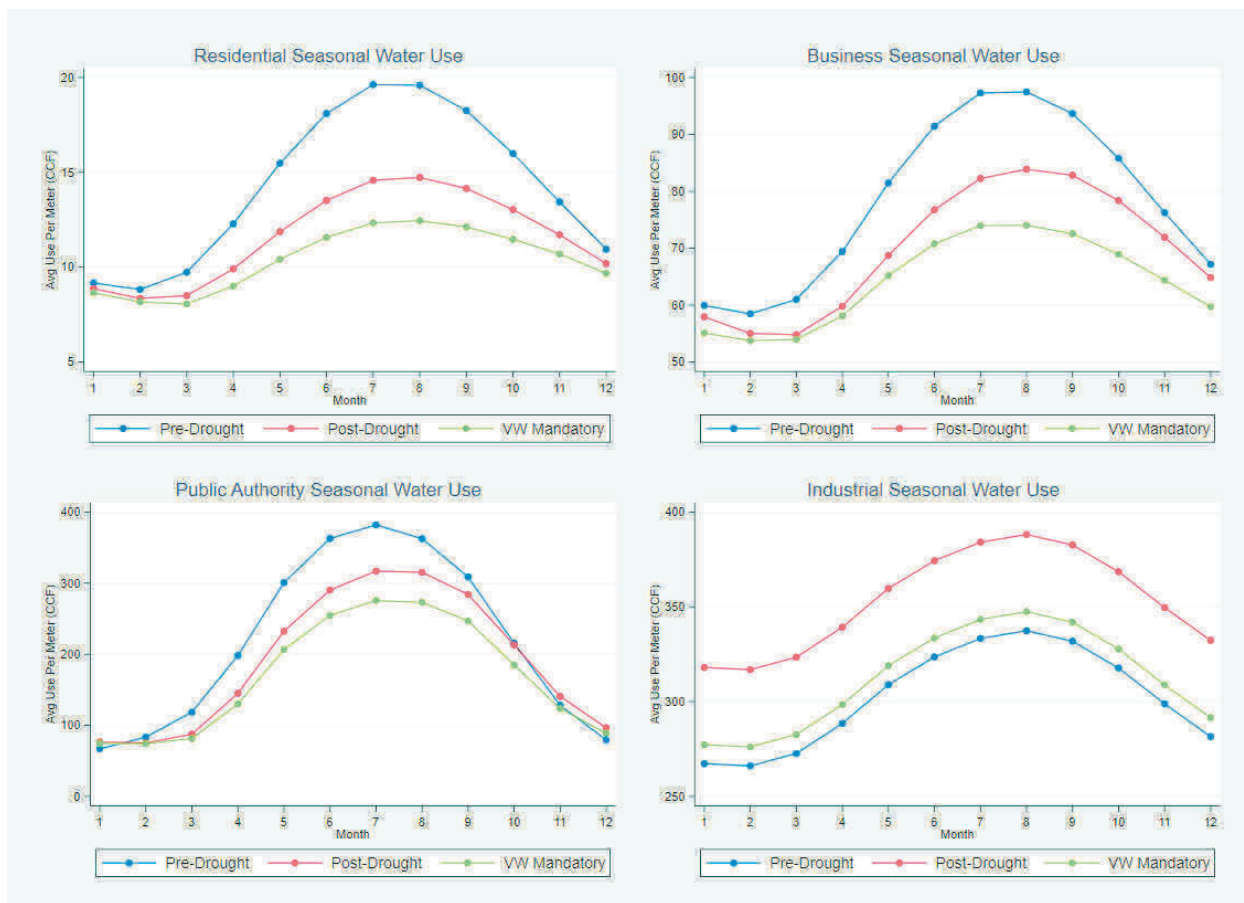
Table 11. Percent Reduction in Average Water Use per Meter Relative to Pre-Drought Water Use

Service Class	Vol. Conserv. 2007-2009	Brown EO (20% Vol.) 2014	State Conserv. Mandate 2015-2016	Self Certification 2016-2017	Post-Drought 2017-2021	Valley Water Conservation Order 2021-2022
Residential	-4.4	-8.2	-32.7	-20.6	-18.8	-29.3
Business	NS	-6.7	-21.2	-12.2	-11.0	-18.8
Public Auth.	NS	NS	-30.6	-12.2	-10.5	-21.2
Industrial	NS	NS	NS	NS	16.2	3.4
NS = No statistically significant reduction in water use						

Change in Seasonal Demand

Most water savings during drought come from landscape irrigation, which lowers summer peak demand. These reductions have the potential to permanently alter seasonal loads, which in turn may alter the need for new capacity. The evolution of SJW’s seasonal demand over the past 15-20 years is illustrated in Figure 5. The 2014-16 drought precipitated a significant reduction in seasonal water use. For example, post-drought residential summer demands are about 25% below their pre-drought level, and during the Valley Water Conservation Order, they dropped roughly an additional 12 percentage points. The residential seasonal load shape is now significantly flatter than it was historically.

Figure 5. Evolution of Seasonal Demands



Effects of Weather

The model’s rainfall and temperature coefficients measure the sensitivity of average water use to departures in rainfall and temperature from their monthly means. As with drought effects, these coefficients can be expressed as semi-elasticities which indicate the percentage change in demand given a one unit change in rainfall or temperature. In the case of rainfall, the semi-elasticity measures the change given a one inch increase in monthly cumulative rainfall. For temperature, it measures the change given a one degree Fahrenheit increase in monthly average maximum daily air temperature. The semi-elasticities for each class of service are summarized in Table 12.

Table 12. Percent Change in Average Water Use per One-Unit Change in Rainfall and Temperature

Service Class	Rainfall	One-Month Lagged Rainfall	Temperature	One-Month Lagged Temperature
Residential	-4.1	-2.2	NS	0.8
Business	-2.3	-1.3	NS	0.4
Public Auth.	-9.0	-4.5	NS	NS
Industrial	NS	NS	NS	NS

The rainfall semi-elasticities measure the percentage change in demand given a one inch increase in monthly cumulative rainfall. The temperature semi-elasticities measure the percentage change in demand given a one degree F increase in monthly average maximum daily air temperature.

The sensitivity of demand to weather is largely related to the preponderance of weather-sensitive outdoor water uses. Public Authority demand is dominated by landscape irrigation and thus it exhibits the greatest weather sensitivity. Residential demand also exhibits significant weather sensitivity. At the other end of the spectrum is industrial demand, where none of the weather semi-elasticities are statistically significant.

On an annual basis, weather variability can cause significant variation in water sales. Using monthly weather data for the period 1905-2022, we estimate that weather variability can cause sales per meter to fluctuate by +/- 10% for the public authority class, by +/- 7% for the residential class, and by +/- 4% for the business class.

Sales Risk Due to Weather and Drought Restrictions

The possibility of drought restrictions significantly alters the sales distribution. This is illustrated for residential sales in Figure 6, which shows the distribution of residential per meter under two scenarios: (1) Only Weather Effects and (2) Combined Weather and Drought Effects.

The Only Weather Effects scenario assumes demand is unconstrained regardless of weather and hydrologic conditions. To simulate weather effects on sales, we use the previous 116 years of monthly weather data from October 1907 to September 2022.¹⁰ We use the econometric model to adjust monthly sales per meter in accordance with the deviations in monthly and lagged monthly rainfall and temperature from their means.

The Combined Weather and Drought Effects scenario assumes demand is restricted when there are two or more consecutive dry/critical years. We simulate drought effects as follows:

- If it is a second consecutive dry/critical year we apply a drought effect that is the same in magnitude as what occurred under the Brown EO, which for the residential class was a reduction of about 8%.

¹⁰ To align with state designations of dry/critical years we use Water Years in the simulation which run from October 1 to September 30.

- If it is a third consecutive dry/critical year we apply a drought effect that is the same in magnitude as what occurred under the Valley Water Conservation Order, which for the residential class was a reduction of about 13% (relative to the post-drought water usage).
- If it is a fourth or greater consecutive dry/critical year we apply a drought effect that is the same in magnitude as what occurred under the state conservation mandate, which for the residential class was a reduction of about 33%.¹¹

Drought restrictions skew the sales distribution sharply to the left. Notice also that the frequency of above average sales is significantly less in the Combined Weather and Drought Effects scenario. This is because drought restrictions are positively correlated with weather that would otherwise push demand up – namely dry and hot conditions.

The results of the simulation show that both conditional and unconditional forecasts of average sales are strongly influenced by the presence of drought restrictions. This is shown in Table 13 which provides mean residential sales conditional on water year type, as well as the unconditional mean (bottom row of table).

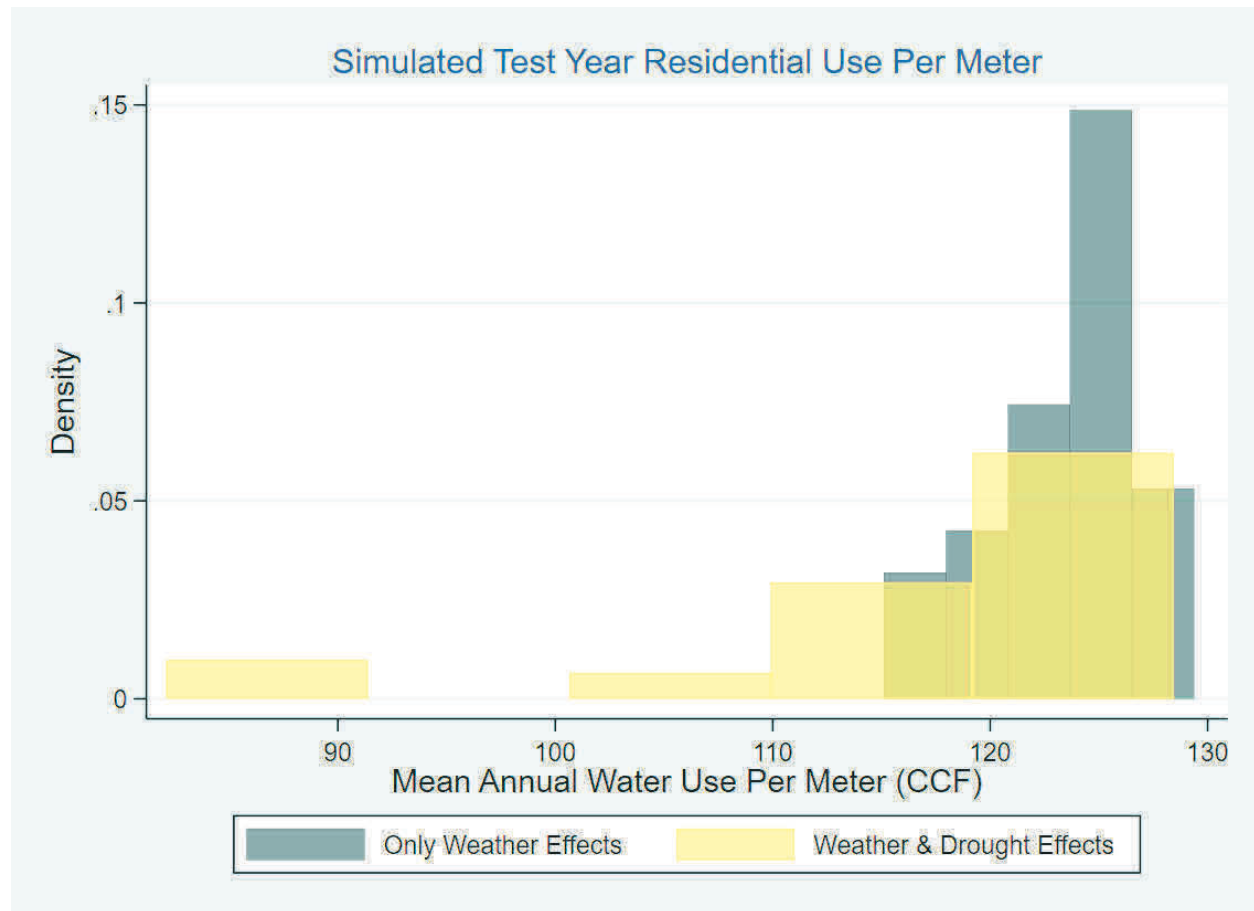
These results have important implications for forecasting sales. Drought restrictions are becoming increasingly common. In the simulation, drought restrictions occurred in 18% of the years. In the previous decade, however, drought restrictions were broadly in place in 40% of the years. Unconditional forecasts of future sales should therefore incorporate the possibility that drought restrictions will be operative in the test and attrition years. The conventional approach is to forecast sales based on average weather and to ignore possible drought effects. The simulation clearly shows that the conventional approach will produce a biased forecast of mean water use. In the residential sales simulation, the bias for the unconditional forecast is approximately 3.2% (123.5/119.7).

Table 13. Conditional and Unconditional Mean Residential Sales Without & With Drought Effects

Forecast Year Type	Frequency in Hydrologic Record	Mean Residential Use (CCF/Yr)	
		Only Weather Effects	Combined Weather & Drought Effects
Non-Drought Years	74	122.2	122.2
Single Dry/Crit. Year	21	125.7	125.7
2 nd Consecutive Dry/Crit. Year	9	126.0	115.7
3 rd Consecutive Dry/Crit. Year	6	126.6	110.3
4 or More Consecutive Dry/Crit. Years	6	124.7	83.9
All Year Types (unconditional mean)	116	123.5	119.7

¹¹ The longest sequence of dry/critical years in the data we used for the simulation is six years. Two such sequences are in the record. One from 1929 to 1934 and the other from 1987 to 1992.

Figure 6. Residential Sales Distribution under (1) Weather Only and (2) Weather & Drought Effects



Average Use Per Service Forecast

We forecast the average use per service for 2023-2027 using the above described econometric models and Monte Carlo simulation of weather and hydrology. The final forecasts are probability-weighted averages of forecasts conditioned on the following year types:

- Non-drought
- Single dry/crit. year
- 2nd consecutive dry/crit. year
- 3rd consecutive dry/crit. year
- 4th consecutive dry/crit. year

The probability of occurrence of the five year types by forecast year is summarized in Table 14. The probabilities are based on 116 years of hydrology for the Sacramento River watershed and were constructed from a probability tree starting with 2023, which we know will be classified a non-drought year.¹² The

¹² The Sacramento River watershed is used for two reasons. First, it is a bell weather for California hydrology in general. Second, it is the primary source of supply for SJW via the federal and state water projects.

remaining branches of the probability tree are based on the frequencies of year type in the historical record conditional on the year type in the previous year. These frequencies are given in Table 15. Attachment 1 provides the complete probability tree that yields the probabilities shown in Table 14.

Table 14. Year Type Probability by Forecast Year

Year Type	Year Type Probability of Occurrence				
	2023	2024	2025	2026	2027
Non-Drought Years	1.0000	0.7162	0.6751	0.6402	0.6511
Single Dry/Crit. Year	0.0000	0.2838	0.2033	0.1916	0.1817
2 nd Consecutive Dry/Crit. Year	0.0000	0.0000	0.1216	0.0871	0.0821
3 rd Consecutive Dry/Crit. Year	0.0000	0.0000	0.0000	0.0811	0.0581
4 th Consecutive Dry/Crit. Year	0.0000	0.0000	0.0000	0.0000	0.0270
Total Probability	1.0000	1.0000	1.0000	1.0000	1.0000

Table 15. Year Type Conditional Frequencies for Sacramento River Watershed (WY 1907-2022)

Following Year Current Year	Non-Drought	First Dry Year	Second Dry Year	Third Dry Year	Fourth Dry Year	Total
Non-Drought	53	21				74
First Dry Year	12		9			21
Second Dry Year	3			6		9
Third Dry Year	4				2	6
Total	74	21	9	6	2	110

The forecasts conditioned on year type are based on the following:

- No drought effects are applied if it is a non-drought or first dry year.
- A drought effect that is the same in magnitude as what occurred under the Brown EO is applied if it is a second consecutive dry year.
- A drought effect that is the same in magnitude as what occurred under the Valley Water Conservation Order is applied if it is a third consecutive dry year.
- A drought effect that is the same in magnitude as what occurred under the State Conservation Mandate is applied if it is a fourth consecutive dry year.

Additionally, the following economic conditions are applied to each forecast:

- The average real rate of increase in marginal service cost over the estimation period, after controlling for seasonal and drought effects, is applied to the forecast. The estimated rates of increase are 2.7% (95% CI: 2.2%-3.1%) for residential service and 1.9% (95% CI: 1.4%-2.4%) for non-residential service.

- The average real rate of increase in household income over the estimation period is applied to the residential forecast. The estimated rate of increase is 2.0% (95% CI: 1.9%-2.1%).
- Caltrans’ forecast unemployment rate for Santa Clara County is applied to the non-residential forecasts.¹³ The projected unemployment rates are 2.7% in 2023, 2.9% in 2024, 3.1% in 2025, 3.3% in 2026, and 3.2% in 2027.
- The trend (see Table 10) in residential and business water use is applied to the forecast. The trend component of the forecast accounts for anticipated reductions in water use due to on-going active and passive conservation as well as changes in demographics and housing density.

Tables 16-19 present the conditional and unconditional forecasts of average use per meter.¹⁴

Table 16. Residential Average Use Forecast (CCF/Meter/Year)

Year Type	2023		2024		2025		2026		2027	
	Prob.	Use	Prob.	Use	Prob.	Use	Prob.	Use	Prob.	Use
Non-Drought	1.0000	122.9	0.7162	123.3	0.6751	122.2	0.6402	121.1	0.6511	120.0
1 st Dry/Crit.	0.0000		0.2838	126.8	0.2033	125.7	0.1916	124.6	0.1817	123.5
2 nd Dry/Crit.	0.0000		0.0000	116.7	0.1216	115.7	0.0871	114.7	0.0821	113.7
3 rd Dry/Crit.	0.0000		0.0000	111.3	0.0000	110.3	0.0811	109.3	0.0581	108.4
4 th Dry/Crit.	0.0000		0.0000	84.6	0.0000	83.9	0.0000	83.1	0.0270	82.4
Wtd. Avg.		122.9		124.3		122.1		120.3		118.4

Table 17. Business Average Use Forecast (CCF/Meter/Year)

Year Type	2023		2024		2025		2026		2027	
	Prob.	Use	Prob.	Use	Prob.	Use	Prob.	Use	Prob.	Use
Non-Drought	1.0000	794.8	0.7162	791.1	0.6751	782.2	0.6402	773.3	0.6511	768.1
1 st Dry/Crit.	0.0000		0.2838	803.1	0.2033	794.2	0.1916	785.3	0.1817	780.0
2 nd Dry/Crit.	0.0000		0.0000	750.6	0.1216	742.3	0.0871	734.0	0.0821	729.1
3 rd Dry/Crit.	0.0000		0.0000	734.3	0.0000	726.2	0.0811	718.1	0.0581	713.3
4 th Dry/Crit.	0.0000		0.0000	630.6	0.0000	623.6	0.0000	616.5	0.0270	612.4
Wtd. Avg.		794.8		794.5		779.8		767.7		732.8

¹³ Accessed from <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/data-analytics-services/transportation-economics/socioeconomic-forecasts/2022/santa-clara-2022-a11y.pdf>.

¹⁴ The forecast for 2023 is the average value for years in the simulation classified as wet since 2023 will be classified as a wet year.

Table 18. Public Authority Average Use Forecast (CCF/Meter/Year)

Year Type	2023		2024		2025		2026		2027	
	Prob.	Use	Prob.	Use	Prob.	Use	Prob.	Use	Prob.	Use
Non-Drought	1.0000	2213.0	0.7162	2229.4	0.6751	2205.9	0.6402	2182.3	0.6511	2174.8
1 st Dry/Crit.	0.0000		0.2838	2324.8	0.2033	2301.2	0.1916	2277.6	0.1817	2270.2
2 nd Dry/Crit.	0.0000		0.0000	2196.5	0.1216	2174.3	0.0871	2152.0	0.0821	2145.0
3 rd Dry/Crit.	0.0000		0.0000	2059.2	0.0000	2038.5	0.0811	2017.6	0.0581	2011.1
4 th Dry/Crit.	0.0000		0.0000	1599.7	0.0000	1583.3	0.0000	1566.9	0.0270	1561.8
Wtd. Avg.		2213.0		2256.5		2221.4		2184.6		2163.6

Table 19. Industrial Average Use Forecast (CCF/Meter/Year)

Year Type	2023		2024		2025		2026		2027	
	Prob.	Use	Prob.	Use	Prob.	Use	Prob.	Use	Prob.	Use
Non-Drought	1.0000	3212.2	0.7162	3176.8	0.6751	3137.3	0.6402	3097.5	0.6511	3084.3
1 st Dry/Crit.	0.0000		0.2838	3182.5	0.2033	3143.0	0.1916	3103.2	0.1817	3090.0
2 nd Dry/Crit.	0.0000		0.0000	3125.7	0.1216	3087.0	0.0871	3047.9	0.0821	3034.9
3 rd Dry/Crit.	0.0000		0.0000	2843.1	0.0000	2808.0	0.0811	2772.5	0.0581	2760.8
4 th Dry/Crit.	0.0000		0.0000	2974.7	0.0000	2937.8	0.0000	2900.5	0.0270	2888.1
Wtd. Avg.		3212.2		3178.4		3132.3		3067.9		3057.2

Average Use Forecast for Setting Rates

For setting rates for the test and attrition years, the average of the 2025-2027 forecasts should be used. These averages are provided in Table 20. We use the average use per meter values in these tables to forecast total sales below.

Table 20. Average of 2025-2027 Average Use Forecasts (CCF/Meter/Year)

Service Class	Avg. Use 2025-2027 Weather & Drought Effects
Residential	120.3
Business	760.1
Public Authority	2189.9
Industrial	3085.8

Resale and Other Water Uses

Resale and Other water use categories account for approximately one percent of SJW sales. Average use for the previous five years is used to forecast future sales. These averages are shown in Table 21.

Table 21. Other and Resale Average Use per Customer

Year	Other/Misc.			Resale		
	Cust.	Sales (CCF)	CCF/ Cust.	Cust.	Sales (CCF)	CCF/ Cust.
2018	254	106,195	419	38	349,652	9,201
2019	292	92,917	318	38	314,655	8,354
2020	298	68,535	230	37	345,362	9,334
2021	309	61,157	198	37	342,763	9,264
2022	313	53,251	170	37	324,444	8,769
		Avg	267		Avg	8,984

Total Water Use Forecast

Total water use is the product of the customer count forecasts in Table 5 and the average use per customer forecasts. The total water use forecasts are provided in Table 22.

Table 22. Total Water Use (Mil. CCF)

Year		Residential	Business	Industrial	Public Authority	Other	Resale	Total
2022	Actual	22.79	15.37	0.14	2.70	0.05	0.32	41.37
2023	Forecast	24.67	16.37	0.16	2.81	0.08	0.33	44.43
2024	Forecast	24.99	16.36	0.15	2.85	0.08	0.33	44.77
2025	Test Year	24.22	15.64	0.15	2.75	0.09	0.33	43.17
2026	Forecast	24.26	15.64	0.14	2.73	0.09	0.33	43.19
2027	Forecast	24.29	15.63	0.14	2.71	0.09	0.33	43.20

Water Use Forecast & Affordability Metrics

Total water use is one of the key inputs for determining cost of service and ultimately water rates. In accordance with the CPUC's D.22-08-023 in Rulemaking 18-07-006, Order Instituting Rulemaking to Establish a Framework and Processes for Assessing the Affordability of Utility Service, the changes resulting from this application to water service affordability, as measured by the CPUC's Affordability Ratio 20 (AR20), Affordability Ratio 50 (AR50), and Hours-at-Minimum-Wage (HR) metrics for each year of the GRC cycle are provided in our companion report *San Jose Water Company 2024 General Rate Case Water Service Affordability Metrics Report*.

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Attachment 1 – Water Year Type Probability Tree

The probability tree used to construct the probabilities in Table 14 is provided on the following page.

Dry Year Sequence Probability Tree											
Key		2023	2024	2025	2026	2027	Prob	Prob	Prob	Prob	Prob
D0	Non Drought Year	D0	D0	D0	D0	D0	1.0000	0.7162	0.5130	0.3674	0.2631
D1	1st Drought Year										0.1043
D2	2nd Drought Year										0.0832
D3	3rd Drought Year										0.0624
D4	4th Drought Year										0.0832
Frequencies (Report Table 15)											
Prev. Yr.	Curr. Yr.	Freq.									
D0	D0	53/74									
D0	D1	21/72									
D1	D0	12/21									
D1	D2	9/21									
D2	D0	3/9									
D2	D3	6/9									
D3	D0	4/6									
D3	D4	2/6									
	Sum Prob	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Year Type Probabilities											
	D0		0.7162				0.6751		0.6402		0.6511
	D1		0.2838				0.2033		0.1916		0.1817
	D2		0.0000				0.1216		0.0871		0.0821
	D3		0.0000				0.0000		0.0811		0.0581
	D4		0.0000				0.0000		0.0000		0.0270
	Sum Prob		1.0000				1.0000		1.0000		1.0000

San Jose Water Company
2024 General Rate Case
Water Service Affordability Metrics Report

Prepared by
David Mitchell
M.Cubed
January 2, 2024

This report contains the water service affordability metrics for San Jose Water Company required per Decision 22-08-023. The following affordability metrics are computed:

- **Hours at Minimum Wage (HR)** – the number of hours at current pre-tax minimum wage rates needed to pay for monthly water service.
- **Affordability Ratio at 20th Percentile Income (AR20)** – the ratio of water service cost to the 20th percentile income level net of other essential utility service costs.
- **Affordability Ratio at 50th Percentile Income (AR50)** – the ratio of water service cost to the 50th percentile income level net of other essential utility service costs.

Affordability metrics are provided for two usage levels:

- **Average usage** – based on 2022 recorded average monthly residential usage of 10 CCF/month.
- **Essential usage** – based on 6 CCF/month, per Decision 20-07-032.

Affordability metrics are provided for two customer categories:

- **Customer Assistance Program (CAP) customers** – CAP customers receive a 15% discount on their total bill.
- **Non-CAP customers** – non-CAP customers pay the posted rates and charges for water service.

Affordability metrics are provided for four sets of rates and charges:

- **Present** – the rates and charges for water service at the time this report was prepared.
- **Test Year** – the proposed rates and charges for calendar year 2025.
- **First Attrition Year** – the proposed rates and charges for calendar year 2026.
- **Second Attrition Year** – the proposed rates and charges for calendar year 2027.

The HR metrics are calculated using current pre-tax minimum wage rates in effect in San Jose Water Company's service area. These minimum wage rates are as follows:

- **City of San Jose** -- \$17.00/hour
- **City of Cupertino** -- \$17.20/hour
- **Rest of Service Area** -- \$15.50/hour

The AR metrics are calculated with the Commission's **ARC_2022_final.xlsx** workbook.¹

The following tables comprise the remainder of this report:

- **Table 1** – Rates and Charges used to Calculate Affordability Metrics
- **Table 2** – Hours at Minimum Wage Affordability Metrics
- **Table 3** – AR20 Affordability Metrics
- **Table 4** – AR50 Affordability Metrics

¹ Downloaded from: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/affordability>.

Table 1. Rates and Charges Used to Calculate Affordability Metrics

	Present	Year 1		Year 2		Year 3			
		2025		2026		2027			
		Amount (\$)	Change from Present (\$)	Amount (\$)	Change from Present (\$)	Amount (\$)	Change from Present (\$)		
Service Charge (per Mo.)	\$52.97	\$17.47	33.0%	\$73.23	\$20.26	38.2%	\$76.51	\$23.54	44.4%
Commodity Charge (per CCF)									
Tier 1	\$4.732	-\$0.540	-11.4%	\$4.362	-\$0.370	-7.8%	\$4.562	-\$0.170	-3.6%
Tier 2	\$6.519	-\$0.263	-4.0%	\$6.510	-\$0.009	-0.1%	\$6.807	\$0.288	4.4%
Tier 3	\$9.750	\$2.200	22.6%	\$12.434	\$2.684	27.5%	\$13.005	\$3.255	33.4%

*Service charge is for a 5/8" or 3/4" residential meter. CAP customers receive a 15% discount on rates and charges.

Table 2. Hours at Minimum Wage Affordability Metrics

	Present	Year 1 2025			Year 2 2026			Year 3 2027		
		Hours	Change from Present (hours)	%	Hours	Change from Present (hours)	%	Hours	Change from Present (hours)	%
		Hours	Change from Present (hours)	%	Hours	Change from Present (hours)	%	Hours	Change from Present (hours)	%
Average Use										
CAP										
City of San Jose	5.4	6.0	0.7	12.3%	6.3	0.9	16.8%	6.6	1.2	22.0%
City of Cupertino	5.3	6.0	0.7	12.3%	6.2	0.9	16.8%	6.5	1.2	22.0%
Rest of Service Area	5.9	6.6	0.7	12.3%	6.9	1.0	16.8%	7.2	1.3	22.0%
Non-CAP										
City of San Jose	6.3	7.1	0.8	12.3%	7.4	1.1	16.8%	7.7	1.4	22.0%
City of Cupertino	6.2	7.0	0.8	12.3%	7.3	1.0	16.8%	7.6	1.4	22.0%
Rest of Service Area	6.9	7.8	0.9	12.3%	8.1	1.2	16.8%	8.5	1.5	22.0%
Essential Use										
CAP										
City of San Jose	4.1	4.8	0.7	17.5%	5.0	0.9	22.2%	5.2	1.1	27.7%
City of Cupertino	4.0	4.7	0.7	17.5%	4.9	0.9	22.2%	5.1	1.1	27.7%
Rest of Service Area	4.5	5.2	0.8	17.5%	5.5	1.0	22.2%	5.7	1.2	27.7%
Non-CAP										
City of San Jose	4.8	5.6	0.8	17.5%	5.8	1.1	22.2%	6.1	1.3	27.7%
City of Cupertino	4.7	5.6	0.8	17.5%	5.8	1.0	22.2%	6.0	1.3	27.7%
Rest of Service Area	5.2	6.2	0.9	17.5%	6.4	1.2	22.2%	6.7	1.5	27.7%

*Hours at Minimum Wage metrics are calculated with minimum wage rates currently in effect in service area.

Table 3. AR20 Affordability Metrics

	Present	Year 1 2025		Year 2 2026		Year 3 2027	
		AR20	Change from Present (%)	AR20	Change from Present (%)	AR20	Change from Present (%)
Average Use							
CAP	4.16%	4.54%	9.1%	4.65%	11.8%	4.79%	15.0%
Non-CAP	4.90%	5.34%	9.1%	5.48%	11.8%	5.63%	15.0%
Essential Use							
CAP	3.15%	3.60%	14.2%	3.69%	17.0%	3.79%	20.3%
Non-CAP	3.71%	4.23%	14.2%	4.34%	17.0%	4.46%	20.3%

*AR20 metrics calculated with CPUC ARC_2022_final.xlism workbook.

Table 4. AR50 Affordability Metrics

	Present	Year 1 2025		Year 2 2026		Year 3 2027	
		AR50	Change from Present (%)	AR50	Change from Present (%)	AR50	Change from Present (%)
Average Use							
CAP	1.06%	1.14%	7.6%	1.16%	9.6%	1.18%	11.6%
Non-CAP	1.24%	1.34%	7.6%	1.36%	9.6%	1.39%	11.6%
Essential Use							
CAP	0.80%	0.90%	12.6%	0.92%	14.7%	0.94%	16.8%
Non-CAP	0.94%	1.06%	12.6%	1.08%	14.7%	1.10%	16.8%

*AR50 metrics calculated with CPUC ARC_2022_final.xlism workbook.

CHAPTER 7

CUSTOMERS, SALES AND OPERATING REVENUES

Prepared by Nanci Tran

A. General

1. Workpapers supporting this chapter can be found in Workpapers, Chapter 7.
2. This chapter includes descriptions of three inter-related subjects: (1) customers, (2) metered sales, and (3) operating revenues. Separate testimony, prepared by M. Cubed as presented in Chapter 6, is being offered in support of the sales forecasts for all customer classes.

B. Customers

3. The total number of active service connections, excluding those for supplemental fire protection service is used to estimate the total number of customers in a water system. Because there are differences in use characteristics among classes of service, the sales and revenues are estimated separately.

4. Table 7-A sets forth, by totals and classifications, the average number of active service connections during the years 2018 through 2023. The averages shown are considered more indicative than end-of-period totals, particularly when related to metered sales or revenues. Insofar as additions during the year follow a normal pattern, the additions between two average periods would also reflect the additions between comparable dates such as end of year totals.

5. There are eight classes of customers: residential, business, industrial, public authority, resale, recycled water (piped and well), raw water, and other. Residential housing units make up the first class, small business customers and multifamily units are included in the business category while large business customers make up the industrial class. The public authority services consist of schools and other governmental customers while the other class is a catch all of miscellaneous customers, such as construction and temporary services. The resale customer class is made up of mutual water companies and other water companies with emergency connections to SJWC. Recycled water customers are customers within SJWC's

service area that takes recycled water service from the San Jose recycled water system. Finally, SJWC has 5 raw water accounts with their own water treatment facilities.

6. In accordance with the 2004 RCP, except where indicated in the workpapers, customer additions for each of the customer classes in the transition year (2024), test year (2025) and the escalation years (2026 and 2027) were developed using five-year averages increase. However, due to the finite number of customers, no changes are forecast to the raw water and recycled well customers. The estimated number of services coupled with the estimated metered sales provides the basis upon which revenues are then determined.

C. Metered Sales

7. Table 7-C shows sales to metered customers by totals and classifications, as recorded for the last six years. Also shown on this table are the average sales per metered customer by classification. In addition, the amounts of water delivered to the system by total and source are shown.

8. Per Decisions 16-12-026 and 20-08-047, the sales forecasts consider consumption trends during and following drought periods and explicitly adjust the forecasts of future sales for reductions in water use that have occurred over the past five years in response to drought, anticipated reductions in use due to changes in the cost of water, ongoing conservation (both passive and active), and conversion of potable water uses to recycled water. A description of the methodology is included as RO Report Chapter 6. The forecasts are built up from forecasts of average use per customer also take into account the potential impacts of continued policies supporting “conservation as a way of life” and the pandemic.

9. Also shown on Table 7-D is the estimated amounts of water to be delivered to the system by total and by source for the years 2024 through 2027. The total requirement is predicated on the trend of average usage per customer and the estimated number of customers, exclusive of fire protection. The production from various sources (Surface, Purchased, and Ground) has been estimated by reviewing historical data, see Results of Operations, Chapter 21.

D. Operating Revenues

13. Table 7-E shows, by total and classification, the recorded operating revenues for the years 2018 through 2023 (annualized).

14. Table 7-F shows, by totals and classifications, a comparison of estimated operating revenues at present and proposed rates for the years 2024 through 2027. It also shows the increases at proposed rates expressed both in dollars and percent. These projections are predicated upon the estimated average numbers of customers shown on Table 7-B and the estimated metered sales shown on Table 7-D. The estimates of revenues that have been designated "present rates" in this report are based upon rates which were implemented on July 31, 2023 via Advice Letter No. 599.

15. In compliance with Commission Decision No. 87-09-026 the Company amortized into its revenues, from the deferred revenue account, the funds provided by contributors through the gross-up on contributions in aid of construction. Table 7-F shows the annual amount of deferred revenue included in each test year, detailed can be found in Workpapers, WP 7-01E.

E. Rate Design

16. SJWC is keeping the three tier rate structure and break point as is. However, rates are designed to recover 50% of revenue from service charge, detailed can be found in Workpapers, WP 7-15D. SJWC is keeping the tier 1 discount at 67% of uniform rate (Tier 2), however due to revenue neutrality, rates for tier 3 will have to increase to 191% of uniform rate (Tier 2). In order to maintain revenue neutrality, it is necessary for SJWC to recover the discount given to Tier 1 usage by increase Tier 3's rate, see Workpapers, WP 7-35 D Tier Rates. This is consistent with SJWC's goal to encourage conservation through rate design by increasing the rate at the higher usage tier (Tier 3).

**SAN JOSE WATER COMPANY
(U-168-W)**

AVERAGE ACTIVE SERVICE CONNECTIONS

(2018-2023)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year 2022	August 2023
Average Metered Services:							
Residential	199,330	199,886	199,890	199,723	200,190	200,515	200,768
Business	20,650	20,658	20,605	20,576	20,597	20,808	20,612
Industrial	53	53	51	51	50	50	49
Public Authorities	1,308	1,300	1,289	1,273	1,271	1,276	1,269
Resale	33	33	32	32	32	32	31
Other	254	292	292	309	313	340	308
Raw	6	6	6	6	6	5	5
Recycled Water, (Piped)	234	256	273	280	293	278	296
Total Average Metered Services	221,867	222,484	222,438	222,250	222,751	223,304	223,339
Recycled Water, Well	8	8	8	8	8	8	8
Average Fire Services:							
Private Fire Service	3,934	3,996	4,048	4,109	4,146	4,193	4,172
Total Average Active Services	225,808	226,487	226,494	226,368	226,906	227,505	227,518

**SAN JOSE WATER COMPANY
(U-168-W)**

AVERAGE ACTIVE SERVICE CONNECTIONS

(2024 - 2027)

	Transition <u>2024</u>	Test Year <u>2025</u>	-----Escalation----- <u>2026</u>	<u>2027</u>
Average Metered Services:				
Residential	201,056	201,344	201,632	201,920
Business	20,605	20,598	20,591	20,584
Industrial	48	47	46	45
Public Authorities	1,261	1,253	1,245	1,237
Resale	31	31	31	31
Other	319	330	341	352
Raw	5	5	5	5
Recycled Water	308	320	332	344
Total Average Metered Services	223,633	223,928	224,223	224,518
Recycled Water Well	8	8	8	8
Average Flat Rate Services:				
Private Fire Service	4,220	4,268	4,316	4,364
Total Average Active Services	227,861	228,204	228,547	228,890

TABLE 7-C

**SAN JOSE WATER COMPANY
(U-168-W)**

METERED SALES AND WATER SUPPLY

(2018-2023)

(Thousands of Cubic Feet)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>Authorized Test Year 2022</u>	<u>2023</u>
Metered Potable Sales (Kccf):							
Residential	25,874	25,649	29,810	26,591	23,161	26,267	21,809
Business	16,616	16,453	17,107	16,125	15,262	15,772	14,724
Industrial	231	174	144	138	140	178	105
Public Authority	2,479	2,400	2,255	2,225	2,177	2,831	1,990
Resale	207	179	208	200	186	195	279
Other	106	93	69	61	53	89	62
Total Metered Sales	45,513	44,947	49,594	45,341	40,980	45,332	38,970
Raw Water	143	117	137	142	138	90	105
Recycled Water	578	739	653	710	732	880	665
Recycled Water Well	440	363	414	423	420	377	373
Average Sales per Customer (ccf):							
Residential	130	128	149	137	116	131	109
Business	805	796	830	784	741	758	714
Industrial	4,374	3,300	2,827	2,699	2,837	3,567	2,148
Public Authorities	1,895	1,845	1,749	1,747	1,714	2,219	1,568
Resale	6,258	5,480	6,512	6,261	5,813	6,094	9,001
Other	419	318	230	198	170	262	202
Raw Water	28,629	23,379	27,396	28,479	27,684	18,000	21,074
Recycled Water	2,468	2,882	2,395	2,538	2,494	3,166	2,247
Recycled Water Well	55,062	45,410	51,719	52,897	52,460	47,133	46,671
Water Supply (Kccf):							
Purchased Water	15,682	16,162	23,114	23,201	18,976	16,497	14,315
Ground Water	29,737	29,662	26,949	24,594	23,428	29,938	23,244
Surface Water	3,575	3,555	1,703	600	2,577	2,445	6,003
Total Supply	48,994	49,379	51,765	48,395	44,981	48,880	43,562

TABLE 7-D

**SAN JOSE WATER COMPANY
(U-168-W)**

**METERED SALES AND WATER SUPPLY
(2024 - 2027)**

	Transition	Test Year	-----Escalation-----	
	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>
Metered Potable Sales (Kccf):				
Residential	24,931	24,161	24,196	24,230
Business	16,381	15,654	15,649	15,644
Industrial	153	145	142	139
Public Authorities	2,845	2,744	2,727	2,709
Other Utilities	188	188	188	188
Other	<u>85</u>	<u>88</u>	<u>91</u>	<u>94</u>
Total Metered Sales	<u>44,583</u>	<u>42,980</u>	<u>42,993</u>	<u>43,004</u>
Raw Water:	136	136	136	136
Recycled Water Piped	787	818	848	879
Recycled Water Well	412	412	412	412
Average Sales per Customer (ccf):				
Residential	124	120	120	120
Business	795	760	760	760
Industrial	3,178	3,086	3,086	3,086
Public Authorities	2,256	2,190	2,190	2,190
Other Utilities	6,065	6,065	6,065	6,065
Other	267	267	267	267
Raw Water	27,113	27,113	27,113	27,113
Recycled Water	2,555	2,555	2,555	2,555
Recycled Water Well	51,510	51,510	51,510	51,510
Water Supply (Kccf):				
Purchased Water	23,202	23,202	23,202	23,202
Ground Water	21,692	19,953	19,968	19,980
Surface Water	<u>3,453</u>	<u>3,453</u>	<u>3,453</u>	<u>3,453</u>
Total Supply	<u>48,347</u>	<u>46,609</u>	<u>46,623</u>	<u>46,635</u>

SAN JOSE WATER COMPANY
(U-168-W)

OPERATING REVENUE

(2018-2023)

(Thousands of Dollars)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test year <u>2022</u>	<u>2023</u>
Metered Revenue:							
Residential	\$215,782	\$239,871	\$247,985	\$246,585	\$242,812	\$273,566	\$260,814
Business	\$115,744	\$122,686	\$115,788	\$121,354	\$123,886	\$124,812	\$132,700
Industrial	\$1,502	\$1,226	\$983	\$1,015	\$1,086	\$1,259	\$954
Public Authorities	\$17,359	\$17,967	\$16,016	\$17,039	\$17,875	\$20,782	\$18,425
Resale	\$1,168	\$1,160	\$1,109	\$1,113	\$1,181	\$1,205	\$1,094
Other	\$717	\$1,270	\$12,487	\$1,756	\$1,916	\$2,369	\$2,203
Raw Water	\$656	\$543	\$645	\$761	\$740	\$473	\$685
Recycled Water	\$4,723	\$5,126	\$4,989	\$5,507	\$6,082	\$6,337	\$6,461
Total Metered Revenue	\$357,651	\$389,849	\$400,003	\$395,130	\$395,580	\$430,803	\$423,335
Flat Rate & Miscellaneous Revenue:							
Residential Fire Service Up-Size	\$197.9	\$290.9	\$314.2	\$329.5	\$325.7	\$496.7	\$409.2
Private Fire Service	\$3,765	\$5,163	\$5,147	\$5,709	\$6,082	\$7,744	\$7,028
Rent	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$158	\$146	\$26	\$9	\$11	\$204	\$15
Total Flat Rate & Misc. Revenue	<u>\$4,121</u>	<u>\$5,600</u>	<u>\$5,488</u>	<u>\$6,048</u>	<u>\$6,419</u>	<u>\$8,445</u>	<u>\$7,452</u>
Total Operating Revenue	<u>\$361,772</u>	<u>\$395,450</u>	<u>\$405,491</u>	<u>\$401,178</u>	<u>\$401,999</u>	<u>\$439,248</u>	<u>\$430,787</u>
Deferred Revenue	\$650	\$903	\$1,086	\$1,114	\$1,261	\$1,500	\$1,278
Total Revenue	<u>\$362,422</u>	<u>\$396,352</u>	<u>\$406,577</u>	<u>\$402,292</u>	<u>\$403,260</u>	<u>\$440,748</u>	<u>\$432,064</u>

SAN JOSE WATER COMPANY
(U-168-W)

COMPARISON OF OPERATING REVENUES AT PRESENT AND PROPOSED RATES

(2024 - 2027)

(Thousands of Dollars)

	2024		2025		2026		2027	
	Present Rates	Proposed Rates	Present Rates	Proposed Rates	Present Rates	Proposed Rates	Present Rates	Proposed Rates
Metered Revenue:								
Residential	\$307,156	\$307,156	\$302,344	\$343,742	\$302,777	\$358,000	\$303,203	\$374,743
Business	\$151,825	\$151,825	\$147,076	\$157,789	\$147,033	\$164,080	\$146,984	\$171,489
Industrial	\$1,323	\$1,323	\$1,266	\$1,333	\$1,227	\$1,341	\$1,210	\$1,384
Public Authorities	\$24,920	\$24,920	\$24,198	\$25,555	\$24,062	\$26,437	\$23,908	\$27,466
Resale	\$1,348	\$1,348	\$1,348	\$1,339	\$1,348	\$1,392	\$1,348	\$1,456
Other	\$2,376	\$2,376	\$2,460	\$3,058	\$2,545	\$3,290	\$2,623	\$3,459
Raw Water	\$877	\$877	\$877	\$844	\$877	\$880	\$877	\$922
Recycled Water	\$8,290	\$8,290	\$8,338	\$8,567	\$8,388	\$8,928	\$8,448	\$9,555
Total Metered Revenue	\$498,115	\$498,115	\$487,907	\$542,227	\$488,257	\$564,348	\$488,601	\$590,474
Increase Over Present Rates:								
- Amount		\$0		\$54,320		\$76,091		\$101,873
- Percent		0%		11.13%		15.58%		20.85%
Step Increase - Percent						4.00%		4.56%
Fire Service & Miscellaneous Revenue:								
Residential Fire Service Up-Size	\$446	\$446	\$463	\$515	\$481	\$555	\$498	\$601
Private Fire Service	\$7,340	\$7,340	\$7,421	\$8,246	\$7,509	\$8,676	\$7,593	\$9,167
Rent	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$15	\$15	\$15	\$15	\$15	\$15	\$15	\$15
Total Fire Service & Miscellaneous Revenue	\$7,801	\$7,801	\$7,899	\$8,776	\$8,005	\$9,246	\$8,106	\$9,783
Total Operating Revenue	\$505,916	\$505,916	\$495,806	\$551,003	\$496,262	\$573,594	\$496,707	\$600,257
Deferred Revenues - Gross of Tax	\$948	\$948	\$977	\$977	\$977	\$977	\$874	\$874
Total Revenue	\$506,864	\$506,864	\$496,783	\$551,979	\$497,238	\$574,571	\$497,581	\$601,131
Increase Over Present Rates:								
- Amount		0		55,196		77,332		103,550
- Percent		0.00%		11.11%		15.55%		20.81%
Step Increase - Percent						4.00%		4.69%

CHAPTER 8

OPERATION AND MAINTENANCE EXPENSES

Prepared by Nanci Tran

A. Description and Classification of Expenses

1. Workpapers supporting this chapter can be found in Workpapers, Chapter 8. The Rate Case Plan requires the utility to "present an inflation adjusted simple five-year average for all administrative, operational and maintenance expenses, with the exception of off-settable expenses and salaries in its work papers." SJWC has included this information in the work papers supporting this application.

2. Operating expenses include expenditures incurred in operating the system for safe and reliable service to customers. In general, they are comprised of expenses for purchased power for pumping and boosting, pump taxes, purchased water, payroll, transportation, materials and supplies, water quality costs, uncollectible, and other miscellaneous costs.

3. Maintenance expenses are expenditures for repairing and maintaining the system in good operating condition. In general, they include expenses for payroll, maintenance materials and payments for work performed by contractors.

4. The third major category of expenses is administrative and general expenses which are considered separately and are discussed in Chapter 9.

B. Operating and Maintenance (O&M) Expenses

5. Table 8A shows by major classification the operating and maintenance (O&M) expenses recorded for the years 2018 through 2023 (annualized).

Except as indicated in the workpapers, or as discussed below, estimated expenses for the transition year 2024 and test year 2025 are typically estimated by escalating the 5-year inflation adjusted average for years 2019 through 2023. The inflation rate applied to each expense category is in accordance with the Commission Decision No. 04-06-018, the interim

Order Adopting Rate Case Plan, escalation of Labor and Non-Labor Expense, Rate Base Addition, which appears in page 14 of the PDF version of the decision (see table below). The compensation per hour and non-labor inflation rates used in the composite inflation rate, as well as the labor inflation rate are published by Public Advocates (Cal Advocates), Water Branch. The CPI-U is published by the US Department of Labor, Bureau of Labor Statistics. The rates can be found in Workpapers, WP 8-03.

LINE ITEM	ESCALATION RATE
Purchased Chemicals	Non-Labor 60%/Compensation per hour 40%
Payroll	Labor
Pensions and Benefits	Labor
Other O&M and A&G	Non-Labor 60%/Compensation per hour 40%
Payroll Taxes	Labor
Other Taxes (excluding income)	Non-Labor 60%/Compensation per hour 40%
Loans, Insurance, Contracted Services, Rents	CPI-U (previous 12 months)

6. Recorded expenses were adjusted by amounts recovered through balancing or memorandum accounts. Annual additions approved in the last GRC D.23-10-005 were removed from recorded and added it back to forecasted years. Approved additions from D.23-10-005 are for annual amounts, by leaving it in the recorded and performing a five-year average for it will dilute the annual approved amount. Therefore, it's removed from the recorded years 2022 and 2023 and add back in to forecasted year (2024-2027) to ensure an approved annual amount is included.

C. Transportation Expenses

7. Transportation expenses comprise of labor, payroll taxes, insurance, fuel, depreciation, and other expenses. Labor expense forecasted methodology can be found in Results of Operations, Chapter 5. The labor expense allocated to transportation can be

found in Workpapers, WP 8-11. Payroll taxes is a percent of labor expense, last recorded percent was used. Insurance forecast is based on increases provided by our insurance broker. Depreciation expense forecast methodology can be found in Result of Operations, Chapter 12. All other transportation expenses are forecasted using inflation adjusted five-year average.

D. Purchased Services Expenses

8. For the most part purchased services expenses (Workpaper, WP 8-13) are using the inflation adjusted five-year average. However SJWC is requesting the following additional expenses to be added to purchased services:

- i. Operations Security Expense: Additional expenses are required as discussed in Results of Operations, Chapter 20. SJWC anticipates increased costs for security services \$2,918,000 annually in 2025. And an additional increase of \$26,500 in 2026 and \$15,000 in 2027.
- ii. Invoice Cloud: SJWC anticipates increased costs for security services in 2024 of \$510,000. Justification can be found in **Attachment A**.

E. Supply Related Expenses

9. Supply related expenses including purchased water (Potable and Recycled), pump tax, purchased power, chemical, and waste disposal is shown in Workpapers WP 8-5, WP 8-6, and WP 8-21. Forecasted methodology and testimony for those expenses can be found in Result of Operations, Chapter 21.

F. Payroll Expense

10. Payroll expense calculations can be found in Workpapers WP 8-7 through 8-11. Forecasted methodology and testimony for payroll can be found in Result of Operations, Chapter 5.

G. Non-tariffed Activities

11. The Company participates in several business activities employing utility assets which would otherwise go underutilized. All risks related to these business activities are borne by the shareholders, while the associated revenue generates benefits to both ratepayers and shareholders.

12. On October 19, 2010 the Commission issued D.10-10-019 in R.09-04-012 “Commission Order Instituting Rulemaking on the Commission’s Own Motion to Develop Standard Rules and Procedures for Regulated Water and Sewer Utilities Governing Affiliate Transactions and the Use of Regulated Assets for Non-Tariffed Utility Services (formerly called Excess Capacity)”. This decision adopted Rules for Water and Sewer Utilities Regarding Affiliate Transactions and the Use of Regulated Assets for Non-Tariffed Utility Services (Affiliate Transaction Rules). Affiliate Transaction Rule X.C establishes the shareholder/ratepayer revenue sharing mechanism to be employed for business activities employing utility assets which would otherwise go underutilized. Pursuant to Affiliate Transaction Rule X.C the sharing mechanism should be based on a gross revenue methodology determining a 70/30 split of gross revenue (excluding “pass-through” revenue) for “Passive” activities and 90/10 split for business activities classified as “Active” (the classification of the individual activities is delineated in the Affiliate Transaction Rules).

13. The workpapers supporting this chapter can be found in Exhibit F, Chapter 8, WP 8-16 and in the responses to the Master Data Request. Since the revenue generated by these contracts is not guaranteed, for forecasting purposes SJWC has used the inflation adjusted five year average adjusted for known contract modifications as described in the following sections.

Telecommunication Antenna Leases

14. The Company is leasing antenna space to telecommunication companies on various water tanks. Although the number of contracts varies, currently the company has 36 of these contracts. The contracts are usually for a period of five years, and may or may not be renewed as telecommunication technology continues to evolve. All risks related to this contract are borne by the shareholders of the Company. In accordance with D.00-07-018 these contracts are classified as “Passive”, resulting in an allocation of 30% to the ratepayers.

Home Emergency Solutions (HomeServe USA)

15. The company is working with HomeServe USA to provide customers information regarding water service line responsibility and optional water service line coverage provided by HomeServe through a direct mail campaign executed by HomeServe. The contractual arrangement for coverage is between HomeServe and the customer. Additionally, SJWC does not provide customer information to HomeServe. HomeServe is also cross-selling other products (e.g., wastewater, interior plumbing and drainage protection) to active water service line policy holders. In accordance with D.11-18-025 this contract is classified as “Passive”, resulting in an allocation of 30% to the ratepayers.

City of Cupertino Water System Lease

16. In October 1997 SJWC was awarded a 25-year lease to operate and maintain the City of Cupertino water system located adjacent (contiguous) to the Company’s regulated service area. The City of Cupertino system, which is operationally interconnected to the SJWC system, provides potable water service to approximately 4,500 customers. Pursuant to the lease agreement the Company will receive all the water rate revenue generated within the City of Cupertino system. In return the Company is responsible for all system upgrades to be completed during the 25-year lease period. Pursuant to the lease agreement SJWC’s rates were phased-in over a three year period ending in 2000. However, the rates in the City of Cupertino are ultimately subject to the approval of the City Council. In accordance with D.00-07-018 this contract is classified as “Active”, resulting in an allocation of 10% to the ratepayers.

Maintenance and Miscellaneous Services for the City of San Jose Municipal Water System

17. In March 2003 the San Jose City Council authorized the City of San Jose to enter into a 10-year agreement with SJWC for repair and maintenance services, valve exercising services and some miscellaneous services. In accordance with D.00-07-018 the maintenance and valve exercising services contract is classified as “Active”, resulting in an allocation of 10% to the ratepayers from the contract. In accordance with D.00-07-018 the

miscellaneous services contract is classified as “Passive”, resulting in an allocation of 30% to the ratepayers from the contract.

Meter Shop Testing Service

18. SJWC provides meter testing and repair services to outside water utilities. The intent of the program is to offer outside agencies an inexpensive alternative to full meter replacement. We serve on average 6 water utilities per year.

SAN JOSE WATER COMPANY
(U-168-W)

OPERATING AND MAINTENANCE EXPENSES*

(2018-2023)

(Thousands of Dollars)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>Authorized Test Year 2022</u>	<u>2023</u>
Operating Expense:							
Purchased Water Potable	\$91,717	\$90,601	\$91,484	\$87,687	\$93,712	\$110,927	\$108,995
Purchased Water Recycle	\$2,680	\$2,793	\$3,108	\$3,500	\$4,023	\$4,023	\$4,058
Pump Taxes	\$44,487	\$43,847	\$72,876	\$76,350	\$70,076	\$56,772	\$49,182
Power	\$6,342	\$6,245	\$8,490	\$9,010	\$8,748	\$5,593	\$7,911
Labor	\$13,556	\$14,269	\$15,057	\$15,678	\$16,934	\$14,815	\$17,218
Transportation	\$2,125	\$2,180	\$2,213	\$2,328	\$2,690	\$2,170	\$2,589
Purchased Services - M & S	\$4,256	\$5,320	\$5,314	\$5,481	\$4,842	\$6,383	\$5,682
Conservation Expenses	\$1,599	\$1,651	\$841	\$1,194	\$727	\$1,362	\$166
Other	\$403	\$397	\$479	\$440	\$718	\$444	\$736
Chemicals	\$663	\$740	\$504	\$429	\$710	\$547	\$999
Water Qual Reg Costs	\$655	\$653	\$543	\$458	\$647	\$228	\$1,018
Uncollectibles	\$374	\$330	\$504	\$522	\$496	\$496	\$2,384
Postage	\$437	\$436	\$576	\$582	\$410	\$488	\$468
Non-Regulated Business Adj.	(\$1,076)	(\$1,034)	(\$1,041)	(\$1,021)	(\$1,185)	(\$1,036)	(\$1,178)
Total Operating Expense	\$168,217	\$168,427	\$200,948	\$202,636	\$203,548	\$203,212	\$200,228
Non-tariffed Services Adjustment						\$0	
Maintenance Expense:							
Labor	\$8,493	\$8,659	\$8,260	\$8,420	\$8,804	\$8,429	\$8,313
Purchased Services - M & S	\$7,516	\$7,805	\$7,105	\$8,681	\$12,689	\$8,983	\$7,573
Transportation	\$1,614	\$2,013	\$1,937	\$2,115	\$2,264	\$2,081	\$2,133
Other	\$226	\$317	(\$813)	\$393	\$355	\$514	\$310
Adjustment for Non-utility Plant	(\$4)	(\$4)	(\$4)	(\$5)	(\$5)	(\$4)	(\$5)
Total Maintenance Expense	\$17,845	\$18,790	\$16,485	\$19,604	\$24,107	\$20,003	\$18,323
Total Operating & Maintenance Expense	\$186,062	\$187,216	\$217,433	\$222,240	\$227,655	\$223,215	\$218,552

*Exclusive of Administrative & General Expenses, Depreciation and Taxes

TABLE 8-B

**SAN JOSE WATER COMPANY
(U-168-W)**

**OPERATING AND MAINTENANCE EXPENSES*
(2024 - 2027)**

(Thousands of Dollars)

	Transition <u>2024</u>	Test Year <u>2025</u>	-----Escalation----- <u>2026</u>	<u>2027</u>
Operating Expense:				
Purchased Water Potable	\$111,268	\$111,268	\$111,268	\$111,268
Purchased Water Recycle	\$5,145	\$5,278	\$5,406	\$5,539
Pump Taxes	\$98,303	\$90,422	\$90,488	\$90,543
Power	\$8,882	\$8,562	\$8,565	\$8,567
Labor	\$18,427	\$20,186	\$20,702	\$21,178
Transportation	\$2,950	\$2,363	\$2,563	\$2,808
Purchased Services - M & S	\$10,261	\$13,575	\$14,125	\$14,684
Conservation Expenses	\$1,063	\$1,079	\$1,100	\$1,124
Other	\$605	\$615	\$627	\$640
Chemicals	\$997	\$971	\$992	\$1,016
Water Qual Reg Costs	\$756	\$769	\$785	\$803
Uncollectibles	\$1,543	\$1,680	\$1,749	\$1,830
Postage	\$555	\$564	\$576	\$589
Non-Regulated Business Adj.	(\$1,214)	(\$1,234)	(\$1,260)	(\$1,290)
Total Operating Expense	\$259,540	\$256,097	\$257,684	\$259,301
Maintenance Expense:				
Labor	\$10,406	\$11,400	\$11,692	\$11,960
Purchased Services - M & S	\$10,066	\$10,454	\$10,857	\$11,276
Transportation	\$2,431	\$1,947	\$2,112	\$2,314
Other	\$102	\$103	\$105	\$108
Adjustment for Non-utility Plant	(\$5)	(\$5)	(\$5)	(\$5)
Total Maintenance Expense	\$23,000	\$23,900	\$24,761	\$25,653
Total Operating & Maintenance Expense	\$282,540	\$279,997	\$282,445	\$284,954

*Exclusive of Administrative & General Expenses, Depreciation and Taxes

Attachment A

Memorandum

To: John Tang
From: Stephanie Napoleon & Amber DeLeon
Date: September 29, 2023

RE: Invoice Cloud

THE PURPOSE

For the benefit of its ratepayers and the environment, San Jose Water (“SJW”) has partnered with Invoice Cloud to provide a more user-friendly and streamlined billing experience with diverse payment options including the ability to pay via on-line, text, digital wallet, PayPal, Venmo or phone so customers have the flexibility to receive their bills and make payments in whichever way is most convenient for them. The service includes the ability to set up automatic payment, schedule payments for specific dates of the month and opt for paperless billing reducing day-to-day paper waste.

SJW’S PREVIOUS SERVICE

SJW used Kubra as their electronic bill presentment and payment provider (EBPP) which had not been upgraded in over 15 years. The antiquated services that Kubra offered were limited in specific relation to the types of payments accepted but also SJW received regular feedback from the ratepayers indicating a desire for a more technologically advanced user interface that was easier to use. Additionally, SJW received underwhelming customer service levels and offerings on the part of the current provider, making it difficult to meet customers’ needs and provide optimum service.

INVOICE CLOUD COSTS

SJW anticipates an increase in cost of approximately \$510,000 for the new EBPP, Invoice Cloud. The increase can be largely attributed to the expanded payment offerings and an estimated 59% increase in adoption rate reported by Invoice Cloud in the case of California Water Utilities. In addition, an overall increase between Invoice Cloud’s per transaction fees compared to that of the previous provider Kubra is also a factor.

CONCLUSION

SJW rate payers expect a technology forward user experience indicative of being in the heart of Silicon Valley and considering the options afforded to them to manage and pay other monthly expenses. Invoice Cloud allowed SJW to respond to customer feedback positively and provides a customer focused modern day solution that meets the rate payers’ needs.

CHAPTER 9

ADMINISTRATIVE AND GENERAL EXPENSES

Prepared by Nanci Tran

A. Description and Classification of Expenses

1. Workpapers supporting this chapter can be found in Workpapers, Chapter 9. The Rate Case Plan (RCP) requires the utility to "present an inflation adjusted simple five-year average for all administrative, operational and maintenance expenses, with the exception of off-settable expenses and salaries in its work papers." SJWC has included this information in the workpapers supporting this application.

2. Charges to administrative and general expenses include all expenses of a general and miscellaneous nature not chargeable to other accounts.

3. Included in these expenses are administrative and general salaries, general office supplies and expenses, insurance premiums and expenses, expenses of employee benefit plans, regulatory commission expenses, expenses for outside services, general corporate expenses, rent expenses, dues, and a credit account reflecting administrative and general (A&G) expenses transferred to construction costs or other accounts, and to SJW Group.

4. Table 9-A shows the total administrative and general expenses and miscellaneous expenses recorded for the years 2018 through 2023 (annualized). This sets forth estimated administrative and general expenses for the years 2024 through 2027 shown on Table 9-B.

5. Aside from the exceptions described below in each expense category were derived by escalating the inflation adjusted five-year average of historical data.

The inflation rate applied to each expense category is in accordance with the Commission Decision No. 04-06-018, the interim Order Adopting Rate Case Plan, escalation of Labor and Non-Labor Expense, Rate Base Addition, which appears in page 14 of the PDF version of the decision (see table below). The compensation per hour and non-labor inflation rates used in the composite inflation rate, as well as the labor inflation rate are published by

Public Advocates (Cal Advocates), Water Branch. The CPI-U is published by the US Department of Labor, Bureau of Labor Statistics. The rates can be found in Workpapers, WP 8-03.

LINE ITEM	ESCALATION RATE
Purchased Chemicals	Non-Labor 60%/Compensation per hour 40%
Payroll	Labor
Pensions and Benefits	Labor
Other O&M and A&G	Non-Labor 60%/Compensation per hour 40%
Payroll Taxes	Labor
Other Taxes (excluding income)	Non-Labor 60%/Compensation per hour 40%
Loans, Insurance, Contracted Services, Rents	CPI-U (previous 12 months)

6. Recorded expenses were adjusted by amounts recovered through balancing or memorandum accounts. Annual additions approved in the last GRC D.23-10-005 were removed from recorded and added it back to forecasted years. Approved additions from D.23-10-005 are for annual amounts, by leaving it in the recorded and performing a five-year average for it will dilute the annual approved amount. Therefore, it's removed from the recorded years 2022 and 2023 and add back in to forecasted year (2024-2027) to ensure an approved annual amount is included.

7. Specifically, expense areas forecasted separately from the five-year escalation average as detailed in Workpapers, Chapter 9:

- i. Insurance Expenses (WPs 9-5 & 9-6): Insurance expenses are forecasted based on escalation rates provided by SJWC's Insurance Broker (Attachment 1). These rates are applied to previous year estimates.
- ii. Other Regulatory Commission Expenses (WP 9-8): The regulatory landscape has become increasingly complicated, increasingly contentious, and increasingly costly. Regulatory Applications regularly go longer than outlined in the scoping memos and additional outside service expenses are incurred for legal assistance, consulting expertise, public noticing, and printing services. SJWC anticipates expenses of \$1,555,000 for the this GRC cycle and amortizes this expense over the three years (2025-2027).

- iii. Healthcare Cost (WP 9-11): Healthcare cost has increase significantly in recent years. The forecasted expenses for medical and dental are based on rates from SJWC's insurance providers, see Results of Operations – Chapter 5.
- iv. Retirement Plan (Pension) and PBOP: Forecasted expense are based on SJWCs actuaries, see Results of Operations – Chapter 5.
- v. Company and Employee Dues (WP 9-02 and 9-03): Forecasted by escalating most current recorded expense.
- vi. A&G Transfers (WP 9-09): Forecasted by escalating most recent recorded three years (2021-2023) escalated average in expense. 2020 was the first year the multifactor allocation (MA) formula was implemented. Since 2020 somewhat of a transition year, its more appropriate to exclude 2020 in the escalated average.
- vii. Uninsured Damages, Provision (WP 9-10): Forecasted by escalating most current recorded reserve.
- viii. A&G Labor (WP 9-01): Forecasted by using most current and escalated per labor factors discussed in Results of Operations – Chapter 5.

**SAN JOSE WATER COMPANY
(U-168-W)**

ADMINISTRATIVE AND GENERAL EXPENSES AND MISCELLANEOUS EXPENSES

(2018-2023)

(Thousands of Dollars)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>Authorized Test Year 2022</u>	<u>2023</u>
Administrative & General Expenses:							
Salaries	\$11,838	\$12,519	\$12,695	\$11,979	\$15,844	\$13,453	\$14,369
Office Supplies & Other	\$2,885	\$3,171	\$3,212	\$3,694	\$4,210	\$3,137	\$3,522
Property Insurance	\$151	\$173	\$188	\$207	\$245	\$284	\$274
Injuries & Damages	\$3,863	\$4,394	\$4,966	\$5,201	\$6,695	\$5,723	\$6,429
Pensions, Benefits & PBOP	\$16,493	\$17,675	\$18,677	\$19,672	\$18,190	\$18,742	\$18,882
Regulatory Commission	\$5,631	\$5,176	\$5,016	\$6,492	\$6,657	\$342	\$4,050
Outside Services	\$4,220	\$6,170	\$6,925	\$5,024	\$4,425	\$6,217	\$4,952
General Corporate	\$1,163	\$1,084	\$664	\$853	\$1,198	\$692	\$1,034
Dues & Membership	\$698	\$734	\$715	\$757	\$794	\$623	\$894
Rent	\$456	\$466	\$514	\$484	\$518	\$535	\$537
Total A&G Expense	\$47,398	\$51,561	\$53,573	\$54,363	\$58,777	\$49,746	\$54,942
Total A & G Expense	\$47,398	\$51,561	\$53,573	\$54,363	\$58,777	\$49,746	\$54,942
Allocated Expenses Transferred	(\$9,434)	(\$10,221)	(\$12,306)	(\$10,571)	(\$10,852)	(\$11,031)	(\$11,409)
Total Administrative & General Expense	\$37,964	\$41,340	\$41,266	\$43,792	\$47,925	\$38,715	\$43,533

**SAN JOSE WATER COMPANY
(U-168-W)**

ADMINISTRATIVE AND GENERAL EXPENSES AND MISCELLANEOUS EXPENSES

(2024 - 2027)

(Thousands of Dollars)

	Transition <u>2024</u>	Test Year <u>2025</u>	-----Escalation----- <u>2026</u>	<u>2027</u>
Administrative & General Expenses:				
Salaries	\$15,981.0	\$19,443.0	\$18,366.0	\$18,788.0
Office Supplies & Other	\$3,965.6	\$3,988.2	\$4,081.5	\$4,191.4
Property Insurance	\$345.7	\$424.0	\$445.3	\$547.1
Injuries and Damages	\$6,611.4	\$7,234.2	\$7,584.6	\$8,142.9
Pensions, Benefits & PBOP	\$20,797.6	\$21,466.0	\$22,604.5	\$24,084.6
Regulatory Commission	\$388.2	\$526.6	\$537.6	\$550.3
Outside Services	\$7,429.0	\$7,554.7	\$7,711.3	\$7,894.4
General Corporate	\$1,032.5	\$1,050.0	\$1,071.8	\$1,097.2
Dues & Memberships	\$768.4	\$781.4	\$797.6	\$816.5
Rent	\$536.2	\$545.3	\$556.6	\$569.8
Total Administration and General Expense	\$57,855.5	\$63,013.3	\$63,756.8	\$66,682.2
Total A & G Expense	\$57,855.5	\$63,013.3	\$63,756.8	\$66,682.2
Allocated Expenses Transferred	(\$12,236.1)	(\$12,536.1)	(\$12,857.8)	(\$13,153.1)
Total Administrative & General Expense	\$45,619.4	\$50,477.2	\$50,898.9	\$53,529.2

CHAPTER 10

TAXES

Prepared by Nanci Tran, Ritu Mehta, and Rally Zerhouni

A. Description and Classification of Taxes

1. Workpapers supporting this chapter can be found in Exhibit F, Chapters 10 and 10A.
2. Taxes are grouped into two basic types: (1) General taxes, and (2) Taxes based on income. General taxes include ad valorem (property) taxes, business licenses, Social Security (payroll) taxes, and local franchise taxes. General taxes are prepared by Nanci Tran. Taxes based on income include the California Corporation Franchise Tax (“CCFT”) and Federal Income Tax. Taxes based on income are prepared by Mohammed G. Zerhouni and Ritu Mehta.

B. General Taxes

3. Table 10-A sets forth, by classification and total, the recorded taxes charged to expense for the years 2018 through 2023 (annualized).
4. Table 10-B shows these same taxes for the estimated years 2024 through 2027 at present and proposed rates.
5. Ad valorem taxes generally move in relation to the sum of net utility plant plus materials and supplies. In this filing it is therefore assumed that property taxes will increase in the future in proportion to additions to utility plant and any increase or decrease in accordance with changes in tax rates.
6. The Company’s business licenses for the City of San Jose and the Town of Los Gatos are determined by local ordinances. Currently, the business license for the City of San Jose is a fixed amount, while the business license for the Town of Los Gatos is determined by the number of installed fire hydrants. It is forecasted by taking the last recorded Business License fee and escalating it by the composite rate.

7. Local franchise taxes are required in connection with franchises from the County of Santa Clara, and from the Cities of Cupertino, Saratoga, Monte Sereno and the City of Campbell. The total of these taxes for the last recorded year has been related to total revenues and the resulting rate used for estimating local franchise taxes for the estimated years 2024 through 2027.

8. The estimates of Social Security (payroll) taxes are based on tax rates applied to estimated payrolls for each of the years 2024 through 2027. For (State Unemployment Insurance) SUI and (Federal Unemployment Insurance) FUI, most current tax rate were used; for (Federal Insurance Contribution Act) FICA, average 5-year average tax rate were used.

C. Taxes Based on Income

9. Tables 10-A and 10-B also show taxes based on income for the recorded years 2018 through 2023 (annualized) and the estimated years 2024 through 2027.

10. Table 10-C shows the computation of taxes based on income for the years 2024 through 2027 at the present and proposed rates. For the recorded years 2018 through 2023 these computations reflect the actual tax rates in effect for those years, the use of tax depreciation and the effect of investment tax credit. Commencing with 1983 the Company adopted the use of full normalization for Federal Income Tax depreciation under the ACRS method relative to all assets installed in 1981 and later. The Company also adopted full normalization for all investment tax credits earned in 1983 and later relative to additions in 1981 thru 1985.

11. The statutory income tax rates applicable to SJWC are 21.00% for federal income tax and 8.84% for state income tax.

12. Interest expense for computing ratemaking income taxes was calculated by multiplying the weighted average cost of debt multiplied by rate base, including working cash and deferred taxes.

13. State and federal taxes are calculated using estimated present and proposed revenues, estimated tax-deductible expenses, interest, and tax depreciation. Expenses are those shown in the summary of earnings less book depreciation.

14. The amount of deferred tax reserve has been calculated as per Federal Tax Regulation Section 1.167(l)-1. As per Reg. § 1.167(l)-1(h)(6)(ii), the amount of reserve for deferred taxes for the period is the amount of the reserve at the beginning of the period and a pro rata portion of the amount of any projected increase to be credited or decrease to be charged to the reserve during such period. The pro rata amount of any increase during the period is determined by multiplying the increase by a fraction, the numerator of which is the number of days remaining in the period at the time the increase is to accrue, and the denominator of which is the total number of days in the period.

D. Tax Cuts and Jobs Act (TCJA)

15. On December 22, 2017, the Tax Cuts and Jobs Act was signed into law. The Tax Act included a number of changes impacting businesses including, among other things, a permanent reduction in the corporate federal income tax rate from 35% to 21%. The rate reduction was effective on January 1, 2018. Some of the other significant changes were repeal of the Domestic Production Activities Deduction, ineligibility of utility property for bonus depreciation and repeal of exception under Internal Revenue Code (IRC) Section 118(c) for “contribution in aid of construction” (CIAC) received by water utilities. These changes were incorporated in last rate case and continue to be monitored and applied to the tax workpapers unless there is any additional change as noted below for CIAC.

E. Infrastructure Investment and Jobs Act

16. On November 15, 2021, the president signed the Infrastructure Investment and Jobs Act (IIJA or the Act). Although the Act was aimed primarily toward massive infrastructure projects, the Act did contain some tax provisions. One of these tax provisions was to exclude CIAC from taxable income for water and sewer construction for contributions made after December 31, 2020. Contributions received for service connections are still taxable as they are not defined as contributions in aid of construction. Accordingly, the taxable contribution estimates have been adjusted.

F. Inflation Reduction Act

17. On August 16, 2022, the Inflation Reduction Act of 2022 (the “IRA”) was signed into law. The IRA extends the Investment Tax Credit (ITC) for solar projects. The IRC Section 48 ITC is subject to the two-tiered credit structure (with the bonus rate being achieved if the prevailing wage and apprenticeship requirements are met). The base credit is 6% and the credit goes up to 30%. The IRA also includes, modifies and extends credits for clean vehicles and electric recharging stations. To claim the clean vehicle credit the vehicle must meet various requirements based on content, assembly in the United States of America, and a dollar threshold. The credit for electric recharging stations must meet similar wage and apprenticeship requirements described above.

The Company has included a reasonable estimate of the credits given the eligibility and documentation requirements and certain factors outside of the Company’s control. The credits related to clean vehicles and electric recharging stations reduce total income tax expense and provide an immediate benefit to the customer. Please refer to WP 10A-01, Row titled Federal Tax Credits.

G. Cost of Removal

18. From a tax perspective, the cost of removal (COR) is deductible when the asset is removed from service and the removal costs are incurred. Recovery of COR through rates before the applicable tax deduction creates a deferred tax asset (DTA). The IRS has issued several Private Letter Rulings (PLRs) in recent years establishing that a regulated company's net deferred tax asset or liability related to COR is not subject to normalization rules. The IRS reiterated its longstanding position of former code section §167(I) in PLRs 202033002 and 202124003 that the normalization rules apply to depreciation method, depreciation life and salvage value and don't apply to COR related Accumulated Deferred Income Taxes (ADIT). As a result of the guidance provided by IRS and to avoid any normalization violations, the Company has undertaken a project to extract the cost of removal records from the underlying excess deferred income taxes (EDIT) average rate assumption method (ARAM) calculations. This will result in a larger protected excess deferred tax liability

related to property timing differences and a new unprotected excess deferred tax asset related to the cost of removal timing difference. The total EDIT to be returned to customers remains unchanged as result of this work, it merely has broken out the cost of removal excess deferred from the underlying property excess deferred. The property related excess deferred is being amortized using ARAM calculation while the COR related excess deferred is being amortized over book life. Please refer to WP 10A-23 RevExcessDef.

H. Equity portion of allowance for funds used during construction

19. The equity component of allowance for funds used during construction (AFUDC) is a component of construction cost and is depreciated once the utility plant is placed in service (i.e., it gives rise to accounting basis). However, for income tax purposes, neither the amount originally capitalized for accounting purposes, nor the subsequent depreciation of that amount enters into the determination of taxable income. Because equity AFUDC is not capitalized into utility plant for tax purposes (i.e., it does not give rise to a tax basis), the book basis of utility plant will exceed the tax basis of utility plant by the capitalized equity AFUDC amount. The book depreciation related to capitalized AFUDC-equity has no corresponding tax benefit and therefore will appear as an adjustment to tax expense. Please refer to WP10A-01, Row titled Addback AFUDC Equity – Depreciation.

I. Repairs Deduction – Aggregation Requirement

20. The Company has increased its tax repairs deduction in the test period based on anticipated tax method change to account for guidance issued in 2023 related to when work orders should be aggregated together for testing if they qualify as a tax repair.

The IRS has had an informal position of aggregation for several years, but this concept was officially introduced in Rev. Proc. 2011-43 with respect to the electric utility industry which states that a taxpayer must aggregate multiple replacements within a circuit if (a) the replacements are initiated at the same time, (b) the replacements are required by the

occurrence of a single event, or (c) a regulatory commission decision authorizes the replacements as part of an identified program aimed at a specific purpose.

Then, in Rev. Proc. 2023-15, the IRS provided a similar aggregation framework applicable to natural gas transmission and distribution utilities, stating that the aggregation of multiple replacements is appropriate if all of the following requirements are met: (a) the replacements are within the same unit of property (for non-linear property and linear transmission property) or the same five digit United States Postal Service ZIP Code delivery area (for linear distribution property), (b) the replacements are described in one authorizing document, and (c) the authorizing document identifies the property with respect to which the replacements will occur or the locations where the property is to be replaced, the amount of pipe to be replaced or the total cost of the replacements, and provides that the replacements are expected to be completed within five years after the date of the authorizing document. Rev. Proc. 2023-15 further clarifies that an authorizing document includes a regulatory commission decision that requires replacements as part of an identified program aimed at a specific purpose, a written project authorization aimed at a specific purpose, a work order or a blanket work order.

While such a safe harbor definition does not officially apply to the water utility industry, it does highlight the position of the IRS to consider aggregating certain work orders if the IRS believes they are part of a larger related project. Rev Proc. 2023-15 provided additional clarifications about the requirement to aggregate work-orders. The Company intends to adopt this definition of aggregation which will provide a greater tax repair deduction than has historically been calculated. This change benefits the ratepayers as it reduces state income tax expense and increases the federal deferred tax liability which is an offset to rate base. Please refer to WP 10A-01, Row Titled – State Tax Deduction on Repairs and Maintenance and WP 10A-22 Def Tax, Row titled Federal Repairs & Maintenance Deduction.

TABLE 10-A

SAN JOSE WATER COMPANY
(U-168-W)

TAXES CHARGED TO EXPENSE
(2018-2023)

(Thousands of Dollars)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	<u>2023</u>
City and County:							
Ad Valorem	\$9,426.9	\$10,439.2	\$10,639.2	\$11,500.4	\$11,831.9	\$11,474.5	\$12,243.7
Business Licenses	\$151.7	\$169.1	\$160.5	\$178.4	\$169.5	\$169.9	\$170.2
Franchise	<u>\$900.5</u>	<u>\$881.5</u>	<u>\$968.4</u>	<u>\$913.1</u>	<u>\$1,018.0</u>	<u>\$1,058.1</u>	<u>\$1,004.8</u>
Total City & County	\$10,479.1	\$11,489.8	\$11,768.2	\$12,591.9	\$13,019.4	\$12,702.5	\$13,418.6
Payroll Taxes	<u>\$3,308.3</u>	<u>\$3,231.0</u>	<u>\$3,057.8</u>	<u>\$3,523.7</u>	<u>\$3,772.0</u>	<u>\$3,309.1</u>	<u>\$4,365.5</u>
Total General Taxes	<u><u>\$13,787.4</u></u>	<u><u>\$14,720.8</u></u>	<u><u>\$14,826.0</u></u>	<u><u>\$16,115.5</u></u>	<u><u>\$16,791.4</u></u>	<u><u>\$16,011.6</u></u>	<u><u>\$17,784.2</u></u>
Taxes Based on Income:							
State Corporate Franchise Tax	\$4,095.2	\$3,350.0	\$5,357.9	\$5,457.3	\$4,560.5	\$5,842.5	\$6,259.8
Federal Income:							
Before Investment Tax Credit	\$9,634.9	\$6,836.2	\$6,838.2	\$6,620.9	\$8,749.9	\$8,637.7	\$10,166.6
Investment Credit - Flow-Thru	(\$0.8)	(\$0.8)	(\$0.8)	(\$0.8)	(\$0.8)	\$0.0	(\$0.8)
Unrecoverable Prepaid Income Tax on CIAC & Advances	<u>\$3.4</u>	<u>\$3.4</u>	<u>\$3.4</u>	<u>\$3.4</u>	<u>\$3.4</u>	<u>\$0.0</u>	<u>\$3.4</u>
Total Federal Income Tax	\$9,637.5	\$6,838.8	\$6,840.8	\$6,623.5	\$8,752.5	\$8,637.7	\$10,169.2
Total Taxes Based on Income	<u><u>\$13,732.7</u></u>	<u><u>\$10,188.8</u></u>	<u><u>\$12,198.7</u></u>	<u><u>\$12,080.8</u></u>	<u><u>\$13,313.0</u></u>	<u><u>\$14,480.2</u></u>	<u><u>\$16,429.0</u></u>

SAN JOSE WATER COMPANY
(U-168-W)

TAXES CHARGED TO EXPENSES
(2024 - 2027)

ESTIMATED AT PRESENT AND PROPOSED RATES

(Thousands of Dollars)

	Present Rates				Proposed Rates			
	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>
City and County:								
Ad Valorem	\$12,754.1	\$13,442.1	\$14,504.9	\$15,567.7	\$12,754.1	\$13,442.1	\$14,504.9	\$15,567.7
Business Licenses	\$169.9	\$172.5	\$175.8	\$179.7	\$169.9	\$172.5	\$175.8	\$179.7
Franchise	\$1,179.8	\$1,156.2	\$1,157.3	\$1,158.3	\$1,179.8	\$1,284.9	\$1,337.6	\$1,399.8
Total City and County	\$14,103.8	\$14,770.8	\$15,838.0	\$16,905.7	\$14,103.8	\$14,899.5	\$16,018.3	\$17,147.2
Payroll Taxes	\$4,278.6	\$4,866.4	\$4,846.6	\$4,958.1	\$4,278.6	\$4,866.4	\$4,846.6	\$4,958.1
Total General Taxes	\$18,382.4	\$19,637.2	\$20,684.7	\$21,863.8	\$18,382.4	\$19,765.9	\$20,865.0	\$22,105.3
Taxes Based on Income:								
State Corporate Franchise Tax	\$4,854.5	\$1,439.3	(\$166.4)	(\$1,726.2)	\$4,854.5	\$6,303.8	\$6,649.0	\$7,427.6
Federal Income Tax	\$7,172.0	\$6,602.6	\$4,633.3	\$2,664.1	\$7,172.0	\$18,158.5	\$19,802.2	\$22,690.2
Total Taxes Charged to Expenses	\$30,408.9	\$27,679.1	\$25,151.6	\$22,801.7	\$30,408.9	\$44,228.3	\$47,316.2	\$52,223.1

SAN JOSE WATER COMPANY
(U-168-W)

COMPUTATION OF TAXES BASED ON INCOME
(2024 - 2027)

ESTIMATED AT PRESENT AND PROPOSED RATES

(Thousands of Dollars)

	Present Rates				Proposed Rates			
	2024	2025	2026	2027	2024	2025	2026	2027
Revenue:								
Operating Revenue	\$505,915.8	\$495,806.2	\$496,261.6	\$496,707.0	\$505,915.8	\$551,002.6	\$573,593.9	\$600,256.8
Deferred Revenue	\$948.5	\$976.8	\$976.9	\$874.5	\$948.5	\$976.8	\$976.9	\$874.5
Deductions:								
Operating & Maintenance Expenses								
Excluding Depreciation & Taxes	\$346,541.7	\$349,943.0	\$353,794.1	\$360,346.6	\$346,541.7	\$350,111.0	\$354,029.1	\$360,346.6
Transportation Depreciation	(\$2,129.0)	(\$708.7)	(\$831.9)	(\$955.1)	(\$2,129.0)	(\$708.7)	(\$831.9)	(\$955.1)
Interest Expense	\$27,890.0	\$30,182.0	\$33,331.0	\$33,331.0	\$27,890.0	\$30,182.0	\$33,331.0	\$33,331.0
Other Permanent Differences	(\$880.8)	(\$880.8)	(\$880.8)	(\$880.8)	(\$880.8)	(\$880.8)	(\$880.8)	(\$880.8)
Less 50% Meals Disallowed	(\$74.2)	(\$74.2)	(\$74.2)	(\$74.2)	(\$74.2)	(\$74.2)	(\$74.2)	(\$74.2)
Total Deductions	\$371,347.7	\$378,461.3	\$385,338.2	\$391,767.5	\$371,347.7	\$378,461.3	\$385,338.2	\$391,767.5
State Corporate Franchise Tax:								
Tax Depreciation	(\$66,608.5)	(\$71,208.5)	(\$78,005.5)	(\$84,802.6)	(\$66,608.5)	(\$71,208.5)	(\$78,005.5)	(\$84,802.6)
State Tax Deduction on Repairs and Maintenance	(\$16,451.9)	(\$33,256.4)	(\$38,100.1)	(\$42,943.8)	(\$16,451.9)	(\$33,256.4)	(\$38,100.1)	(\$42,943.8)
Deferred Revenue (Net of Tax)	\$723.6	\$606.1	\$586.6	\$567.1	\$723.6	\$606.1	\$586.6	\$567.1
Section 263(a)	\$2,684.2	\$2,795.2	\$2,713.1	\$2,713.1	\$2,684.2	\$2,795.2	\$2,713.1	\$2,713.1
State Taxable Income								
(Op Rev - Op & Main Exp - Depr + Def Rev)	\$54,915.5	\$16,281.3	(\$1,882.5)	(\$19,526.7)	\$54,915.5	\$71,309.8	\$75,214.8	\$84,023.1
Tax @ 8.84%	\$4,854.5	\$1,439.3	(\$166.4)	(\$1,726.2)	\$4,854.5	\$6,303.8	\$6,649.0	\$7,427.6
Federal Income Tax:								
Tax Depreciation	(\$80,689.0)	(\$78,978.1)	(\$84,680.2)	(\$90,382.3)	(\$80,689.0)	(\$78,978.1)	(\$84,680.2)	(\$90,382.3)
State Franchise Tax	(\$6,681.0)	(\$4,854.5)	(\$1,439.3)	\$166.4	(\$6,681.0)	(\$4,854.5)	(\$6,303.8)	(\$6,649.0)
Addback AFUDC Equity and Depr on EV	\$159.0	\$333.7	\$554.3	\$775.0	\$159.0	\$333.7	\$554.3	\$775.0
Taxable Income	\$47,357.1	\$33,845.9	\$25,358.2	\$15,498.5	\$47,357.1	\$88,874.4	\$97,591.0	\$112,233.0
Tax @ 21.00%	\$9,945.0	\$7,107.6	\$5,325.2	\$3,542.8	\$9,945.0	\$18,663.6	\$20,494.1	\$23,568.9
Amortization of Unrecoverable Prepaid Tax on CIAC	\$195.6	\$195.6	\$195.6	\$195.6	\$195.6	\$195.6	\$195.6	\$195.6
Reversal of Excess Deferred Tax	(\$2,833.6)	(\$663.2)	(\$790.0)	(\$916.9)	(\$2,833.6)	(\$663.2)	(\$790.0)	(\$916.9)
Federal Tax Credit	(\$135.0)	(\$37.5)	(\$97.5)	(\$157.5)	(\$135.0)	(\$37.5)	(\$97.5)	(\$157.5)
Federal Tax	\$7,172.0	\$6,602.6	\$4,633.3	\$2,664.1	\$7,172.0	\$18,158.5	\$19,802.2	\$22,690.2
Total Income Tax	\$12,026	\$8,041.9	\$4,466.9	\$937.9	\$12,026.5	\$24,462.3	\$26,451.2	\$30,117.8

CHAPTER 11

UTILITY PLANT

Prepared by Nanci Tran

A. Plant Accounting Records

1. Workpapers supporting this chapter, and a breakdown of the capital budget by project, can be found in Workpapers, Chapter 11.

2. The Company maintains Plant Ledgers to record the detail of the Balance Sheet Account 100-1, "*Utility Plant in Service*". Utility plant in service is classified in these ledgers by accounts in accordance with the Uniform System of Accounts prescribed by the California Public Utilities Commission.

3. In addition to the Plant Ledgers, SJWC maintains Construction Work in Progress Ledgers to record monthly charges to active work orders. The Plant Ledgers together with the Construction Work in Progress Ledgers provide a complete and continuous record of additions and retirements affecting utility plant in service. There are two types of Work Orders (Estimates): (1) Specific Estimates, and (2) Blanket Estimates. The latter include installations and retirements of meters and services, including their pertinent equipment, and various divisions of construction overhead (liquidated to other estimates as they are completed). Upon completion of installations or retirements, the recorded costs are audited using the Bill of Materials, the Completion Report, and the Estimate. After applying construction overhead to the recorded charges, the balance of the "In Progress" Estimate is transferred to appropriate accounts in the Plant Ledgers and/or to the Reserve for Depreciation in case of Retirements.

4. The Company's construction budgets for the years 2024-2026 are summarized in Table 11-B, and detailed in Capital Improvement Project and Program Justifications.

B. Utility Plant Projections

5. Table 11-A sets forth data for utility plant as recorded on the books of the Company for the years 2018 through 2023 (through August + projected amount for remaining 4 months). The table shows beginning of the year balances for utility plant in service as well as gross additions segregated by major classifications, sales and adjustments, and the resulting net additions. For utility plant under construction, the table shows the beginning and end of year balances, and the net change during the year. For total utility plant, the table shows the beginning of the year balances and net additions expressed in amounts and in percentage of the beginning of the year balance. The annual weighted average of total utility plant balances, in total amount as well as in average per customer, are shown at the bottom of Table 11-A. The Company's summarized construction budgets for the years 2024-2026 are set forth in Table 11-B.

6. The capital budgets for 2024-2026 and the costs are detailed in Workpapers, Chapter 11. A description of the SJWC capital budgeting process and Project Justifications for projects over \$1,000,000 are provided in Capital Improvement Project and Program Justifications.

7. To arrive at "*Estimated Net Additions*" to utility plant for Table 11-C adjustments to the Company's construction budgets are required for (1) additional advances and contribution for construction, (2) remove cloud projects for IT investments (see Table 13-J in Chapter 13 for cloud's rate base calculation), (3) additional AFUDC at rate of return and (4) estimated retirements. These additions are weighted at 50% to come up with the weighted average amount.

8. The projection of the total utility plant for the years 2024-2026 is shown in Table 11-C. Data is brought forward from Tables 11-A beginning of the year balances, 11-B gross additions segregated into land & intangibles and depreciable plant, and for estimated retirements to arrive at ending balance for each year. The resulting net additions are calculated in total dollars as well as percentage of the beginning of the year balances. Table

11-C also present the weighted average plant balances for the years 2024-2026. Plant additions for the year is weighted at 50%.

11. The Company applies capitalizes interest during construction to some of the company financed construction work in progress or AFUDC (Allowance for Funds Used During Construction). See Attachment A for Rally Zerhouni testimony for AFUDC.

SAN JOSE WATER COMPANY
(U-168-W)

UTILITY PLANT
(2018-2023)

(Thousands of Dollars, Except per Customer Information)

	2018	2019	2020	2021	2022	Authorized Test Year 2022	2023	Authorized Test Year 2023
Utility Plant in Service (UPIS)								
Beginning of Year Balance	\$1,618,561.4	\$1,660,311.9	\$1,691,692.8	\$1,749,862.6	\$2,029,690.2	\$2,052,560.4	\$2,149,435.8	\$2,162,689.9
Gross Additions:								
Intangibles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$76.5	\$0.0
Land	\$373.0	\$14.0	\$796.9	\$28.7	\$0.0	\$0.0	\$1,251.2	\$0.0
Source of Supply Plant	\$14,340.5	\$4,168.5	\$5,571.3	\$4,348.6	(\$3,948.5)	\$13,654.1	\$3,968.1	\$27,435.7
Reservoirs and Tanks	\$1,931.7	\$17,802.8	\$21,353.7	\$188.9	\$22,468.7	\$16,365.5	\$8,840.0	\$20,133.5
Water Treatment Plant	\$5,566.0	\$3,144.6	\$7,208.3	\$719.2	\$10,348.6	\$7,128.3	\$3,289.8	\$8,501.0
Pumping Plant	\$8,083.1	\$6,401.3	\$18,874.6	\$11,225.6	\$9,422.8	\$7,188.3	\$8,739.6	\$17,523.8
Subtotal	\$30,294.3	\$31,531.2	\$53,804.7	\$16,511.1	\$38,291.6	\$44,336.2	\$26,165.2	\$73,594.0
Other Transmission & Distribution Plant	\$9,214.7	\$7,143.7	\$14,451.1	\$6,950.0	\$12,754.3	\$10,888.1	\$27,927.9	\$7,661.9
General Plant	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total Gross Additions	\$39,508.9	\$38,674.9	\$68,255.9	\$23,461.0	\$51,045.9	\$55,224.3	\$54,093.1	\$81,255.9
Retirements, Sales & Adjustments:								
Retirements	\$4,811.1	\$9,403.8	\$8,855.4	\$5,395.3	\$10,396.7	\$10,457.0	\$6,902.8	\$10,457.0
Sales & Adjustments	(\$7,052.7)	(\$2,109.7)	\$1,230.6	\$1,007.5	\$0.0	\$169.0	\$8.4	\$665.9
Total Retirements, Sales & Adjustments	(\$2,241.6)	\$7,294.1	\$10,086.0	\$6,402.9	\$10,396.7	\$10,626.0	\$6,911.1	\$11,122.9
Net Additions:								
Total Gross Additions	\$39,508.9	\$38,674.9	\$68,255.9	\$23,461.0	\$51,045.9	\$55,224.3	\$54,093.1	\$81,255.9
Total Retirements, Sales & Adjustments	(\$2,241.6)	\$7,294.1	\$10,086.0	\$6,402.9	\$10,396.7	\$10,626.0	\$6,911.1	\$11,122.9
Net Additions	\$41,750.5	\$31,380.9	\$58,169.9	\$17,058.2	\$40,649.3	\$44,598.3	\$47,181.9	\$70,133.0
End of Year Balance:								
Beginning of Year Balance	\$1,618,561.4	\$1,660,311.9	\$1,691,692.8	\$1,749,862.6	\$2,029,690.2	\$2,052,560.4	\$2,149,435.8	\$2,162,689.9
Net Additions	\$41,750.5	\$31,380.9	\$58,169.9	\$17,058.2	\$40,649.3	\$44,598.3	\$47,181.9	\$70,133.0
End of Year Balance	\$1,660,311.9	\$1,691,692.8	\$1,749,862.6	\$1,766,920.8	\$2,070,339.5	\$2,097,158.7	\$2,196,617.7	\$2,232,822.9
Utility Plant Under Construction (CWIP)								
Beginning of Year Balance	\$44,160.2	\$64,733.3	\$81,610.0	\$51,293.4	\$74,859.4	\$0.0	\$63,543.1	\$0.0
End of Year Balance	\$64,733.3	\$81,610.0	\$51,293.4	\$74,859.4	\$63,543.1	\$0.0	\$77,192.1	\$0.0
Net Annual Change	\$20,573.1	\$16,876.7	(\$30,316.6)	\$23,566.0	(\$11,316.3)	\$0.0	\$13,649.0	\$0.0
Total Utility Plant In Service								
Beginning of Year Balance (UPIS)	\$1,662,721.6	\$1,725,045.2	\$1,773,302.7	\$1,801,156.0	\$2,104,549.6	\$2,052,560.4	\$2,212,978.9	\$2,162,689.9
Net Additions (UPIS)	\$41,750.5	\$31,380.9	\$58,169.9	\$17,058.2	\$40,649.3	\$44,598.3	\$47,181.9	\$70,133.0
Net Annual Change (CWIP)	\$20,573.1	\$16,876.7	(\$30,316.6)	\$23,566.0	(\$11,316.3)	\$0.0	\$13,649.0	\$0.0
Total End of Year Balance	\$1,725,045.2	\$1,773,302.7	\$1,801,156.0	\$1,841,780.2	\$2,133,882.6	\$2,097,158.7	\$2,273,809.9	\$2,232,822.9
Change as % of Beginning Balance	3.7%	2.8%	1.6%	2.3%	1.4%	2.2%	2.7%	3.2%
Weighted Average - Amount	\$1,728,914.0	\$1,855,828.0	\$1,955,214.0	\$2,049,199.0	\$2,163,490.0	\$2,110,755.0	\$2,274,989.1	\$2,260,769.4
- per Customer	\$7,803	\$8,378	\$8,844	\$9,270	\$9,755	\$9,278	\$9,991	\$9,918

TABLE 11-B

**SAN JOSE WATER COMPANY
(U-168-W)**

**CONSTRUCTION BUDGETS
(2024 - 2026)**

(Thousands of Dollars)

<u>Description</u>	<u>Transition 2024</u>	<u>Test Year 2025</u>	<u>Test Year 2026</u>
Land	\$442.0	\$0.0	\$0.0
Source of Supply	\$8,055.9	\$6,688.9	\$6,594.0
Water Treatment	\$4,200.0	\$3,772.5	\$5,500.0
Reservoirs & Tanks	\$8,840.9	\$21,646.4	\$39,276.6
Pump Stations & Equip.	\$6,224.2	\$10,378.5	\$22,523.3
Distribution System:			
New Mains	\$1,000.0	\$9,647.2	\$0.0
Service Transfers	\$0.0	\$0.0	\$0.0
City, County & State	\$52.0	\$54.1	\$56.2
Replacement Mains	\$59,990.7	\$71,414.1	\$90,103.4
Main Extensions	\$6,514.1	\$8,808.3	\$6,003.6
Services	\$16,086.8	\$16,730.3	\$17,399.5
Meters	\$2,262.2	\$189.3	\$196.8
Hydrants	\$1,861.6	\$1,936.1	\$2,013.5
Equipment	\$13,655.7	\$14,670.9	\$12,832.1
Structures & Non-Specifics	\$3,503.6	\$1,904.0	\$4,970.3
Special Request for Recovery	\$7,337.2	\$12,177.4	\$12,517.1
	\$140,026.9	\$180,018.0	\$219,986.4
Cost of Retiring	\$0.0	\$0.0	\$0.0
Total Construction Budget	<u>\$140,026.9</u>	<u>\$180,018.0</u>	<u>\$219,986.4</u>


TABLE 11-C

**SAN JOSE WATER COMPANY
(U-168-W)**

**UTILITY PLANT
(2024 - 2026)**

(Thousands of Dollars)

	Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>
<u>Total Utility Plant</u>			
Beginning of Year Balance	\$2,273,456.2	\$2,421,130.1	\$2,587,904.9
Gross Additions:			
Land & Intangibles	\$442.0	\$0.0	\$0.0
Depreciable Plant	\$151,298.8	\$189,550.1	\$231,113.8
AFUDC	\$5,543.7	\$7,064.3	\$8,736.0
Total	\$157,284.5	\$196,614.5	\$239,849.8
Retirements & Adjustments	\$9,610.6	\$29,839.7	\$10,939.9
Net Additions	\$147,673.9	\$166,774.8	\$228,909.9
% of Beginning Balance	6.5%	6.9%	8.8%
End of Year Balance	\$2,421,130.1	\$2,587,904.9	\$2,816,814.8
Weighted Average - Amount	\$2,347,293.2	\$2,504,517.5	\$2,702,359.9
Weighted Average - per Customer	\$10,301	\$10,975	\$11,824



Chapter 11 – Attachment A Allowance for Funds Used During Construction (AFUDC)

By Mohammed G. “Rally” Zerhouni

I. INTRODUCTION AND PURPOSE

Q. Please state your name, affiliation, and business address.

A. My name is Mohammed G. “Rally” Zerhouni. I am a Senior Vice President of Finance & Principal Accounting Officer, at San Jose Water Company. My business address is 110 West Taylor Street. San Jose, CA 95110.

Q. On whose behalf are you submitting this testimony?

A. I am submitting this direct testimony (“Direct Testimony”) before the California Public Utilities Commission (“Commission”) on behalf of San Jose Water Company (“SJWC” or the “Company”).

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to present and support the appropriate rate to be used for accruing Allowance for Funds Used During Construction (“AFUDC”). As explained in my testimony, the Company proposes to accrue AFUDC at the Weighted Average Cost of Capital (“WACC”) authorized in this proceeding.

II. BACKGROUND

Q. What approaches do regulators use to allow utilities to recover their financing costs incurred during construction?

A. In general, there are two approaches used by regulators to allow for the recovery by utilities of financing costs incurred during construction: (1) the accrual and subsequent recovery of an Allowance for Funds Used During Construction, or AFUDC; and (2) the inclusion of Construction Work in Progress (“CWIP”) in rate base. As stated in *Accounting for Public Utilities*, “[w]hen utilities are not allowed to earn a return to cover their construction financing costs during the construction

period, they are allowed to capitalize the financing costs for future recovery through an allowance for funds used during construction (AFUDC).”¹

Q. Does the California Public Utilities Commission (“CPUC”) recognize these two methods of construction financing cost recovery?

A. Yes. In California, a utility has the option to either record CWIP – including financing costs – in rate base on an annual basis, or to record the costs in the AFUDC account, and then capitalize all costs when the plant goes into service.² Thus, when new plant goes into service, the total capital-related costs, including AFUDC, are included in rate base.

Q. What is AFUDC?

A. Allowance for Funds Used During Construction, or AFUDC, is a well-recognized regulatory concept that reflects the financing costs incurred during the construction of capital projects.³ When utilities construct new capital assets, they record the design and construction costs incurred in a holding account called CWIP. These costs are financed using a mix of debt and equity. Both debt and equity have a cost: debt in the form of interest, and equity in the form of the equity return required by shareholders for committing equity capital. Therefore, in addition to the labor and material costs of construction, a utility incurs financing costs associated with the debt and equity supplied by investors to fund the construction of capital assets. Accrued AFUDC amounts are added to the capitalized balance of construction projects and recovered over the depreciable lives of the underlying capital assets.

1 Robert L. Hahne and Gregory E. Aliff, Accounting for Public Utilities § 4.04[4] (Matthew Bender).

2 CPUC Decision 20-12-007 at 30, footnote 51.

3 See, e.g., CPUC Decision 23-03-048, at 15.

Q. How is AFUDC calculated?

A. To calculate the dollar amount of AFUDC, the cost rate of investor supplied capital (both debt and equity, weighted by their relative proportions of the capital structure) employed to finance CWIP is multiplied by the outstanding CWIP balance. The cost rate is a percentage rate known as the AFUDC rate. For example, under the FERC's Uniform System of Accounts,⁴ the calculation of the AFUDC rate is a weighted cost that applies the interest rate of each source of capital (debt and equity), by the proportion of funding from each source of capital. Therefore, the AFUDC rate is in effect the cost of capital, as it reflects not just debt but also equity capital.

III. SJWC'S PROPOSED RATE FOR AFUDC

Q. How does SJWC currently recover construction costs, and what is the rate it uses?

A. In Docket No. A-95-08-038, the Commission approved a settlement in which SJWC would no longer include CWIP and interest during construction ("IDC") in rate base, and instead would capitalize IDC in accordance with the IRS's Uniform Capitalization Rules and include that amount in rate base.⁵ However, the IRS's Uniform Capitalization Rules include only debt costs, and do not include equity costs. In other words, SJWC's current approach does not reflect the full cost to the Company of financing construction projects, nor the fact that the Company relies on both debt and equity to finance those projects. The Company does, however,

4 CFR 18 part 101, Electric Plant Instructions, 3(17), accessible at <https://www.ecfr.gov/current/title-18/chapter-I/subchapter-C/part-101?toc=1>

5 CPUC Application 95-08-038, Stipulation at 3 (July 16, 1996); Stipulation approved in Decision No. 96-07-036 (July 17, 1996).

incur equity financing costs as a component of its overall capitalization that is used to finance capital assets.

Q. Is SJWC proposing a change in this rate case?

A. Yes. The Company proposes to accrue AFUDC at a rate equivalent to the WACC authorized in this proceeding.

Q. Why is the Company requesting to change the rate at which it accrues AFUDC?

A. Consistent with widely recognized ratemaking principles, the Company's is requesting that the rate at which it accrues AFUDC matches how it actually finances CWIP. The Company finances its assets under construction with a mix of debt and equity, and the financing costs it pays reflect this mix of financing. Therefore, the Company's current methodology of recovering only capitalized interest based on IRS rules ("interest during construction", or "IDC") fails to allow for full recovery of SJWC's actual financing costs. Including all costs of construction – including financing costs – ensures that rates recover all the utility's construction costs through depreciation and amortization expense.

Q. Is the Company's proposal consistent with how utilities finance long-term capital assets?

A. Yes. As explained in *Public Utility Accounting: Theory and Application*, from an economic perspective, there is an opportunity cost associated with the cost of funds used in construction projects. Therefore, it is appropriate to provide investors with a return on that capital.

It is apparent that investors have supplied funds, long-term debt, equity capital, or both, and that the construction period of most utility

property is usually long; consequently, invested capital remains unproductive for a considerable period of time. Sentiment has been with those investors who have foregone alternative opportunities or sources of investment which would have been productive immediately and thus earned an acceptable return.⁶

No one quarrels with capitalizing interest expenditures on funds provided by long-term debt; however, imputing interest on equity funds is a different matter. Generally, return on this capital is available only when the plant is in operation and profitable, but such is not the case during a period of construction. Yet, it is difficult to argue against the cost of money, real or implied, during the construction period...In the case of equity capital, it is an opportunity cost forgone during the lengthy construction period and not compensated for in the usual risks attributed to this type of financing.⁷

Moreover, prudent financing practice calls for financing long-term capital assets with long-term securities. Utilities generally match the lives of assets being financed with the maturity of the securities issued to finance those assets. Under the practice of “maturity matching,” the overall term structure of the utility’s long-term liabilities — including both debt and equity — correspond to the life of its long-term assets. As explained by Brigham and Houston:

In practice, firms don’t finance each specific asset with a type of capital that has a maturity equal to the asset’s life. However, academic studies do show that most firms tend to finance short-term assets from short-term sources and long-term assets from long-term sources.⁸

Because cash is fungible, it is reasonable to assume that construction is financed by the overall actual mix of investor-supplied capital. Therefore, the

6 James E. Suelflow, Public Utility Accounting: Theory and Application, Michigan State University Public Utilities Studies, at 171 (1973).

7 *Ibid.* at 172.

8 Brigham, Eugene F. and Joel F. Houston, Fundamentals of Financial Management, Concise 4th Ed., Thomson South-Western, 2004, p. 574.

Company's WACC reasonably reflects the financing costs SJWC must pay to invest in its system on customers' behalf.

Furthermore, the ability to borrow at rates consistent with the WACC is based on a fundamental principle that the utility is properly capitalized, and not funded 100% with debt. If the utility was funded 100% with debt, or did not have a sufficient equity layer, the utility would likely have difficulty raising additional debt capital, and any debt raised would likely be at rates well above those for an investment grade utility.

Q. How does the Company's proposal to accrue AFUDC at its WACC align with ratemaking principles?

A. First, accruing AFUDC at the utility's WACC sends a more accurate price signal by reflecting the Company's actual financing costs. Second it would improve the Company's opportunity to recover its full cost of service, which supports the credit quality and financial integrity of the utility. Contributing to the financial stability of creditworthiness of the utility benefits customers and shareholders alike.

IV. REGULATORY PRECEDENT FOR ACCRUING AFUDC AT A UTILITY'S WACC

Q. What is the Commission's precedent for CWIP and the appropriate AFUDC rate?

A. As noted earlier, under the Commission's rules, a utility has the option to either record CWIP – including financing costs – in rate base on an annual basis, or to record the costs in the AFUDC account, and then capitalize all costs when the

plant goes into service.⁹ The Commission has recognized that the Uniform System of Accounts “expressly provides for ‘a reasonable rate upon the utility’s own funds when used’ to finance CWIP, terminology that is commonly understood to refer to a utility’s authorized rate of return.”¹⁰ Further, in Decision 20-12-007 for California Water Service, the Commission recently concluded that it “will not prioritize or mandate specific sources of funding for CWIP. Instead, we leave that to the discretion of Cal Water, subject to our review for reasonableness on a case-by-case basis during its [General Rate Cases].”¹¹ Lastly, while the Commission has “broad discretion”¹² to determine the methodology to apply when determining AFUDC rates, it has authorized AFUDC rates at the utility’s actual cost of funds used to fund the project.¹³

The facilities under construction in SJWC’s CWIP account are long-term in nature, capital intensive, and are funded by both debt and equity. Therefore, the Company’s WACC is the appropriate AFUDC rate, consistent with Commission precedent.

Q. Do other jurisdictions use the subject utility’s WACC as the AFUDC rate for ratemaking purposes?

A. Yes. Accruing AFUDC at the utility’s WACC is a widely employed and standard practice for U.S. utilities. First, as noted earlier, the FERC’s formula reflects the weighted average cost of capital, including both debt and equity in the AFUDC

9 CPUC Decision 20-12-007 at 30, footnote 51.

10 CPUC Decision 20-12-007 at 32.

11 CPUC Decision 20-12-007 at 34.

12 CPUC Decision 23-03-048, at 20-21, citing Decision 95-03-021, at 12.

13 CPUC Decision 23-03-048, at 22. See also, Decision 18-07-019, at 144-145, 186, Finding of Fact 150.

formula. As further examples, Michigan, Idaho, Oregon, and Washington also use the utility's authorized WACC to set the AFUDC rate.

The Michigan PSC policy regarding the AFUDC rate was determined in a 1980 Order in Case U-5281. In that order the Michigan PSC stated that “[t]he AFUDC rate utilized shall be the Commission’s found overall rate of return for each utility. In the case of combination utilities’ common plant, the AFUDC rate for such common plant shall be the latest overall rate of return for a major utility department.”¹⁴ Additionally, Avista Utilities capitalizes AFUDC in Washington, Idaho, and Oregon on a monthly basis using the rate of return established in its most recent Washington general rate case.¹⁵

These examples are not unique to these utilities or jurisdictions, but rather provide examples of a commonly employed approach across U.S. regulatory jurisdictions. As noted by S&P Global, in a “Frequently Asked Questions” primer on U.S. utility rate regulation:

If CWIP is not included in rate base, accounting standards dictate that the utility is to record a non-cash adder known as allowance for funds used during construction (AFUDC), which represents the accrued financing charges associated with CWIP that is not yet included in rate base. AFUDC is equal to the assumed rate of return on the CWIP balance, with the amount included on the utility’s income statement during the period in question.¹⁶

V. CONCLUSION

Q. Please summarize your conclusion and recommendation.

14 See, e.g., Michigan PSC Case U-20162, Order, at 96, footnote 12 (May 2, 2019).

15 Idaho Public Utilities Commission Order No. 34326, at 1 (May 2, 2019). See also Washington UTC Docket No. UE 190074, Petition for Order Authorizing Deferral of Costs, at 3-4 and footnote 2 (January 31, 2019); Avista Corporation 2022 Annual Report at 66, <https://investor.avistacorp.com/static-files/536eb577-0eb6-4502-a885-ce58d678ad1f>

16 S&P Global RRA Regulatory Focus, “Frequently Asked Questions,” July 31, 2023, at 14.

A. The Company respectfully requests that the Commission authorize an AFUDC rate at the WACC approved in this proceeding. Because SJWC finances its CWIP using a mix of debt and equity, the WACC is the appropriate capitalization rate, consistent with prior Commission Decisions.

Q. Does this conclude your Direct Testimony?

A. Yes.

CHAPTER 12

DEPRECIATION RESERVE AND EXPENSE

Prepared by Nanci Tran

A. Depreciation Reserve

1. Workpapers supporting this chapter can be found in Workpapers, Chapter 12.
2. The recorded depreciation data for 2018 through 2023 is shown in Table 12-A. The table shows the beginning of the year depreciation reserve balances, the yearly accruals applicable to "Transportation Equipment," "Contributed Plant," and "Other Plant in Service," retirements and adjustments, net additions to the reserve for the year and weighted average balances of the depreciation reserve.
3. Depreciable plant balances at the beginning of the year, and depreciation accruals as a percent of the depreciable plant at the beginning of the year are also shown under "Statistics" at the bottom of Table 12-A.
4. SJWC has determined its annual depreciation accruals by preparing annual depreciation studies and computations to reflect current weighting between ages, classes and types of depreciable properties, and their future life expectancies. Composite average lives of each property group were determined by "Average Service Life Weighting" in compliance with California Public Utilities Commission Standard Practice U-4.
5. Table 12-B sets forth the depreciation reserve and expense as estimated for the years 2024-2026. The accruals for 2024-2026 are based upon the updated depreciation study performed for 2022, see testimony of Chapter 15 – Dane Watson’s testimony. The table also includes estimated weighted average reserve balances for 2024-2026.
6. Similar to Table 12-A, depreciable plant balances at the beginning of the year, and depreciation accruals as a percent of the depreciable plant at the beginning of the year are shown under "Statistics" at the bottom of Table 12-B.

B. Depreciation Expense

7. As previously stated, Table 12-A, sets forth recorded depreciation accruals for the years 2018-2023. These accruals are separated into “Transportation Equipment,” “Contributed Plant,” and “Other Plant in Service.” Only accruals for Other Plant in Service is included in Depreciation Expense in the Summary of Earnings.

8. Similarly, Table 12-B sets forth accruals separated into “Transportation Equipment,” “Contributed Plant,” and “Other Plant in Service.” An added accrual is for cloud capital projects for various information technology investments. Only accruals for Other Plant in Service and Cloud is included in Depreciation Expense in the Summary of Earnings. As indicated in Table 12-B the composite depreciation rate requested for the test year 2025 in this filing is 3.49%.

9. Further testimony is provided by Dane Watson of Alliance Consulting Group in Attachment A.

SAN JOSE WATER COMPANY
(U-168-W)

DEPRECIATION RESERVE AND EXPENSE
(2018-2023)

(Thousands of Dollars)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	<u>2023</u>	Authorized Test Year <u>2023</u>
Depreciation Reserve								
Beginning of Year Balance	\$514,698.9	\$564,390.2	\$614,320.5	\$673,366.2	\$737,662.1	\$733,398.0	\$799,557.1	\$795,979.2
Accruals:								
Transportation Equipment	\$1,444.9	\$1,793.9	\$1,478.6	\$1,674.7	\$1,514.9	\$1,589.1	\$1,601.4	\$1,627.1
Contributed Plant	\$4,864.5	\$5,179.1	\$5,427.9	\$5,684.4	\$6,016.2	\$5,984.2	\$6,390.9	\$6,283.4
Other Plant in Service	\$52,042.9	\$57,861.5	\$63,525.4	\$66,755.0	\$72,004.9	\$69,854.8	\$67,464.7	\$72,568.4
Total Accruals	\$58,352.3	\$64,834.5	\$70,431.9	\$74,114.0	\$79,536.0	\$77,428.1	\$75,457.0	\$80,479.0
Retirements and Adjustments:								
Sales & Adjustments	\$8,531.9	\$14,792.2	\$11,371.0	\$9,817.5	\$17,640.7	\$14,677.9	\$9,509.6	\$14,677.9
Total Retirements and Adjustments	\$8,661.0	\$14,904.2	\$11,386.2	\$9,818.2	\$17,641.0	\$14,847.0	\$9,509.6	\$15,343.9
Net Additions:								
Total Accruals	\$58,352.3	\$64,834.5	\$70,431.9	\$74,114.0	\$79,536.0	\$77,428.1	\$75,457.0	\$80,479.0
Total Retirements and Adjustments	\$8,661.0	\$14,904.2	\$11,386.2	\$9,818.2	\$17,641.0	\$14,847.0	\$9,509.6	\$15,343.9
Net Additions	\$49,691.3	\$49,930.3	\$59,045.7	\$64,295.8	\$61,895.1	\$62,581.1	\$65,947.4	\$65,135.1
Weighted Average Balance	\$539,544.5	\$589,355.3	\$643,843.4	\$705,514.1	\$768,609.6	\$766,879.0	\$832,530.8	\$830,826.5
Statistics:								
Depreciable Plant - Beg-of-Yr Balance	\$1,618,561.4	\$1,729,592.6	\$1,832,067.5	\$1,947,120.3	\$2,029,690.2	\$1,996,895.5	\$2,149,435.8	\$2,112,672.2
Accruals as % of Beg-of-Yr Balance	3.61%	3.75%	3.84%	3.81%	3.92%	3.88%	3.51%	3.81%

**SAN JOSE WATER COMPANY
(U-168-W)**

**DEPRECIATION RESERVE AND EXPENSE
(2018-2020)**

(Thousands of Dollars)

	Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>
<u>Depreciation Reserve</u>			
Beginning of Year Balance	\$865,504.5	\$937,183.2	\$986,568.0
Accruals:			
Transportation Equipment	\$2,129.0	\$708.7	\$831.9
Contributed Plant	\$5,491.2	\$5,115.2	\$5,213.5
Other Plant in Service	\$78,327.5	\$78,059.0	\$83,657.9
Total Accruals	\$85,947.7	\$83,882.8	\$89,703.3
Cloud Depreciation Expense (CH-13 Cloud)		\$380.5	\$1,028.1
Retirements and Adjustments:			
Net Retirements	\$14,269.0	\$34,498.1	\$15,598.3
Adjustments	\$0.0	\$0.0	\$0.0
Total Retirements and Adjustments	\$14,269.0	\$34,498.1	\$15,598.3
Net Additions:			
Total Accruals	\$85,947.7	\$83,882.8	\$89,703.3
Total Retirements and Adjustments	\$14,269.0	\$34,498.1	\$15,598.3
Total Net Additions	\$71,678.7	\$49,384.8	\$74,105.0
Weighted Average Balance	\$900,531.6	\$961,063.4	\$1,022,808.3
Statistics:			
Depreciable Plant - Beg-of-Yr Balance	\$2,255,846.1	\$2,403,520.0	\$2,570,294.7
Accruals as % of Beg-of-Yr Balance	3.81%	3.49%	3.49%

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

**CHAPTER 12 – ATTACHMENT A
DIRECT TESTIMONY OF DANE A. WATSON**

December 29, 2023

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**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

DIRECT TESTIMONY OF DANE A. WATSON

I. INTRODUCTION

Q1. Please provide your name, position and business address.

A1. My name is Dane A. Watson. I am Managing Partner of Alliance Consulting Group. Alliance Consulting Group provides consulting and expert services to the utility industry. I have been retained by San Jose Water Company (“San Jose Water” or “the Company”) to present testimony in this proceeding. My business address is 101 E. Park Blvd., Suite 220, Plano, TX 75074.

Q2. What are your responsibilities?

A2. My responsibilities included preparing a depreciation study for San Jose Water and supporting those rates in this proceeding.

Q3. What is your educational background?

A3. I hold a Bachelor of Science degree in Electrical Engineering from the University of Arkansas at Fayetteville and a Master’s Degree in Business Administration from Amberton University.

Q4. Do you hold any special certification as a depreciation expert?

A4. Yes. The Society of Depreciation Professionals (“the Society”) has established national standards for depreciation professionals. The Society administers an examination and has certain required qualifications to become certified in this field. I met all requirements and have become a Certified Depreciation Professional (“CDP”). A list of depreciation studies that I have prepared are provided in Attachment 1.

Q5. Please outline your experience in the field of depreciation.

A5. Since graduation from college in 1985, I have worked in the area of depreciation and valuation. I founded Alliance Consulting Group in 2004 and am responsible for conducting depreciation, valuation and certain accounting-related studies for utilities in various industries. My duties related to depreciation studies include the assembly and analysis of historical and simulated data, conducting field reviews, determining service life and net salvage estimates, calculating annual depreciation, presenting recommended depreciation rates to utility management for its consideration, and supporting such rates before regulatory bodies.

My prior employment from 1985 to 2004 was with Texas Utilities (“TXU”). During my tenure with TXU, I was responsible for, among other things, conducting valuation and depreciation studies for the domestic TXU companies. During that time, I served as Manager of Property Accounting Services and Records Management in addition to my depreciation responsibilities.

I have twice been Chair of the Edison Electric Institute (“EEI”) Property Accounting and Valuation Committee and have been Chairman of EEI’s Depreciation and Economic Issues Subcommittee. I was the Industry Project Manager for the EEI/AGA effort around the electric and gas industry adoption of FAS 143 and testified before the Federal Energy Regulatory Commission (“FERC”) in the hearings leading up to the release of FERC Order 631. I was also the Project Leader for the EEI/American Gas Association (“AGA”) *Introduction to Depreciation* textbook update. I am a Registered Professional Engineer (“PE”) in the State of Texas and a Certified Depreciation Professional. I am a Senior Member of the Institute of Electrical and Electronics Engineers (“IEEE”) and have held various local, regional and world-wide offices in IEEE. I have served as past President of the Society of Depreciation Professionals, most recently in 2015. As part of the annual training program for the Society of Depreciation Professionals, I serve as a faculty member. I also teach depreciation in multiple venues for EEI/AGA and other entities.

- Q6. Have you previously testified before a state public utilities regulatory commission?
- A6. Yes, I have. I have appeared before the California Public Utilities Commission in six different proceedings, listed in Attachment 1. The rest of my testimony appearances are found in Attachment 1.

II. PURPOSE OF TESTIMONY

- Q7. What is the purpose of your testimony?
- A7. The purpose of my testimony is to sponsor and support the depreciation study performed for San Jose Water Company (“San Jose Water” or “the Company”). The San Jose Water depreciation study included as Attachment 2 resulted in depreciation rates that were used to determine the depreciation expense for Company assets in this proceeding.
- Q8. Are you sponsoring any Attachments with your Direct Testimony?
- A8. Yes. I am sponsoring two attachments. I have identified Attachment 1 and Attachment 2 above.
- Q9. What depreciation rates are you proposing, and how do they compare with the current rates?
- A9. The detailed computation of the proposed annual accrual rates is shown in Appendix A of my Attachment 2.. A comparison of the existing versus proposed annual accrual rates and amounts are shown in Appendix B of Attachment 2.
- Q10. What depreciation expense are you recommending in this proceeding?
- A10. The Company will compute depreciation expense by applying the depreciation rates recommended in the depreciation study against the forecasted 2025 plant balances. The depreciation study, which analyzed the Company’s depreciable plant in service at December 31, 2022, results in an annualized depreciation expense for San Jose Water of approximately \$71.1 million. This represents a decrease of approximately \$1.9 million over the annualized depreciation expense calculated on year-end 2022 investment using

the current depreciation rates. A summary of the proposed versus current accrual amounts is shown below by utility function.

Utility Function	Plant Balance 12-31-2022	Current Accrual Amount	Proposed Accrual Amount	Difference
Source of Supply	\$ 97,862,086	\$ 4,125,837	\$ 3,039,934	\$ (1,085,903)
Pumping Plant	168,950,818	9,122,130	8,944,573	(177,557)
Water Treatment	115,703,706	4,826,336	5,702,521	876,185
Transmission and Distribution	1,619,637,018	54,171,086	46,791,432	(7,379,655)
General Plant	110,863,910	7,216,467	8,021,465	804,999
CIAC	(217,502,461)	(6,423,950)	(2,734,872)	3,689,079
Reserve Difference			1,338,716	1,338,716
Total	\$1,895,515,077	\$ 73,037,906	\$ 71,103,769	\$ (1,934,136)

Q11. What are the primary factors that have influenced the change in the Company’s depreciation rates?

A11. There are three offsetting primary drivers of the decrease in annual accrual: first, the increased service life recommendations for the Company’s largest accounts, Account 343 and Account 345, which comprise approximately 60% of the Company’s plant in service at December 31, 2022; second, the shorter life recommendation for Account 346 Meters and 332.1 WT Equipment Filter Plant; and third, the 13 accounts that increased net salvage by 25% (more negative).

Q12. Does the depreciation study you sponsor in this case reflect the most current data available for San Jose Water’s assets?

A12. Yes. The data used reflects the most recent experience and future expectations for life and net salvage characteristics for San Jose Water.

III. SAN JOSE WATER DEPRECIATION STUDY

Q13. Did you prepare the San Jose Water depreciation study?

- A13. Yes. The depreciation study is attached to my testimony as Attachment 2. The study analyzes the life and net salvage percentage for the property groups associated with the Company's water utility plant and general plant assets at December 31, 2022.
- Q14. Please describe the assets for San Jose Water.
- A14. This study includes Source of Supply Plant, Pumping Plant, Water Treatment Plant, Transmission and Distribution Plant, and General Plant assets. Intangible assets and non-depreciable property such as land were excluded. Accrual rates and amounts for CIAC accounts were also computed using the depreciation parameters of the corresponding plant accounts.
- Q15. What definition of depreciation have you used for the purpose of conducting a depreciation study and preparing your testimony?
- A15. The term "depreciation," as used herein, is considered in the accounting sense; that is, it is a system of accounting that distributes the cost of assets, less net salvage (if any), over the estimated useful life of the assets in a systematic and rational manner. Depreciation is a process of allocation, not valuation. Depreciation expense is systematically allocated to accounting periods over the life of the properties. The amount allocated to any one accounting period does not necessarily represent the loss or decrease in value that will occur during that particular period. Thus, depreciation is considered an expense or cost, rather than a loss or decrease in value. The Company accrues depreciation based on the original cost of all property included in each depreciable plant account. On retirement, the full cost of depreciable property, less the net salvage amount, if any, is charged to the depreciation reserve.
- Q16. Please describe your depreciation study approach.
- A16. I conducted the depreciation studies in four phases as shown in my Attachment 2. The four phases are: Data Collection, Analysis, Evaluation, and Calculation. During the initial phase of the study, I collected historical data to be used in the analysis. After the data was assembled, I performed analyses to determine the life and net salvage percentage for the

different property groups being studied. As part of this process, I conferred with field personnel, engineers, and managers responsible for the installation, operation, and removal of the assets to gain their input into the operation, maintenance, and salvage of the assets. The information obtained from field personnel, engineers, and managerial personnel, combined with the study results, was then evaluated to determine how the results of the historical asset activity analysis, in conjunction with the Company's expected future plans, should be applied to develop depreciation rates that will allow the recovery of the plant investment. I used all of these resources to calculate the depreciation rate for each function.

Q17. What depreciation methodology did you use?

A17. The straight-line, Average Life Group, remaining-life depreciation system was employed to calculate annual and accrued depreciation in this study. This use of the Average Life Group methodology is the same methodology used to develop the Company's current depreciation rates, which were approved by the Commission and are consistent with Standard Practice U-4.

Q18. How were depreciation rates determined using the average life group procedure?

A18. In this system, the annual depreciation expense for each group was computed by dividing the original cost of the asset, less allocated depreciation reserve, less estimated net salvage, by its respective average life group remaining life. The resulting annual accrual amounts of all depreciable property within an account were accumulated and divided by the original cost of all depreciable property within the account to determine the depreciation rate. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group. The computations of the annual depreciation rates are shown in Appendix A of Attachment 2. The remaining life calculations are discussed below and are also shown in Appendix A of Attachment 2.

Q19. What time period did you use to develop the proposed depreciation rates?

A19. The account level depreciation rates were developed based on the depreciable property

recorded on the Company's books at December 31, 2022.

Q20. In developing the proposed depreciation rates, did you consider the company's current asset accounting practices?

A20. Yes. In developing the proposed depreciation rates, the depreciation study analysis focused not only on historical data but also on the field experience noted by the Company's operations personnel. The results of this analysis confirmed that the historical accounting and operational data were generally representative of current and future life expectations for water utility assets.

Q21. Please summarize the depreciation study results with respect to the depreciation rates.

A21. For each account, the proposed depreciation rates are shown in Appendix A of Attachment 2. A comparison of existing and proposed depreciation rates by district is shown in Appendix B of Attachment 2. In developing the proposed depreciation rates, the depreciation study analysis focused not only on historical data but also on the field experience noted by the Company's operations personnel.

Q22. What factors influence the depreciation rates for an account?

A22. The primary factors that influence the depreciation rate for an account are (1) the remaining investment to be recovered in the account, (2) the depreciable life of the assets in the account, and (3) the net salvage of the assets in the account.

Q23. Did you use per book data for the depreciation study?

A23. Yes.

A. Service Lives

Q24. What is the significance of an asset's useful life in your depreciation study?

A24. An asset's useful life was used to determine the remaining life over which the remaining cost (original cost, plus or minus net salvage, minus accumulated depreciation) can be allocated to normalize the asset's cost and spread it ratably over future periods.

Q25. How did you determine the average service lives for each account?

A25. All accounts were analyzed using the well-accepted actuarial analysis method (retirement

rate method) to estimate the life of property. In much the same manner as human mortality is analyzed by actuaries, depreciation analysts use models of property mortality characteristics that have been validated in research and empirical applications. Graphs and tables supporting the actuarial analysis and the chosen Iowa Curves used to determine the average service lives for analyzed accounts are found in the Life Analysis section of my Attachment 2 and in workpapers.

Q26. In addition to statistical modeling, did you also consider company-specific expectations in developing your service life recommendations?

A26. Yes. Both statistical modeling of historical data and Company-specific facts and expectations are critical to any depreciation analysis. In order to achieve a reasonable balance between these critical components of the life analysis, I evaluated the statistical historical data and then applied informed judgment to make the most appropriate service life selections. The objective in any depreciation study is to determine the remaining cost (installation, material and removal cost) to be recovered and the remaining periods in which to recover the costs. This necessarily requires that the service life selections reflect both the Company's historical experience and its current expectations of asset lives. In order to understand the Company's expectations regarding asset lives, I interviewed Company engineers working in both operations and maintenance to confirm the historical activity and indications, current and future plans, expectations and the applicability to the future surviving assets. The interview process provides important information regarding changes in materials, operation and maintenance, as well as the Company's current expectation regarding the service life of the assets currently in use. This information is then considered along with the historical statistical data to develop the most reasonable and representative expected service lives for the Company's assets. The result of all of this analysis is reflected in the service life recommendations set forth in my depreciation study and accompanying workpapers.

Q27. Have you prepared a summary of the life changes by account?

- A27. Yes. A comparison of the existing and proposed life for each account is shown in Appendix C of Attachment 2.
- Q28. What are the key factors driving the need to revise the average service lives for the various accounts?
- A28. The key factors changing the lives of average service lives includes incorporation of updated information about the Company's assets since the last depreciation study, input from operations personnel, and adjustments to the account level at which the average service life is applied. For example, life analysis for Account 316 Source of Supply Mains combined multiple subaccounts with unique service lives used for various diameter and materials of mains to develop one average service life and accrual rate for mains. The detailed analysis of each account is described fully in the Life Analysis section of my Attachment 2.

B. Net Salvage

- Q29. What is net salvage?
- A29. Net salvage is the difference between the gross salvage (what the asset was sold for upon removal) and the removal cost (cost to remove and dispose of the asset). Salvage and removal cost percentages are calculated by dividing the current cost of salvage or removal by the original installed cost of the asset. When salvage exceeds removal (positive net salvage), the net salvage reduces the amount to be depreciated over time. When removal exceeds salvage (negative net salvage), the negative net salvage increases the amount to be depreciated. Plant assets can experience significant negative removal cost percentages due to the amount of removal cost and the timing of the addition versus the retirement.
- Q30. When were the company's current net salvage rates established?
- A30. Net salvage rates for the Company were adjudicated in GRC Decision 22-12-005 before the California Public Utility Commission.

Q31. What are the main factors impacting the net salvage the Company is experiencing?

A31. The costs related to retirement activities (generally including cutting, capping, and purging of water for the abandonment of pipe) have increased over time. Removal from service of these underground assets involves increased labor costs due to inflation and the need to use specialized skill and equipment in the removal process, more restrictive municipal ordinances for performing these projects, and environmental disposal costs.

As mentioned previously in testimony, 13 accounts experienced increases in net salvage percentages (more negative) and this study applies the concept of gradualism and proposes a 25 percent increase in net salvage for those accounts. In recent proceedings, the California Public Utilities Commission has expressed concerns about growing cost burdens associated with increasing cost trends for negative net salvage and applied a principle of gradualism for these rates.¹ The concept of gradualism is discussed in more detail in my Attachment 2.

Q32. How did you determine the net salvage percentages for each asset group?

A32. Salvage analysis for San Jose Water was done at the plant account level and applies the same net salvage percentage to the various subaccounts within each plant account. For each account, data for retirements, gross salvage, and cost of removal were derived from 2001-2022. The net salvage data analyzed for each account is shown in Appendix D of my Attachment 2. The analysis looks at various bands (or combinations) of these years, such as a two-year, three-year, up to a ten-year band. Evaluating these moving averages allows the smoothing of the timing differences between when retirements, removal cost and salvage are booked. By looking at successive average bands (“rolling bands”), an analyst can also see trends in the data that could impact the future net salvage in the account, such as increasing or decreasing net salvage in more recent years. Based on this analysis and feedback from Company engineers regarding any changes in operations or

¹ D-14-08-032 at 597.

maintenance that would affect the future net salvage of the asset I determined the best estimate of future net salvage for each account.

The proposed net salvage percentage for each account used in the depreciation calculations are shown in Appendix C of my Attachment 2. As with any analysis of this type, objective data analysis and expert judgment were applied in order to select a net salvage percentage reflective of the future expectations for each account.

Q33. Is this a reasonable method for determining net salvage rates?

A33. Yes. The method used to establish appropriate net salvage percentages for each account is the methodology commonly employed throughout the industry and is the method recommended in authoritative texts such as *Depreciation Systems*, by Drs. Fitch and Wolf² and the National Association of Regulatory Utility Commissioners' *Public Utility Depreciation Practices*.³ I have relied on this method in the past when sufficient historical data is available, and the Commission has also adopted this methodology in other cases that I have participated in, namely Proceedings A10071007, A13-11-003, A14-07-006, and A16-07-002.

IV. CONCLUSION

Q36. Please summarize the conclusions you have reached as a result of your analysis.

A36. The depreciation study and analysis performed under my supervision fully support setting depreciation rates at the levels I have indicated in my testimony. The depreciation study describes the extensive analysis performed and the resulting rates that are now appropriate for the Company's water utility property. The Company's depreciation rates should be set at my recommended amounts in order to accurately recover the Company's remaining undepreciated plant investment over the estimated remaining life of the assets.

² *Depreciation Systems*, by Drs. F.K. Wolf and W.C. Fitch, Iowa State Press, 1994, page 260-267.

³ *Public Utility Depreciation Practices*, NARUC, 1996, pages 157-164.

Q37. Does this conclude your direct testimony?

A37. Yes, it does.

CHAPTER 13

RATE BASE

Prepared by Nanci Tran

A. Development of Rate Base

1. Workpapers supporting this chapter can be found in Workpapers, Chapter 13.
2. To conform with the practices of the Commission Staff, the rate base developed and set forth herein is based on weighted average balances. Although certain of the rate base items, such as working cash allowance, are not recorded as such on the books of the Company, the rate base amounts are computed from recorded and estimated data

B. Utility Plant

3. The weighted averages of utility plant balances, as set forth in Chapter 11, Tables 11-A and 11-C, have been brought forward to Tables 13-K and 13-L.

C. Adjustment to Utility Plant

4. In the development of rate base for rate making purposes certain adjustments to the weighted averages of the utility plant balances are appropriate. These adjustments include reduction for refundable advances for construction (extension deposits), contributions in aid of construction, reserve for amortization of intangibles and plant funded by Safe Drinking Water State Revolving Fund loans.

5. “Advances for Construction” represent the net deposits made by individuals or others in accordance with the water main extension rules prescribed by the California Public Utilities Commission for which there is provision for refunds. In addition, “Advances for Construction” include non-refundable deposits pending completion of the work, adjustment of the deposit and transfer to “Contributions in Aid of Construction.”

6. Tables 13-A and 13-B set forth recorded data for “Advances for Construction” 2018-2023 and estimated data for the years 2024-2026. The data include: (1) beginning of year balances, (2) deposits during the year, (3) refunds and transfers during the year, (4) the resulting

net addition, and (5) weighted average balances, which include the invested portion as well as the unexpended portion of advances, for which no amounts have been included in the utility plant.

7. “Contributions in Aid of Construction” include the amount of cash, services or property which has been provided to the Company with no provision for refund or for the payment of interest. These include funds for installation of fire services and hydrants, and for relocation of facilities in connection with street modifications and highway construction, as well as the unrefunded balances of expired extension contracts.

8. Tables 13-A and 13-B also set forth “Contributions in Aid of Construction” data as recorded for the years 2018-2023 and for the years 2023-2026 as estimated. The data include (1) the beginning of the year balances, (2) additions during the year, (3) depreciation charged to the “contributions” account, (4) the resulting net additions during the year and (5) weighted average balances.

9. The “Reserve for Amortization of Intangibles” represents accumulated prior amortization of “other intangible plant” which is being amortized over the 70-year life of the treated water contract.

10. “Plant funded by SDWSRF Loan” is plant funded by low-interest state loans under the Safe Drinking Water State Revolving Fund act. Since this plant is not funded by the Company, it is deducted as an adjustment to utility plant

D. Working Capital

11. For rate making purposes, the Commission allows the inclusion of amounts invested in working capital in addition to adjusted utility plant balances. Working Capital allowances include two items: (1) materials and supplies, and (2) working cash.

12. The amount of materials and supplies required to insure the availability of construction and maintenance materials fluctuates throughout the year and from year to year. Tables 13-F and 13-G set forth recorded data for the years 2018-2023 and estimated data for the years 2024-2026 for (1) the beginning of the year balances, and (2) weighted average balances of materials and supplies inventories, net of reserve for inventory losses, obsolescence, and price fluctuations.

13. “Working Cash Allowance” for recorded years 2018-2023 and the estimated years 2024-2026 is based upon lead/lag calculation and is set forth in Tables 13-F and 13-G.

E. Tax Deferrals

14. Since 1982 SJWC has used the normalization method of computing the depreciation deduction and investment tax credits for the purpose of calculating its federal income tax payment. Tables 13-H and 13-I show the adjustment for deferred items: (1) unamortized investment tax credit and (2) federal income taxes both of which are deducted from rate base for the recorded years and for the future test years.

F. Rate Base Effect of Taxation of Contributions and Advances

15. The Tax Reform Act of 1986 requires advances for construction and contributions in aid of construction to be treated as taxable income for income tax purposes. In compliance with Commission Decision No. 87-09-026, the Company includes in rate base the difference between the additional taxes it pays and the additional amounts it collects from the applicants for service. Tables 13-D and 13-E show the adjustments to rate base for those items for the recorded years as well as for the test years.

G. Rate Base for Cloud Projects

16. The Cloud projects represent various Information Technology investments to modernize and transform our business operations leveraging cloud based software infrastructure or platforms. Cloud projects has a different depreciations rate, overall depreciation composit rate were not used for Cloud projects. Summary of Cloud projects and it's depreciation schedule can be found in Workpapers, WP 13-02-Cloud. Its weight rate base cacluation is shown in Workpapers, WP13-Cloud and brought forward to Table 13-J.

H. Rate Base

17. The various components of weighted average rate base, as discussed above, have been brought forward from Tables 11-A, 11-C, and 13-A through 13-I and summarized in Tables 13-K and 13-L to determine undepreciated rate base.

18. Weighted average balances of the reserve for depreciation, as set forth in Tables 12-A and 12-B, have been brought forward to Tables 13-K and 13-L and deducted from each respective undepreciated rate base to determine each years weighted average rate base. In addition rate base from Cloud capital projects from Table 13-J is brought forward and added to the utility

rate base line to come up with total rate base which are shown in Table 13-L in total amounts as well as the average per customer.

18. As required by the 2004 RCP, rate base for the second escalation year 2027 is estimated using an attrition methodology. This methodology assumes the same addition to weighted average rate base for the year 2026-2027 as is calculated for 2024-2025.

TABLE 13-A

SAN JOSE WATER COMPANY
(U-168-W)

ADJUSTMENTS TO UTILITY PLANT
(2018-2023)

(Thousands of Dollars)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	<u>2023</u>	Authorized Test Year <u>2023</u>
<u>Advances for Construction</u>								
Beginning of Year Balance	\$75,477.5	\$70,391.6	\$74,537.1	\$80,039.2	\$78,131.1	\$80,239.0	\$81,602.3	\$80,391.1
Additions - Deposits	\$5,344.3	\$12,539.3	\$13,743.3	\$9,586.0	\$13,842.8	\$10,992.0	\$6,643.2	\$10,992.0
Deductions - Refunds:	\$2,465.6	\$2,661.0	\$2,524.2	\$2,596.9	\$2,604.7	\$2,740.9	\$2,482.0	\$2,777.9
Transfers to:								
Contributions in Aid of Construction	\$7,558.8	\$5,608.0	\$5,535.2	\$8,520.7	\$3,705.1	\$7,900.0	\$2,210.9	\$7,900.0
Other	\$405.8	\$124.9	\$181.8	\$376.5	\$4,061.8	\$199.0	\$4,598.7	\$199.0
Total Transfers	\$7,964.6	\$5,732.8	\$5,717.0	\$8,897.2	\$7,766.8	\$8,099.0	\$6,809.6	\$8,099.0
Total Deductions	\$10,430.2	\$8,393.8	\$8,241.2	\$11,494.1	\$10,371.6	\$10,840.0	\$9,291.6	\$10,876.9
Weighted Average Balances	\$72,824.0	\$72,743.0	\$78,215.0	\$79,582.0	\$83,095.0	\$80,339.8	\$86,608.0	\$80,467.4
<u>Contributions in Aid of Construction</u>								
Beginning of Year Balance	\$121,268.0	\$126,574.7	\$129,185.5	\$131,568.9	\$137,062.9	\$140,588.6	\$141,262.7	\$149,323.4
Additions:								
Transfer from Advances for Constr.	\$7,558.8	\$5,608.0	\$5,535.2	\$8,520.7	\$3,705.1	\$7,900.0	\$2,210.9	\$7,900.0
Other	\$2,612.5	\$2,181.9	\$2,276.1	\$2,657.7	\$6,510.9	\$6,819.0	\$7,042.7	\$6,819.0
Total Additions	\$10,171.2	\$7,789.9	\$7,811.3	\$11,178.3	\$10,216.0	\$14,719.0	\$9,253.6	\$14,719.0
Deductions - Depreciation Charged	\$4,864.5	\$5,179.1	\$5,427.9	\$5,684.4	\$6,016.2	\$5,984.2	\$6,390.9	\$6,283.4
Net Additions	\$5,306.8	\$2,610.7	\$2,383.4	\$5,494.0	\$4,199.8	\$8,734.8	\$2,862.7	\$8,435.6
Weighted Average Balance	\$124,084.0	\$126,364.0	\$128,136.0	\$133,957.0	\$137,879.0	\$141,939.9	\$141,262.7	\$150,628.4
Plant Funded by SDWSFR Loan	\$1,147.8	\$964.3	\$780.3	\$589.6	\$409.2	\$370.2	\$239.9	\$180.2
<u>Reserve for Amortization of Intangibles</u>								
Beginning of Year Balance	\$512.0	\$528.3	\$544.7	\$561.0	\$577.3	\$577.3	\$593.7	\$593.7
Provision	\$16.3	\$16.3	\$16.3	\$16.3	\$16.3	\$16.3	\$16.3	\$16.3
Weighted Average Balance	\$520.2	\$536.5	\$552.8	\$569.2	\$585.5	\$585.5	\$601.8	\$601.8
Weighted Average Adjustments	\$198,576.0	\$200,607.8	\$207,684.1	\$214,697.8	\$221,968.7	\$223,235.4	\$228,712.4	\$231,877.8

TABLE 13-B

SAN JOSE WATER COMPANY (U-168-W)
ADJUSTMENTS TO UTILITY PLANT
(2024-2026)

(Thousands of Dollars)

	Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>
<u>Advances for Construction</u>			
Beginning of Year Balance	\$78,953.9	\$88,693.1	\$98,435.6
Additions	\$11,270.9	\$11,270.9	\$11,270.9
Total Refunds	\$2,570.5	\$2,573.8	\$2,555.7
Transfers to CIAC	\$5,300.0	\$5,300.0	\$5,300.0
Reserve for Depreciation - Salvage	\$1,868.7	\$1,868.7	\$1,868.7
Total Transfers	\$7,168.7	\$7,168.7	\$7,168.7
Net Additions	\$1,531.7	\$1,528.4	\$1,546.5
Deduction - Unexpended Advances	\$4,766.4	\$4,766.4	\$4,766.4
Weighted Average Balance, Advances	\$74,953.3	\$76,483.4	\$78,020.8
<u>Contributions in Aid of Construction</u>			
Beginning of Year Balance	\$144,125.4	\$146,566.1	\$149,382.8
Additions:			
Transfer from Advances for Construction	\$5,300.0	\$5,300.0	\$5,300.0
Other	\$2,631.9	\$2,631.9	\$2,631.9
Total Additions	\$7,931.9	\$7,931.9	\$7,931.9
Deductions - Depreciation Charged	\$5,491.2	\$5,115.2	\$5,213.5
Net Additions	\$2,440.7	\$2,816.7	\$2,718.4
Weighted Average Balance, Contributions	\$145,345.7	\$147,974.5	\$150,742.1
<u>Plant Funded by SDWSFR Loan</u>	\$70.7	\$0.0	\$0.0
<u>Reserve for Amortization of Intangibles</u>			
Beginning of Year Balance	\$610.0	\$626.4	\$642.7
Provision	\$16.3	\$16.3	\$16.3
Weighted Average Reserve Balance	\$618.2	\$634.5	\$650.9

SAN JOSE WATER COMPANY (U-168-W)

ADJUSTMENTS TO UTILITY PLANT
(2024-2026)

(Thousands of Dollars)

		Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>
<u>Advances for Construction</u>				
Weighted Average	(from Table 13-B)	\$74,953.3	\$76,483.4	\$78,020.8
<u>Contributions in Aid of Construction</u>				
Weighted Average	(from Table 13-B)	\$145,345.7	\$147,974.5	\$150,742.1
<u>Plant Funded by SDWSFR Lo</u>	(from Table 13-B)	\$70.7	\$0.0	\$0.0
<u>Reserve for Amortization of Intangibles</u>				
Weighted Average	(from Table 13-B)	\$618.2	\$634.5	\$650.9
Total Weighted Average Adjustment to Utility Plant		<u>\$220,987.9</u>	<u>\$225,092.4</u>	<u>\$229,413.8</u>

SAN JOSE WATER COMPANY
(U-168-W)

ADJUSTMENTS TO UTILITY PLANT - RATE BASE ON TAXING
CONTRIBUTIONS AND ADVANCES IN CONSTRUCTION
(2018-2023)

(Thousands of Dollars)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	<u>2023</u>	Authorized Test Year <u>2023</u>
Weighted Average Ratebase Effect on Taxing :								
Contributions (WP 13-1)	\$6,317.8	\$7,853.5	\$9,141.9	\$9,085.3	\$9,179.8	\$12,731.2	\$9,540.9	\$14,644.4
Advances (WP 13-1)	\$2,965.0	\$3,307.4	\$3,936.9	\$3,531.1	\$3,379.7	\$3,693.7	\$3,424.9	\$3,794.2
Total Ratebase Effect of Taxing CIAC & Advances	<u>\$9,282.9</u>	<u>\$11,160.9</u>	<u>\$13,078.8</u>	<u>\$12,616.4</u>	<u>\$12,559.6</u>	<u>\$16,424.9</u>	<u>\$12,965.8</u>	<u>\$18,438.6</u>

TABLE 13-E

SAN JOSE WATER COMPANY (U-168-W)

ADJUSTMENTS TO UTILITY PLANT - RATE BASE ON TAXING
CONTRIBUTIONS AND ADVANCES IN CONSTRUCTION
(2024-2026)

(Thousands of Dollars)

		Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>
Weighted Average Ratebase Effect on Taxing:				
Contributions	(from WP 13-07)	\$10,148.2	\$9,940.1	\$9,737.5
Advances	(from WP 13-08)	\$2,879.2	\$2,778.2	\$2,658.0
Total Ratebase Effect on Taxing CIAC & Advances		\$13,027.4	\$12,718.2	\$12,395.4

TABLE 13-F

SAN JOSE WATER COMPANY
(U-168-W)

WORKING CAPITAL
(2018-2023)

(Thousands of Dollars)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	<u>2023</u>	Authorized Test Year <u>2023</u>
Materials and Supplies								
Beginning of Year Balance	\$824.2	\$808.4	\$925.8	\$1,063.7	\$1,609.0	\$1,150.0	\$2,198.9	\$1,179.6
Weighted Average	\$824.2	\$808.4	\$925.8	\$1,063.7	\$1,609.0	\$1,150.0	\$2,198.9	\$1,179.6
Reserve for Inventory Losses:								
Beginning of Year Balance	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Weighted Average	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Weighted Average M & S Net of Inventory Loss	\$824.2	\$808.4	\$925.8	\$1,063.7	\$1,609.0	\$1,150.0	\$2,198.9	\$1,179.6
Authorized Working Cash Allowance	\$18,494.0	\$24,453.1	\$25,387.6	\$26,322.1	\$27,385.4	\$27,385.4	\$27,914.3	\$27,914.3
Total Working Capital	\$19,318.2	\$25,261.5	\$26,313.3	\$27,385.8	\$28,994.5	\$28,535.4	\$30,113.2	\$29,093.9

TABLE 13-G

SAN JOSE WATER COMPANY (U-168-W)

WORKING CAPITAL
(2024-2026)

(Thousands of Dollars)

		Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>
<u>Materials and Supplies</u>				
Weighted Average	(from WP 13-11)	\$2,336.4	\$2,611.3	\$2,886.3
<u>Working Cash Allowance</u>				
Gross Working Cash Requirements Indicated by Certain Balance Sheet Accounts				
Minimum Bank Cash Deposit	(from WP 13-11)	\$200.0	\$200.0	\$200.0
Special Deposits and Working Funds	(from WP 13-11)	\$383.1	\$383.1	\$383.1
Total Gross Requirements		\$583.1	\$583.1	\$583.1
<u>Deduction from Gross Requirement of Amounts Supplied by Investors</u>				
Average Deficiency as a Result of Paying Expenses in Advance of Collecting Revenues.	(from WP 13-11)	\$51,310.4	\$50,818.0	\$52,441.9
Customer Deposits	(from WP 13-11)	\$0.0	\$0.0	\$0.0
Amounts Withheld from Employees	(from WP 13-11)	(\$143.6)	(\$143.6)	(\$143.6)
Total Deduction from Gross Requirement		\$51,166.8	\$50,674.5	\$52,298.4
Working Cash Supplied by Investors		\$51,750.0	\$51,257.6	\$52,881.5
Total Working Capital		\$54,086.4	\$53,868.9	\$55,767.8

SAN JOSE WATER COMPANY
(U-168-W)

DEFERRED TAXES AND INVESTMENT TAX CREDIT RESERVE
(2018-2023)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	Authorized Test Year <u>2023</u>	<u>2023</u>
<u>Investment Tax Credit Reserve</u>								
Beginning of Year Balance	\$1,134.6	\$1,074.6	\$1,014.6	\$954.6	\$894.6	\$894.6	\$834.6	\$834.6
Addition During the Year	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,132.5	\$0.0
Amortization for the Year	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$92.4	\$60.0
End of Year Balance	\$1,074.6	\$1,014.6	\$954.6	\$894.6	\$834.6	\$834.6	\$1,874.7	\$774.6
Average Balance	\$1,104.6	\$1,044.6	\$984.6	\$924.6	\$864.6	\$864.6	\$1,354.7	\$804.6
<u>Deferred Federal Income Tax</u>								
Beginning of Year Balance	\$154,877.2	\$152,826.1	\$150,726.3	\$144,510.2	\$138,378.1	\$138,866.3	\$135,770.3	\$133,928.3
Deferral for the Year:								
Additions on ACRS/MACRS Assets Only	(\$2,051.1)	(\$2,099.7)	(\$6,216.1)	(\$6,132.1)	(\$2,607.9)	(\$4,937.9)	(\$5,044.9)	(\$4,934.1)
End of Year Balance	\$152,826.1	\$150,726.3	\$144,510.2	\$138,378.1	\$135,770.3	\$133,928.3	\$130,725.4	\$128,994.3
Average Balance	\$153,851.6	\$151,776.2	\$147,618.3	\$141,444.2	\$137,074.2	\$137,578.6	\$133,247.8	\$132,624.7
Total Average Deferrals	\$154,956.2	\$152,820.8	\$148,602.9	\$142,368.8	\$137,938.8	\$138,443.2	\$134,602.5	\$133,429.3

TABLE 13-1

SAN JOSE WATER COMPANY (U-168-W)

DEFERRED TAXES AND INVESTMENT TAX CREDIT RESERVE
(2024-2026)

(Thousands of Dollars)

	Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>
<u>Investment Tax Credit Reserve</u>			
Beginning of Year Balance	\$1,874.7	\$2,407.3	\$4,062.9
Additions During The Year	\$643.3	\$1,876.6	\$1,210.2
Amortization for the Year	\$110.7	\$220.9	\$301.6
	<hr/>		
End of Year Balance	\$2,407.3	\$4,062.9	\$4,971.5
Average Balance	\$2,141.0	\$3,235.1	\$4,517.2
<u>Deferred Federal Income Tax</u>			
Beginning of Year Balance	\$130,725.4	\$124,889.8	\$126,978.6
Deferral for the Year:			
Additions on ACRS/MACRS Assets Only	(\$5,835.6)	\$2,088.8	\$4,552.8
	<hr/>		
Additions	(\$5,835.6)	\$2,088.8	\$4,552.8
End of Year Balance	\$124,889.8	\$126,978.6	\$131,531.4
Average Balance	\$129,748.0	\$128,334.0	\$132,051.2
	<hr/>		
Total Average Deferrals	\$131,889.0	\$131,569.1	\$136,568.4
	<hr/> <hr/>		

SAN JOSE WATER COMPANY (U-168-W)

WEIGHTED AVERAGE RATE BASE - CLOUD
(2024-2026)

(Thousands of Dollars, Except per Customer Data)

		Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>	Attrition <u>2027</u>
Undepreciated Rate Base	From (CH-13 Cloud)	\$1,094.5	\$4,374.3	\$7,947.3	\$11,520.4
Depreciation Reserve	From (CH-13 Cloud)	\$0.0	\$190.3	\$894.6	\$1,598.9
Weighted Rate Base for Cloud					
Weighted Average Rate Base - Amount		\$1,094.5	\$4,184.0	\$7,052.7	\$9,921.5

SAN JOSE WATER COMPANY
(U-168-W)

WEIGHTED AVERAGE RATE BASE
(2018-2023)

(Thousands of Dollars, Except per Customer Data)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	<u>2023</u>	Authorized Test Year <u>2023</u>
Utility Plant	\$1,728,914.0	\$1,855,828.0	\$1,955,214.0	\$2,049,199.0	\$2,163,490.0	\$2,110,755.0	\$2,274,989.1	\$2,260,769.4
Adjustments to Plant	(\$198,576.0)	(\$200,607.8)	(\$207,684.1)	(\$214,697.8)	(\$221,968.7)	(\$223,235.4)	(\$228,712.4)	(\$231,877.8)
Working Capital	\$19,318.2	\$25,261.5	\$26,313.3	\$27,385.8	\$28,994.5	\$28,535.4	\$30,113.2	\$29,093.9
Tax Deferrals	(\$154,956.2)	(\$152,820.8)	(\$148,602.9)	(\$142,368.8)	(\$137,938.8)	(\$138,443.2)	(\$134,602.5)	(\$133,429.3)
Ratebase on Taxing Contributions and Advances	\$9,282.9	\$11,160.9	\$13,078.8	\$12,616.4	\$12,559.6	\$16,424.9	\$12,965.8	\$18,438.6
Undepreciated Rate Base	\$1,403,982.8	\$1,538,821.8	\$1,638,319.1	\$1,732,134.6	\$1,845,136.5	\$1,794,036.7	\$1,954,753.3	\$1,942,994.8
Depreciation Reserve	\$539,544.5	\$589,355.3	\$643,843.4	\$705,514.1	\$768,609.6	\$766,879.0	\$832,530.8	\$830,826.5
Weighted Average Rate Base:	\$864,438.3	\$949,466.4	\$994,475.7	\$1,026,620.4	\$1,076,526.9	\$1,027,157.7	\$1,122,222.4	\$1,112,168.3
Per Customer	\$3,896	\$4,268	\$4,471	\$4,619	\$4,833	\$4,600	\$5,025	\$3,222

SAN JOSE WATER COMPANY (U-168-W)

WEIGHTED AVERAGE RATE BASE
(2024-2026)

(Thousands of Dollars, Except per Customer Data)

		Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>	Attrition <u>2027</u>
Utility Plant	(from Table 11-D)	\$2,347,293.2	\$2,504,517.5	\$2,702,359.9	
Adjustments to Plant	(from Table 13-C)	(\$220,987.9)	(\$225,092.4)	(\$229,413.8)	
Working Capital	(from Table 13-G)	\$54,086.4	\$53,868.9	\$55,767.8	
Tax Deferrals	(from Table 13-I)	(\$131,889.0)	(\$131,569.1)	(\$136,568.4)	
Ratebase on Taxing Contributions & Advances	(from Table 13-E)	\$13,027.4	\$12,718.2	\$12,395.4	
Undepreciated Rate Base		\$2,061,530.0	\$2,214,443.2	\$2,404,540.8	\$2,594,638.5
Depreciation Reserve	(from Table 12-B)	\$900,531.6	\$961,063.4	\$1,022,808.3	\$1,084,553.2
Weighted Average Rate Base - Utility Plant		\$1,160,998.4	\$1,253,379.8	\$1,381,732.5	\$1,510,085.3
Weighted Average Rate Base - Cloud		\$1,094.5	\$4,184.0	\$7,052.7	\$9,921.5
Weighted Average Rate Base - Utility Plant & Cloud		\$1,162,092.9	\$1,257,563.8	\$1,388,785.3	\$1,520,006.8
Weighted Average Rate Base - Per Customer		\$5,196	\$5,616	\$6,194	\$6,597

TABLE 13-A

SAN JOSE WATER COMPANY
(U-168-W)

ADJUSTMENTS TO UTILITY PLANT
(2018-2023)

(Thousands of Dollars)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	<u>2023</u>	Authorized Test Year <u>2023</u>
<u>Advances for Construction</u>								
Beginning of Year Balance	\$75,477.5	\$70,391.6	\$74,537.1	\$80,039.2	\$78,131.1	\$80,239.0	\$81,602.3	\$80,391.1
Additions - Deposits	\$5,344.3	\$12,539.3	\$13,743.3	\$9,586.0	\$13,842.8	\$10,992.0	\$6,643.2	\$10,992.0
Deductions - Refunds:	\$2,465.6	\$2,661.0	\$2,524.2	\$2,596.9	\$2,604.7	\$2,740.9	\$2,482.0	\$2,777.9
Transfers to:								
Contributions in Aid of Construction	\$7,558.8	\$5,608.0	\$5,535.2	\$8,520.7	\$3,705.1	\$7,900.0	\$2,210.9	\$7,900.0
Other	\$405.8	\$124.9	\$181.8	\$376.5	\$4,061.8	\$199.0	\$4,598.7	\$199.0
Total Transfers	\$7,964.6	\$5,732.8	\$5,717.0	\$8,897.2	\$7,766.8	\$8,099.0	\$6,809.6	\$8,099.0
Total Deductions	\$10,430.2	\$8,393.8	\$8,241.2	\$11,494.1	\$10,371.6	\$10,840.0	\$9,291.6	\$10,876.9
Weighted Average Balances	\$72,824.0	\$72,743.0	\$78,215.0	\$79,582.0	\$83,095.0	\$80,339.8	\$86,608.0	\$80,467.4
<u>Contributions in Aid of Construction</u>								
Beginning of Year Balance	\$121,268.0	\$126,574.7	\$129,185.5	\$131,568.9	\$137,062.9	\$140,588.6	\$141,262.7	\$149,323.4
Additions:								
Transfer from Advances for Constr.	\$7,558.8	\$5,608.0	\$5,535.2	\$8,520.7	\$3,705.1	\$7,900.0	\$2,210.9	\$7,900.0
Other	\$2,612.5	\$2,181.9	\$2,276.1	\$2,657.7	\$6,510.9	\$6,819.0	\$7,042.7	\$6,819.0
Total Additions	\$10,171.2	\$7,789.9	\$7,811.3	\$11,178.3	\$10,216.0	\$14,719.0	\$9,253.6	\$14,719.0
Deductions - Depreciation Charged	\$4,864.5	\$5,179.1	\$5,427.9	\$5,684.4	\$6,016.2	\$5,984.2	\$6,390.9	\$6,283.4
Net Additions	\$5,306.8	\$2,610.7	\$2,383.4	\$5,494.0	\$4,199.8	\$8,734.8	\$2,862.7	\$8,435.6
Weighted Average Balance	\$124,084.0	\$126,364.0	\$128,136.0	\$133,957.0	\$137,879.0	\$141,939.9	\$141,262.7	\$150,628.4
Plant Funded by SDWSFR Loan	\$1,147.8	\$964.3	\$780.3	\$589.6	\$409.2	\$370.2	\$239.9	\$180.2
<u>Reserve for Amortization of Intangibles</u>								
Beginning of Year Balance	\$512.0	\$528.3	\$544.7	\$561.0	\$577.3	\$577.3	\$593.7	\$593.7
Provision	\$16.3	\$16.3	\$16.3	\$16.3	\$16.3	\$16.3	\$16.3	\$16.3
Weighted Average Balance	\$520.2	\$536.5	\$552.8	\$569.2	\$585.5	\$585.5	\$601.8	\$601.8
Weighted Average Adjustments	\$198,576.0	\$200,607.8	\$207,684.1	\$214,697.8	\$221,968.7	\$223,235.4	\$228,712.4	\$231,877.8

TABLE 13-B

SAN JOSE WATER COMPANY (U-168-W)
ADJUSTMENTS TO UTILITY PLANT
(2024-2026)

(Thousands of Dollars)

	Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>
<u>Advances for Construction</u>			
Beginning of Year Balance	\$78,953.9	\$88,693.1	\$98,435.6
Additions	\$11,270.9	\$11,270.9	\$11,270.9
Total Refunds	\$2,570.5	\$2,573.8	\$2,555.7
Transfers to CIAC	\$5,300.0	\$5,300.0	\$5,300.0
Reserve for Depreciation - Salvage	\$1,868.7	\$1,868.7	\$1,868.7
Total Transfers	\$7,168.7	\$7,168.7	\$7,168.7
Net Additions	\$1,531.7	\$1,528.4	\$1,546.5
Deduction - Unexpended Advances	\$4,766.4	\$4,766.4	\$4,766.4
Weighted Average Balance, Advances	\$74,953.3	\$76,483.4	\$78,020.8
<u>Contributions in Aid of Construction</u>			
Beginning of Year Balance	\$144,125.4	\$146,566.1	\$149,382.8
Additions:			
Transfer from Advances for Construction	\$5,300.0	\$5,300.0	\$5,300.0
Other	\$2,631.9	\$2,631.9	\$2,631.9
Total Additions	\$7,931.9	\$7,931.9	\$7,931.9
Deductions - Depreciation Charged	\$5,491.2	\$5,115.2	\$5,213.5
Net Additions	\$2,440.7	\$2,816.7	\$2,718.4
Weighted Average Balance, Contributions	\$145,345.7	\$147,974.5	\$150,742.1
<u>Plant Funded by SDWSFR Loan</u>	\$70.7	\$0.0	\$0.0
<u>Reserve for Amortization of Intangibles</u>			
Beginning of Year Balance	\$610.0	\$626.4	\$642.7
Provision	\$16.3	\$16.3	\$16.3
Weighted Average Reserve Balance	\$618.2	\$634.5	\$650.9

SAN JOSE WATER COMPANY (U-168-W)

ADJUSTMENTS TO UTILITY PLANT
(2024-2026)

(Thousands of Dollars)

		Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>
<u>Advances for Construction</u>				
Weighted Average	(from Table 13-B)	\$74,953.3	\$76,483.4	\$78,020.8
<u>Contributions in Aid of Construction</u>				
Weighted Average	(from Table 13-B)	\$145,345.7	\$147,974.5	\$150,742.1
<u>Plant Funded by SDWSFR Lo</u>	(from Table 13-B)	\$70.7	\$0.0	\$0.0
<u>Reserve for Amortization of Intangibles</u>				
Weighted Average	(from Table 13-B)	\$618.2	\$634.5	\$650.9
Total Weighted Average Adjustment to Utility Plant		<u>\$220,987.9</u>	<u>\$225,092.4</u>	<u>\$229,413.8</u>

SAN JOSE WATER COMPANY
(U-168-W)

ADJUSTMENTS TO UTILITY PLANT - RATE BASE ON TAXING
CONTRIBUTIONS AND ADVANCES IN CONSTRUCTION
(2018-2023)

(Thousands of Dollars)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	<u>2023</u>	Authorized Test Year <u>2023</u>
Weighted Average Ratebase Effect on Taxing :								
Contributions (WP 13-1)	\$6,317.8	\$7,853.5	\$9,141.9	\$9,085.3	\$9,179.8	\$12,731.2	\$9,540.9	\$14,644.4
Advances (WP 13-1)	\$2,965.0	\$3,307.4	\$3,936.9	\$3,531.1	\$3,379.7	\$3,693.7	\$3,424.9	\$3,794.2
Total Ratebase Effect of Taxing CIAC & Advances	\$9,282.9	\$11,160.9	\$13,078.8	\$12,616.4	\$12,559.6	\$16,424.9	\$12,965.8	\$18,438.6

TABLE 13-E

SAN JOSE WATER COMPANY (U-168-W)

ADJUSTMENTS TO UTILITY PLANT - RATE BASE ON TAXING
 CONTRIBUTIONS AND ADVANCES IN CONSTRUCTION
 (2024-2026)

(Thousands of Dollars)

		Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>
Weighted Average Ratebase Effect on Taxing:				
Contributions	(from WP 13-07)	\$10,148.2	\$9,940.1	\$9,737.5
Advances	(from WP 13-08)	\$2,879.2	\$2,778.2	\$2,658.0
Total Ratebase Effect on Taxing CIAC & Advances		\$13,027.4	\$12,718.2	\$12,395.4

TABLE 13-F

SAN JOSE WATER COMPANY
(U-168-W)

WORKING CAPITAL
(2018-2023)

(Thousands of Dollars)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	<u>2023</u>	Authorized Test Year <u>2023</u>
Materials and Supplies								
Beginning of Year Balance	\$824.2	\$808.4	\$925.8	\$1,063.7	\$1,609.0	\$1,150.0	\$2,198.9	\$1,179.6
Weighted Average	\$824.2	\$808.4	\$925.8	\$1,063.7	\$1,609.0	\$1,150.0	\$2,198.9	\$1,179.6
Reserve for Inventory Losses:								
Beginning of Year Balance	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Weighted Average	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Weighted Average M & S Net of Inventory Loss	\$824.2	\$808.4	\$925.8	\$1,063.7	\$1,609.0	\$1,150.0	\$2,198.9	\$1,179.6
Authorized Working Cash Allowance	\$18,494.0	\$24,453.1	\$25,387.6	\$26,322.1	\$27,385.4	\$27,385.4	\$27,914.3	\$27,914.3
Total Working Capital	\$19,318.2	\$25,261.5	\$26,313.3	\$27,385.8	\$28,994.5	\$28,535.4	\$30,113.2	\$29,093.9

TABLE 13-G

SAN JOSE WATER COMPANY (U-168-W)

WORKING CAPITAL
(2024-2026)

(Thousands of Dollars)

		Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>
<u>Materials and Supplies</u>				
Weighted Average	(from WP 13-11)	\$2,336.4	\$2,611.3	\$2,886.3
<u>Working Cash Allowance</u>				
Gross Working Cash Requirements Indicated by Certain Balance Sheet Accounts				
Minimum Bank Cash Deposit	(from WP 13-11)	\$200.0	\$200.0	\$200.0
Special Deposits and Working Funds	(from WP 13-11)	\$383.1	\$383.1	\$383.1
Total Gross Requirements		\$583.1	\$583.1	\$583.1
<u>Deduction from Gross Requirement of Amounts Supplied by Investors</u>				
Average Deficiency as a Result of Paying Expenses in Advance of Collecting Revenues.	(from WP 13-11)	\$51,310.4	\$50,818.0	\$52,441.9
Customer Deposits	(from WP 13-11)	\$0.0	\$0.0	\$0.0
Amounts Withheld from Employees	(from WP 13-11)	(\$143.6)	(\$143.6)	(\$143.6)
Total Deduction from Gross Requirement		\$51,166.8	\$50,674.5	\$52,298.4
Working Cash Supplied by Investors		\$51,750.0	\$51,257.6	\$52,881.5
Total Working Capital		\$54,086.4	\$53,868.9	\$55,767.8

SAN JOSE WATER COMPANY
(U-168-W)

DEFERRED TAXES AND INVESTMENT TAX CREDIT RESERVE
(2018-2023)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	Authorized Test Year <u>2023</u>	<u>2023</u>
<u>Investment Tax Credit Reserve</u>								
Beginning of Year Balance	\$1,134.6	\$1,074.6	\$1,014.6	\$954.6	\$894.6	\$894.6	\$834.6	\$834.6
Addition During the Year	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,132.5	\$0.0
Amortization for the Year	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$92.4	\$60.0
End of Year Balance	\$1,074.6	\$1,014.6	\$954.6	\$894.6	\$834.6	\$834.6	\$1,874.7	\$774.6
Average Balance	\$1,104.6	\$1,044.6	\$984.6	\$924.6	\$864.6	\$864.6	\$1,354.7	\$804.6
<u>Deferred Federal Income Tax</u>								
Beginning of Year Balance	\$154,877.2	\$152,826.1	\$150,726.3	\$144,510.2	\$138,378.1	\$138,866.3	\$135,770.3	\$133,928.3
Deferral for the Year:								
Additions on ACRS/MACRS Assets Only	(\$2,051.1)	(\$2,099.7)	(\$6,216.1)	(\$6,132.1)	(\$2,607.9)	(\$4,937.9)	(\$5,044.9)	(\$4,934.1)
End of Year Balance	\$152,826.1	\$150,726.3	\$144,510.2	\$138,378.1	\$135,770.3	\$133,928.3	\$130,725.4	\$128,994.3
Average Balance	\$153,851.6	\$151,776.2	\$147,618.3	\$141,444.2	\$137,074.2	\$137,578.6	\$133,247.8	\$132,624.7
Total Average Deferrals	\$154,956.2	\$152,820.8	\$148,602.9	\$142,368.8	\$137,938.8	\$138,443.2	\$134,602.5	\$133,429.3

TABLE 13-1

SAN JOSE WATER COMPANY (U-168-W)

DEFERRED TAXES AND INVESTMENT TAX CREDIT RESERVE
(2024-2026)

(Thousands of Dollars)

	Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>
<u>Investment Tax Credit Reserve</u>			
Beginning of Year Balance	\$1,874.7	\$2,407.3	\$4,062.9
Additions During The Year	\$643.3	\$1,876.6	\$1,210.2
Amortization for the Year	\$110.7	\$220.9	\$301.6
	<hr/>		
End of Year Balance	\$2,407.3	\$4,062.9	\$4,971.5
Average Balance	\$2,141.0	\$3,235.1	\$4,517.2
 <u>Deferred Federal Income Tax</u>			
Beginning of Year Balance	\$130,725.4	\$124,889.8	\$126,978.6
Deferral for the Year:			
Additions on ACRS/MACRS Assets Only	(\$5,835.6)	\$2,088.8	\$4,552.8
	<hr/>		
Additions	(\$5,835.6)	\$2,088.8	\$4,552.8
End of Year Balance	\$124,889.8	\$126,978.6	\$131,531.4
Average Balance	\$129,748.0	\$128,334.0	\$132,051.2
	<hr/>		
Total Average Deferrals	\$131,889.0	\$131,569.1	\$136,568.4
	<hr/> <hr/>		

SAN JOSE WATER COMPANY (U-168-W)

WEIGHTED AVERAGE RATE BASE - CLOUD
(2024-2026)

(Thousands of Dollars, Except per Customer Data)

		Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>	Attrition <u>2027</u>
Undepreciated Rate Base	From (CH-13 Cloud)	\$1,094.5	\$4,374.3	\$7,947.3	\$11,520.4
Depreciation Reserve	From (CH-13 Cloud)	\$0.0	\$190.3	\$894.6	\$1,598.9
Weighted Rate Base for Cloud					
Weighted Average Rate Base - Amount		\$1,094.5	\$4,184.0	\$7,052.7	\$9,921.5

SAN JOSE WATER COMPANY
(U-168-W)

WEIGHTED AVERAGE RATE BASE
(2018-2023)

(Thousands of Dollars, Except per Customer Data)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	<u>2023</u>	Authorized Test Year <u>2023</u>
Utility Plant	\$1,728,914.0	\$1,855,828.0	\$1,955,214.0	\$2,049,199.0	\$2,163,490.0	\$2,110,755.0	\$2,274,989.1	\$2,260,769.4
Adjustments to Plant	(\$198,576.0)	(\$200,607.8)	(\$207,684.1)	(\$214,697.8)	(\$221,968.7)	(\$223,235.4)	(\$228,712.4)	(\$231,877.8)
Working Capital	\$19,318.2	\$25,261.5	\$26,313.3	\$27,385.8	\$28,994.5	\$28,535.4	\$30,113.2	\$29,093.9
Tax Deferrals	(\$154,956.2)	(\$152,820.8)	(\$148,602.9)	(\$142,368.8)	(\$137,938.8)	(\$138,443.2)	(\$134,602.5)	(\$133,429.3)
Ratebase on Taxing Contributions and Advances	\$9,282.9	\$11,160.9	\$13,078.8	\$12,616.4	\$12,559.6	\$16,424.9	\$12,965.8	\$18,438.6
Undepreciated Rate Base	\$1,403,982.8	\$1,538,821.8	\$1,638,319.1	\$1,732,134.6	\$1,845,136.5	\$1,794,036.7	\$1,954,753.3	\$1,942,994.8
Depreciation Reserve	\$539,544.5	\$589,355.3	\$643,843.4	\$705,514.1	\$768,609.6	\$766,879.0	\$832,530.8	\$830,826.5
Weighted Average Rate Base:	\$864,438.3	\$949,466.4	\$994,475.7	\$1,026,620.4	\$1,076,526.9	\$1,027,157.7	\$1,122,222.4	\$1,112,168.3
Per Customer	\$3,896	\$4,268	\$4,471	\$4,619	\$4,833	\$4,600	\$5,025	\$3,222

SAN JOSE WATER COMPANY (U-168-W)

WEIGHTED AVERAGE RATE BASE
(2024-2026)

(Thousands of Dollars, Except per Customer Data)

		Transition <u>2024</u>	Test Year <u>2025</u>	Test Year <u>2026</u>	Attrition <u>2027</u>
Utility Plant	(from Table 11-D)	\$2,347,293.2	\$2,504,517.5	\$2,702,359.9	
Adjustments to Plant	(from Table 13-C)	(\$220,987.9)	(\$225,092.4)	(\$229,413.8)	
Working Capital	(from Table 13-G)	\$54,086.4	\$53,868.9	\$55,767.8	
Tax Deferrals	(from Table 13-I)	(\$131,889.0)	(\$131,569.1)	(\$136,568.4)	
Ratebase on Taxing Contributions & Advances	(from Table 13-E)	\$13,027.4	\$12,718.2	\$12,395.4	
Undepreciated Rate Base		\$2,061,530.0	\$2,214,443.2	\$2,404,540.8	\$2,594,638.5
Depreciation Reserve	(from Table 12-B)	\$900,531.6	\$961,063.4	\$1,022,808.3	\$1,084,553.2
Weighted Average Rate Base - Utility Plant		\$1,160,998.4	\$1,253,379.8	\$1,381,732.5	\$1,510,085.3
Weighted Average Rate Base - Cloud		\$1,094.5	\$4,184.0	\$7,052.7	\$9,921.5
Weighted Average Rate Base - Utility Plant & Cloud		\$1,162,092.9	\$1,257,563.8	\$1,388,785.3	\$1,520,006.8
Weighted Average Rate Base - Per Customer		\$5,196	\$5,616	\$6,194	\$6,597

CHAPTER 14

SUMMARY OF EARNINGS

Prepared by John Tang

A. Rate of Return

1. Workpapers supporting this chapter can be found in Workpapers, Chapter 14.
2. The revenues, operating expenses and income taxes developed in the preceding chapters of this chapter are combined to arrive at net operating revenues after income taxes for the periods shown. The annual net operating revenue after income taxes is then divided by the respective year's weighted average rate base developed in Chapter 13 to determine rate of return.
3. Table 14-A shows the development of the net revenue and the rate of return from recorded data for the years 2018-2023.
4. Table 14-B summarizes the estimates of revenues and expenses and the resultant rates of return for the projected years 2024-2027 at both the present and proposed rates.

B. Trend in Rate of Return

5. For the projected years, both the revenues at present rates and the expenses are based upon normal operations. Expense items subject to offset rate increases, such as pump taxes, purchased water and purchased power, are shown at a constant rate or price level for all the projected years, while all other expense items have been estimated independently for each of the test years. The trend in rate base between the various projected years is based upon the anticipated future construction. Because of the fact that the trends of the various elements used in computing rates of return do not necessarily change in the same ratio, the decline in rate of return under a uniform level of rates may vary between the years. Thus projections for the future years are based upon projections of the elements and not upon a fixed decline in rate of return.
6. The recorded rates of return for 2018-2023, shown on Table 14-A and the estimated rates of return for 2024-2027 at present rates shown on Table 14-B, are as follows:

<u>Year</u>	<u>Rate of Return</u>	<u>Change from Previous Year</u>
Estimated:		
2027	2.98%	(0.91%)
2026	3.89%	(0.89%)
2025	4.78%	(1.25%)
2024	6.02%	(1.04%)
Recorded:		
2023(est)	6.08%	3.71%
2022	2.37%	(1.49%)
2021	3.86%	(1.90%)
2020	5.76%	(3.19%)
2019	8.95%	2.15%

C. Test and Escalation Years

7. As required by D.07-05-062 the determination of the appropriate level of rate of return for SJWC is taking place in a separate cost of capital proceeding. SJWC filed Application 21-05-004 to determine authorized Cost of Capital for the years 2022-2024 on May 3, 2021. On June 29, 2023, Commission issued Decision (D.) 23-06-025 authorized a rate of return of 7.28% along with a Water Cost of Capital (WCCM) triggered. The WCCM triggered in 2023, SJWC filed Advice Letter 598 to update its rate of return to 7.47%. The WCCM once again triggered in 2024, SJWC filed Advice Letter 601 on October 13, 2023. The authorized 2024 rate of return is 7.86%. Therefore, for the purposes of the current General Rate Case filing, the rate of return is set at the most current authorized rate of return, 7.86%.

8. The proposed step rates, which produce the requested rates of return, as shown on Table 14-B, are designed to offset the decline in rate of return.

9. The RCP prescribes a method for water companies to forecast escalation years 2023 and 2024. Certain expenses are multiplied by an inflation factor to derive the escalation year increase for expenses. Rate base for the second escalation year is derived using an attrition methodology as outlined in the RCP. Since the escalation year inflation factors are not available until an advice letter is filed requesting a rate change, SJWC has used the most current available inflation factors (August 2023) to calculate the expected revenue requirement for each escalation year.

SAN JOSE WATER COMPANY
(U-168-W)

SUMMARY OF EARNINGS AND RATES OF RETURNS
(2018-2023)

(Thousands of Dollars)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	Authorized Test Year <u>2022</u>	<u>2023</u>
<u>Operating Revenue</u>	\$362,421.9	\$396,352.3	\$406,577.2	\$402,292.2	\$403,259.7	\$440,747.5	\$432,064.1
<u>Operating Expense</u>							
Purchased Water Potable	\$91,717.0	\$90,600.9	\$91,484.0	\$87,686.7	\$93,712.0	\$110,927.0	\$108,995.4
Purchased Water Recycled	\$2,680.2	\$2,792.8	\$3,107.8	\$3,500.0	\$4,023.2	\$4,023.4	\$4,057.7
Pump Taxes	\$44,486.9	\$43,846.6	\$72,875.6	\$76,349.7	\$70,075.8	\$56,772.0	\$49,181.5
Purchased Power	\$6,341.7	\$6,244.8	\$8,489.7	\$9,009.8	\$8,748.3	\$5,593.0	\$7,910.9
Other Operating Expenses	\$22,990.8	\$24,941.6	\$24,991.2	\$26,089.5	\$26,988.3	\$25,897.1	\$30,082.9
Sub-Total	\$168,216.6	\$168,426.7	\$200,948.3	\$202,635.7	\$203,547.6	\$203,212.5	\$200,228.5
Administrative & General Maintenance	\$37,963.7	\$41,339.9	\$41,266.4	\$43,791.6	\$47,925.0	\$38,715.4	\$43,533.1
Total O&M/A&G Expense	\$17,845.3	\$18,789.5	\$16,484.6	\$19,604.2	\$24,107.0	\$20,003.0	\$18,323.4
Taxes, Other than Taxes Based on Income	\$224,025.6	\$228,556.1	\$258,699.3	\$266,031.4	\$275,579.7	\$261,930.9	\$262,084.9
Depreciation & Amortization	\$13,787.4	\$14,720.8	\$14,826.0	\$16,115.5	\$16,791.4	\$16,011.6	\$17,784.2
Total Expenses, Excluding Taxes Based on Income	\$52,059.2	\$57,877.8	\$63,541.7	\$66,771.3	\$72,021.3	\$69,871.1	\$67,481.0
Net Operating Revenue	\$289,872.1	\$301,154.7	\$337,067.1	\$348,918.3	\$364,392.3	\$347,813.6	\$347,350.1
Non-Tariffed Services Adjustment Before Taxes, Based on Income	\$72,549.8	\$95,197.6	\$69,510.1	\$53,373.9	\$38,867.4	\$92,934.0	\$84,714.0
Taxes, Based on Income	\$13,732.7	\$10,188.8	\$12,198.7	\$12,080.8	\$13,313.0	\$14,480.2	\$16,429.0
After Taxes, Based on Income	\$58,817.1	\$85,008.7	\$57,311.4	\$39,641.3	\$25,554.4	\$78,453.8	\$68,285.0
Weighted Average Rate Base	\$864,438.3	\$949,466.4	\$994,475.7	\$1,026,620.4	\$1,076,526.9	\$1,027,157.7	\$1,122,222.4
Rate of Return %	6.80%	8.95%	5.76%	3.86%	2.37%	7.64%	6.08%
Change from Previous Year	0.79%	2.15%	-3.19%	-1.90%	-1.49%	5.27%	3.71%

SAN JOSE WATER COMPANY (U-168-W)

TABLE 14-B

SUMMARY OF EARNINGS AND RATES OF RETURNS
ESTIMATED AT PRESENT AND PROPOSED RATES
(2024-2027)

(Thousands of Dollars)

	Present Rates				Proposed Rates			
	2024	2025	2026	2027	2024	2025	2026	2027
Operating Revenue (Table 7F)	\$506,864.3	\$496,782.9	\$497,238.5	\$497,581.5	\$506,864.3	\$551,979.4	\$574,570.8	\$601,131.3
Operating Expense								
Purchased Water Potable (Table 8B)	\$111,268.0	\$111,268.0	\$111,268.0	\$111,268.0	\$111,268.0	\$111,268.0	\$111,268.0	\$111,268.0
Purchased Water Recycled (Table 8B)	\$5,145.0	\$5,277.5	\$5,406.2	\$5,539.3	\$5,145.0	\$5,277.5	\$5,406.2	\$5,539.3
Pump Taxes (Table 8B)	\$98,303.0	\$90,422.0	\$90,488.0	\$90,543.0	\$98,303.0	\$90,422.0	\$90,488.0	\$90,543.0
Purchased Power (Table 8B)	\$8,881.8	\$8,562.5	\$8,565.1	\$8,567.3	\$8,881.8	\$8,562.5	\$8,565.1	\$8,567.3
Other Operating Expenses	\$35,941.8	\$40,566.8	\$41,957.0	\$43,383.2	\$35,941.8	\$40,566.8	\$41,957.0	\$43,383.2
Sub-Total	\$259,539.6	\$256,096.8	\$257,684.3	\$259,300.8	\$259,539.6	\$256,096.8	\$257,684.3	\$259,300.8
Administrative & General Expense	\$45,619.4	\$50,477.2	\$50,898.9	\$53,529.2	\$45,619.4	\$50,477.2	\$50,898.9	\$53,529.2
Maintenance Expense	\$23,000.3	\$23,899.8	\$24,761.1	\$25,652.9	\$23,000.3	\$23,899.8	\$24,761.1	\$25,652.9
Total O & M Expense	\$328,159.3	\$330,473.8	\$333,344.4	\$338,482.8	\$328,159.3	\$330,473.8	\$333,344.4	\$338,482.8
Taxes, Other than Income								
Based on Income	\$18,382.4	\$19,637.2	\$20,684.7	\$21,863.8	\$18,382.4	\$19,765.9	\$20,865.0	\$22,105.3
Depreciation & Amortization	\$78,343.9	\$78,455.8	\$84,702.3	\$90,948.8	\$78,343.9	\$78,455.8	\$84,702.3	\$90,948.8
Total, Excluding Taxes	\$424,885.6	\$428,566.8	\$438,731.4	\$451,295.5	\$424,885.6	\$428,695.5	\$438,911.7	\$451,537.0
Based on Income								
Net Operating Revenue								
Before Taxes, Based on Income	\$81,978.7	\$68,216.1	\$58,507.1	\$46,286.0	\$81,978.7	\$123,283.9	\$135,659.1	\$149,594.4
Taxes, Based on Income	\$12,026.5	\$8,041.9	\$4,466.9	\$937.9	\$12,026.5	\$24,462.3	\$26,451.2	\$30,117.8
After Taxes, Based on Income	\$69,952.3	\$60,174.3	\$54,040.2	\$45,348.1	\$69,952.3	\$98,821.6	\$109,207.9	\$119,476.5
Weighted Average Rate Base	\$1,162,092.9	\$1,257,563.8	\$1,388,785.3	\$1,520,006.8	\$1,162,092.9	\$1,257,563.8	\$1,388,785.3	\$1,520,006.8
Rate of Return %	6.02%	4.78%	3.89%	2.98%	6.02%	7.86%	7.86%	7.86%
Change from Previous Year	-0.06%	-1.24%	-0.89%	-0.91%		1.84%	0.00%	0.00%

CHAPTER 15

RATES

Prepared by Nanci Tran

A. Introduction

1. Pursuant to Commission D.08-08-030, SJWC implemented a two-tiered rate design for the residential customer class beginning on November 19, 2008. The implementation of the tiered rate design did not impact the authorized revenue requirement.

2. In D.14-08-006, Decision Resolving General Rate Case of San Jose Water Company, the Commission authorized a three-tiered rate design for the residential customer class. This rate design went into effect on August 15, 2014. SJWC is seeking to change the residential rate design in this filing in accordance with D.16-12-006, Decision Providing Guidance on Water Rate Structure and Tiered Rates, and D.20-08-047, Decision and Order Phase I of Rulemaking 17-06-024. In this application SJWC is proposing to keep the current 3-tier rate and break point, but is seeking to recover 50% of its total revenue requirement from service charge. SJWC's last GRC D.22-10-005 authorized a 45% service charge recovery and the current 3 tier rate structure and breakpoint.

B. Present Rate Schedules

3. SJWC's present rate for tariff schedules for "General Metered Service" (Schedule No. 1), "General Metered Service With Automatic Fire Sprinkler System" (Schedule No. 1B), "General Metered Service Mountain District" (Schedule 1C), "Private Fire Service" (Schedule No. 4), "Raw Water Metered Service" (Schedule RW), "Recycled Water Metered Service" (Schedule No. RCW) were authorized by Advice Letters No. 599. "Construction and Other Temporary Metered Service" (Schedule 9C) became effective November 27, 2001 by Advice Letter No. 327. Schedule CAP, Customer Assistance Program, became effective on June 1, 2023 by Advice Letter 594. All other rates were authorized by Decision No. 67296 and became effective July 1, 1964.

5. Table 15A sets forth the current tariff schedules for “General Metered Service”, “General Metered Service With Automatic Fire Sprinkler System”, “General Metered Service – Mountain District”, “Private Fire Service” and “Raw Water Metered Service.”

C. Proposed Rate Schedules

6. The Company’s proposed rate schedules are shown in Table 15A. It is proposed that these rate schedules would replace the current tariff schedules for “General Metered Service”, “General Metered Service With Automatic Fire Sprinkler System”, General Metered Service – Mountain District”, “Private Fire Service”, “Raw Water Metered Service”, and “Recycled Water Metered Service”. No rate changes are proposed for any other present tariff schedules, except for those that will automatically apply to the “Construction and Other Temporary Metered Service” (Schedule No. 9C), which is billed at the “General Metered Service” (Schedule No. 1) rates.

7. D.16-12-026 in the Commission's Order Instituting Rulemaking on the Commission’s Own Motion into Addressing the Commission’s Water Action Plan Objective of Setting Rates that Balance Investment, Conservation, and Affordability for Class A and Class B Water Utilities was issued on December 9, 2016. In compliance with Ordering Paragraph No. 13 of that decision, SJWC’s proposed service charges are designed to recover 50% of the Company’s total revenues. In SJWC’s last GRC covering the years 2022-2024, D.22-10-005 authorized fixed cost recovery of 45% of the Company’s total revenues.

D. Tiered Rate Design

8. Under a uniform, single quantity rate structure, in the Test Year (2019) SJWC would recover 50% of its metered revenue the quantity charge and 50% of the metered revenue from the service charges (Workpapers, WP 7-13D).

9. As noted above, SJWC intends to maintain the three-tiered rate design adopted in D.22-10-005. This adopted rate design is as shown below:

- i. The proposed tier widths for monthly consumption
 - a. Tier 1: usage \leq 6 ccf
 - b. Tier 2: $>$ 6 ccf usage \leq 12 ccf
 - c. Tier 3: $>$ 12 ccf usage

- ii. The authorized tier ratios as of a function of the SQR
 - a. Tier 1: 0.67
 - b. Tier 2: 1.00 (SQR)
 - c. Tier 3: 1.67

However, due to the effectiveness of the current tier rate design, customers are conserving and a larger percent of total usage is in Tier 1 as compared to when Tier rate authorized in D.22-10-005.

	Percent of Total Residential Usage in Each Tier	
	Current	Previous (D.22-10-005)
Tier 1	56%	48%
Tier 2	24%	25%
Tier 3	20%	27%

In order to remain revenue neutral, SJWC is proposing to keep the Tier 1 discount at 67% of SQR and increasing Tier 3's rate to 191% of SQR (Workpapers, WP7-35D Tier Rates)

E. Bill Comparisons

13. Table 15-B sets forth a comparison of billings at present and proposed rates as applied to a residential or business metered customer using various typical monthly quantities of water. Bill comparisons for a typical large industrial or public authority customer are also shown.

14. Under the proposed rates the bill for a typical residential customer with a 3/4-inch meter using 10 ccf per month would in 2025 increase approximately \$13.18 or 12.3 percent from \$107.44 at present rates, to \$120.62 in 2025, by \$4.82 or 4.0 percent to \$125.44 in 2026, and by \$5.68 or 4.5 percent to \$131.12 in 2027. These bill amounts excludes all surcharges, fees, and taxes.

F. Assistance to Low Income Customers

15. The Commission's Water Action Plan set forth the objective to develop a low-income rate assistance program for water customers taking service from Commission-regulated water utilities.

16. SJWC implemented its Customer Assistance Program (CAP) formally known as Water Rate Assistance Program (WRAP) in December of 2005. The program provides a 15% discount for qualifying residential customers in single family homes and in sub-metered mobile home parks. For administrative ease and cost-efficiency SJWC's income qualifying criteria match the CARE parameters established by PG&E. Additionally, SJWC's program is "piggy backing" on the approval process already established for PG&E's CARE program. Thus, SJWC customers who are enrolled in PG&E's CARE program are automatically enrolled in SJWC's CAP program.

17. Information about the program, along with an application, has been circulated by bill insert and mobile home park management within SJWC service area has been provided with program information and applications. All new residential customers are provided program information and an application with their welcome package provided when initial service is requested from SJWC. To increase participation in the program, SJWC has also produced the CAP applications in English, Spanish and Vietnamese, and local non-profit social service agencies have been provided applications in all three languages. SJWC has also implemented additional outreach including placement of advertisements in local neighborhood newspapers and radio stations for the CAP program. SJWC also partners with PG&E to receive a listing of PG&E's CARE customers who reside within SJWC's service area in an attempt to identify customers who would qualify for CAP, but have not yet signed up for the program. Once identified, pre-approval letters are then mailed to such customers. As of September 2023, SJWC had 26,874 customers in the CAP program. Due to the Commission's ongoing industrywide rulemaking regarding the low income rate assistance programs for water utilities, SJWC is not proposing any changes to its CAP program at this time.

**SAN JOSE WATER COMPANY (U-168-W)
PRESENT and PROPOSED RATES**

WP 15A-1

**Schedule No. 1
GENERAL METERED SERVICE**

APPLICABILITY

Applicable to general metered water service.

TERRITORY

Portions of Cupertino, San Jose, and Santa Clara, and in Campbell, Los Gatos, Monte Sereno, and Saratoga and in contiguous territory in the County of Santa Clara

RATES

Quantity Rate Per 100 cu.ft. (Ccf):

Residential Customers with 5/8 x 3/4-inch, 3/4-inch, 1-inch, 1 1/2-inch or 2-inch meter

		Present	Proposed	Proposed	Proposed
		<u>2023</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>
For Total Monthly Usage from	0 to 6 ccfs	\$4.7319	\$4.1920	\$4.3617	\$4.5620
For Total Monthly Usage from	6+ to 18 ccfs	\$6.5194	\$6.2567	\$6.5100	\$6.8090
For Total Monthly Usage over	18 ccfs	\$9.7503	\$11.9503	\$12.4341	\$13.0052

All Other Customers

For all water delivered per ccf		\$6.5194	\$6.2567	\$6.5100	\$6.8090
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Service Charges per Meter per Month

All Customers

5/8 x3/4-inch meter	\$	52.97	\$70.44	\$73.23	\$76.51
3/4-inch meter	\$	52.97	\$70.44	\$73.23	\$76.51
1-inch meter	\$	88.32	\$117.40	\$122.05	\$127.52
1 1/2-inch meter	\$	176.64	\$234.79	\$244.10	\$255.04
2-inch meter	\$	282.61	\$375.66	\$390.57	\$408.07
3-inch meter	\$	529.89	\$704.37	\$732.31	\$765.13
4-inch meter	\$	883.14	\$1,173.95	\$1,220.52	\$1,275.22
6-inch meter	\$	1,766.31	\$2,347.90	\$2,441.03	\$2,550.44
8-inch meter	\$	2,826.10	\$3,756.65	\$3,905.65	\$4,080.70
10-inch meter	\$	4,062.49	\$5,400.18	\$5,614.38	\$5,866.00

**SAN JOSE WATER COMPANY (U-168-W)
PROPOSED RATES**

WP 15A-2

**Schedule No. 1B
GENERAL METERED SERVICE WITH
AUTOMATIC FIRE SPRINKLER SYSTEM**

APPLICABILITY

Applicable to all detached single family structures whose automatic fire sprinkler system is served through the meter providing residential water service.

TERRITORY

Portions of Cupertino, San Jose, and Santa Clara, and in Campbell, Los Gatos, Menlo Park, San Bruno, and Saratoga and in contiguous territory in the County of Santa Clara

RATES

Quantity Rate Per 100 cu.ft. (Ccf):

Residential Customers with 5/8 x 3/4-inch, 3/4-inch, 1-inch, 1 1/2-inch or 2-inch meter

		Present	Proposed	Proposed	Proposed
		<u>2023</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>
For Total Monthly Usage from	0 to 6 ccfs	\$4.7319	\$4.1920	\$4.3617	\$4.5620
For Total Monthly Usage from	6+ to 18 ccfs	\$6.5194	\$6.2567	\$6.5100	\$6.8090
For Total Monthly Usage over	18 ccfs	\$9.7503	\$11.9503	\$12.4341	\$13.0052

All Other Customers

For all water delivered per ccf		\$6.5194	\$6.2567	\$6.5100	\$6.8090
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Service Charges per Meter per Month

All Customers

5/8 x3/4-inch meter	\$52.97	\$70.44	\$73.23	\$76.51
3/4-inch meter	\$52.97	\$70.44	\$73.23	\$76.51
1-inch meter	\$88.32	\$117.40	\$122.05	\$127.52
1 1/2-inch meter	\$176.64	\$234.79	\$244.10	\$255.04
2-inch meter	\$282.61	\$375.66	\$390.57	\$408.07
3-inch meter	\$529.89	\$704.37	\$732.31	\$765.13

Upsize Charges:

For 1/4-inch meter upsize	\$2.67	\$2.97	\$3.09	\$3.22
For 1/2-inch meter upsize	\$5.34	\$5.93	\$6.17	\$6.45
For 3/4-inch meter upsize	\$8.02	\$8.91	\$9.27	\$9.68
For 1/4-inch meter upsize	\$10.70	\$11.89	\$12.36	\$12.92
For 1 1/2-inch meter upsize	\$16.06	\$17.84	\$18.56	\$19.39

SAN JOSE WATER COMPANY (U-168-W)
PROPOSED RATES

WP 15A-3

Schedule No. 1C
GENERAL METERED SERVICE
MOUNTAIN DISTRICT

APPLICABILITY

Applicable to general metered water service.

TERRITORY

Portions of Los Gatos and in contiguous territory in the County of Santa Clara.

RATES

Quantity Rate Per 100 cu.ft. (Ccf):

Residential Customers with 5/8 x 3/4-inch, 3/4-inch, 1-inch, 1 1/2-inch or 2-inch meter

		Present <u>2023</u>	Proposed <u>2025</u>	Proposed <u>2026</u>	Proposed <u>2027</u>
For Total Monthly Usage from	0 to 6 ccfs	\$4.7319	\$4.1920	\$4.3617	\$4.5620
For Total Monthly Usage from	6+ to 18 ccfs	\$6.5194	\$6.2567	\$6.5100	\$6.8090
For Total Monthly Usage from	18 ccfs	\$9.7503	\$11.9503	\$12.4341	\$13.0052

All Other Customers

For Total Monthly Usage		\$6.5194	\$6.2567	\$6.5100	\$6.8090
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Service Charges per Meter per Month

All Customers

5/8 x3/4-inch meter	\$52.97	\$70.44	\$73.23	\$76.51
3/4-inch meter	\$52.97	\$70.44	\$73.23	\$76.51
1-inch meter	\$88.32	\$117.40	\$122.05	\$127.52
1 1/2-inch meter	\$176.64	\$234.79	\$244.10	\$255.04
2-inch meter	\$282.61	\$375.66	\$390.57	\$408.07
3-inch meter	\$529.89	\$704.37	\$732.31	\$765.13
4-inch meter	\$883.14	\$1,173.95	\$1,220.52	\$1,275.22
6-inch meter	\$1,766.31	\$2,347.90	\$2,441.03	\$2,550.44
8-inch meter	\$2,826.10	\$3,756.65	\$3,905.65	\$4,080.70
10-inch meter	\$4,062.49	\$5,400.18	\$5,614.38	\$5,866.00

**SAN JOSE WATER COMPANY (U-168-W)
PROPOSED RATES**

WP 15A-4

**Schedule No. 4
PRIVATE FIRE SERVICE**

APPLICABILITY

Applicable to all water service furnished to privately owned fire protection syst

TERRITORY

Portions of Cupertino, San Jose, and Santa Clara, and in Campbell, Los Gatos, Monte Sereno, and Saratoga and in contiguous territory in the County of Santa Clara.

RATES	Present	Proposed	Proposed	Proposed
Charge per service connection per month:	<u>2023</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>
For each 2-inch service.....	\$53.54	\$59.49	\$61.86	\$64.64
For each 3-inch service.....	\$66.92	\$74.35	\$77.32	\$80.79
For each 4-inch service.....	\$93.69	\$104.10	\$108.25	\$113.11
For each 6-inch service.....	\$147.23	\$163.59	\$170.11	\$177.75
For each 8-inch service.....	\$187.38	\$208.20	\$216.51	\$226.23
For each 10-inch service.....	\$240.92	\$267.69	\$278.37	\$290.87
For each 12-inch service.....	\$294.48	\$327.20	\$340.25	\$355.53

**SAN JOSE WATER COMPANY (U-168-W)
PROPOSED RATES**

WP 15A-5

**Schedule No. RW
RAW WATER SERVICE**

APPLICABILITY

Applicable to raw water metered service.

TERRITORY

Portions of Cupertino, San Jose, and Santa Clara, and in Campbell, Los Gatos, Moten Sereno, and Saratoga and in contiguous territory in the County of Santa Clara

RATES

<u>Quantity Rate Per 100 cu.ft. (Ccf):</u>	Present	Proposed	Proposed	Proposed
All Customers	2023	2025	2026	2027
For all water delivered per ccf	\$6.2898	\$5.9927	\$6.8090	\$6.5450

Service Charges per Meter per Month

All Customers				
5/8 x3/4-inch meter	\$52.97	\$70.44	\$73.23	\$76.51
3/4-inch meter	\$52.97	\$70.44	\$73.23	\$76.51
1-inch meter	\$88.32	\$117.40	\$122.05	\$127.52
1 1/2-inch meter	\$176.64	\$234.79	\$244.10	\$255.04
2-inch meter	\$282.61	\$375.66	\$390.57	\$408.07
3-inch meter	\$529.89	\$704.37	\$732.31	\$765.13
4-inch meter	\$883.14	\$1,173.95	\$1,220.52	\$1,275.22
6-inch meter	\$1,766.31	\$2,347.90	\$2,441.03	\$2,550.44
8-inch meter	\$2,826.10	\$3,756.65	\$3,905.65	\$4,080.70
10-inch meter	\$4,062.49	\$5,400.18	\$5,614.38	\$5,866.00

**SAN JOSE WATER COMPANY (U-168-W)
PROPOSED RATES**

WP 15A-6

**Schedule No. RCW
RECYCLED WATER METERED SERVICE**

APPLICABILITY

Applicable to all recycled water metered service.

TERRITORY

Portions of Cupertino, San Jose, and Santa Clara, and in Campbell, Los Gatos, Moten Sereno, and Saratoga and in contiguous territory in the County of Santa Clara

RATES

Quantity Rate Per 100 cu.ft. (Ccf):

Currently effective quantity rate as reflected in "Schedule No. 1, General Metered Service" less the treated water surcharge currently added to potable deliveries from the Santa Clara Valley Water District and less any applicable discount from the South Bay Water Recycling Program.

Service Charges:

Currently effective monthly service charge for the applicable meter size as reflected in "Schedule No. 1, General Metered Service".

SPECIAL CONDITIONS

1. For the purposes of this tariff a well user is defined as a customer of the Santa Clara Valley Water District who procures his/her non-potable supply from an on-site well as of the first effective date of this tariff. The service charge for well users will be in accordance with the following schedule:

<u>Service Charges per Meter per Month</u>	<u>Present</u>	<u>Proposed</u>	<u>Proposed</u>	<u>Proposed</u>
	<u>2023</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>
2-inch meter	\$43.62	\$48.47	\$50.40	\$52.66
3-inch meter	\$58.17	\$64.63	\$67.21	\$70.23
4-inch meter	\$65.42	\$72.69	\$75.59	\$78.98
6-inch meter	\$109.09	\$121.21	\$126.05	\$131.71
8-inch meter	\$130.88	\$145.42	\$151.22	\$158.01
10-inch meter	\$203.59	\$226.21	\$235.23	\$245.80

The monthly service charge will change in an amount equal to changes in the monthly service charge for similarly sized meters under "Schedule No. 1, General Metered Service". In addition to the service charge, such customers will be charged for the quantity of recycled water used at that site in the same amount billed to San Jose Water Company by the South Bay Water Recycling Program.

SAN JOSE WATER COMPANY
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES

RESIDENTIAL MONTHLY - 5/8 AND 3/4 INCH METERS

Usage Per Month, ccf (1)	Service charge \$ 52.97	Present rates 2023			Present	Service charge \$70.44	Proposed rates 2025			Proposed	Increase (4)	Percent Increase (5)
		Tier1 4.7319	Tier2 6.5194	Tier3 9.7503	Base Rate Bill (2)		Tier1 4.192	Tier2 6.2567	Tier3 11.9503	Base Rate Bill (3)		
0	52.97	0			\$ 52.97	70.44	0			\$ 70.44	\$ 17.47	33.0%
1	52.97	4.7319			\$ 57.70	70.44	4.192			\$ 74.63	16.93	29.3%
2	52.97	9.4638			\$ 62.43	70.44	8.384			\$ 78.82	16.39	26.3%
3	52.97	14.1957			\$ 67.17	70.44	12.576			\$ 83.02	15.85	23.6%
4	52.97	18.9276			\$ 71.90	70.44	16.768			\$ 87.21	15.31	21.3%
5	52.97	23.6595			\$ 76.63	70.44	20.96			\$ 91.40	14.77	19.3%
6	52.97	28.3914			\$ 81.36	70.44	25.152			\$ 95.59	14.23	17.5%
7	52.97	28.3914	6.5194		\$ 87.88	70.44	25.152	6.2567		\$ 101.85	13.97	15.9%
8	52.97	28.3914	13.0388		\$ 94.40	70.44	25.152	12.5134		\$ 108.11	13.71	14.5%
9	52.97	28.3914	19.5582		\$ 100.92	70.44	25.152	18.7701		\$ 114.36	13.44	13.3%
10	52.97	28.3914	26.0776		\$ 107.44	70.44	25.152	25.0268		\$ 120.62	13.18	12.3%
11	52.97	28.3914	32.597		\$ 113.96	70.44	25.152	31.2835		\$ 126.88	12.92	11.3%
12	52.97	28.3914	39.1164		\$ 120.48	70.44	25.152	37.5402		\$ 133.13	12.65	10.5%
13	52.97	28.3914	39.1164	9.7503	\$ 130.23	70.44	25.152	37.5402	11.9503	\$ 145.08	14.85	11.4%
14	52.97	28.3914	39.1164	19.5006	\$ 139.98	70.44	25.152	37.5402	23.9006	\$ 157.03	17.05	12.2%
15	52.97	28.3914	39.1164	29.2509	\$ 149.73	70.44	25.152	37.5402	35.8509	\$ 168.98	19.25	12.9%
16	52.97	28.3914	39.1164	39.0012	\$ 159.48	70.44	25.152	37.5402	47.8012	\$ 180.93	21.45	13.4%
17	52.97	28.3914	39.1164	48.7515	\$ 169.23	70.44	25.152	37.5402	59.7515	\$ 192.88	23.65	14.0%
18	52.97	28.3914	39.1164	58.5018	\$ 178.98	70.44	25.152	37.5402	71.7018	\$ 204.83	25.85	14.4%
19	52.97	28.3914	39.1164	68.2521	\$ 188.73	70.44	25.152	37.5402	83.6521	\$ 216.78	28.05	14.9%
20	52.97	28.3914	39.1164	78.0024	\$ 198.48	70.44	25.152	37.5402	95.6024	\$ 228.73	30.25	15.2%
22	52.97	28.3914	39.1164	97.503	\$ 217.98	70.44	25.152	37.5402	119.503	\$ 252.64	34.66	15.9%
30	52.97	28.3914	39.1164	175.505	\$ 295.98	70.44	25.152	37.5402	215.105	\$ 348.24	52.26	17.7%
35	52.97	28.3914	39.1164	224.257	\$ 344.73	70.44	25.152	37.5402	274.857	\$ 407.99	63.26	18.4%
40	52.97	28.3914	39.1164	273.008	\$ 393.49	70.44	25.152	37.5402	334.608	\$ 467.74	74.25	18.9%
50	52.97	28.3914	39.1164	370.511	\$ 490.99	70.44	25.152	37.5402	454.111	\$ 587.24	96.25	19.6%
60	52.97	28.3914	39.1164	468.014	\$ 588.49	70.44	25.152	37.5402	573.614	\$ 706.75	118.26	20.1%
70	52.97	28.3914	39.1164	565.517	\$ 686.00	70.44	25.152	37.5402	693.117	\$ 826.25	140.25	20.4%
80	52.97	28.3914	39.1164	663.02	\$ 783.50	70.44	25.152	37.5402	812.62	\$ 945.75	162.25	20.7%
90	52.97	28.3914	39.1164	760.523	\$ 881.00	70.44	25.152	37.5402	932.123	\$ 1,065.26	184.26	20.9%

SAN JOSE WATER COMPANY
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES

RESIDENTIAL MONTHLY - 5/8 AND 3/4 INCH METERS

Usage Per Month, ccf (1)	Service charge \$73.23	Proposed rates 2026			Tier3 12.4341	Proposed Base Rate Bill (3)	Increase (4)	Percent Increase (5)
		Tier1 4.3617	Tier2 6.51					
0	73.23	0			\$ 73.23	\$ 2.79	4.0%	
1	73.23	4.3617			\$ 77.59	\$ 2.96	4.0%	
2	73.23	8.7234			\$ 81.95	\$ 3.13	4.0%	
3	73.23	13.0851			\$ 86.32	\$ 3.30	4.0%	
4	73.23	17.4468			\$ 90.68	\$ 3.47	4.0%	
5	73.23	21.8085			\$ 95.04	\$ 3.64	4.0%	
6	73.23	26.1702			\$ 99.40	\$ 3.81	4.0%	
7	73.23	26.1702	6.51		\$ 105.91	\$ 4.06	4.0%	
8	73.23	26.1702	13.02		\$ 112.42	\$ 4.31	4.0%	
9	73.23	26.1702	19.53		\$ 118.93	\$ 4.57	4.0%	
10	73.23	26.1702	26.04		\$ 125.44	\$ 4.82	4.0%	
11	73.23	26.1702	32.55		\$ 131.95	\$ 5.07	4.0%	
12	73.23	26.1702	39.06		\$ 138.46	\$ 5.33	4.0%	
13	73.23	26.1702	39.06	12.4341	\$ 150.89	\$ 5.81	4.0%	
14	73.23	26.1702	39.06	24.8682	\$ 163.33	\$ 6.30	4.0%	
15	73.23	26.1702	39.06	37.3023	\$ 175.76	\$ 6.78	4.0%	
16	73.23	26.1702	39.06	49.7364	\$ 188.20	\$ 7.27	4.0%	
17	73.23	26.1702	39.06	62.1705	\$ 200.63	\$ 7.75	4.0%	
18	73.23	26.1702	39.06	74.6046	\$ 213.06	\$ 8.23	4.0%	
19	73.23	26.1702	39.06	87.0387	\$ 225.50	\$ 8.72	4.0%	
20	73.23	26.1702	39.06	99.4728	\$ 237.93	\$ 9.20	4.0%	
22	73.23	26.1702	39.06	124.341	\$ 262.80	\$ 10.16	4.0%	
30	73.23	26.1702	39.06	223.8138	\$ 362.27	\$ 14.03	4.0%	
35	73.23	26.1702	39.06	285.9843	\$ 424.44	\$ 16.45	4.0%	
40	73.23	26.1702	39.06	348.1548	\$ 486.62	\$ 18.88	4.0%	
50	73.23	26.1702	39.06	472.4958	\$ 610.96	\$ 23.72	4.0%	
60	73.23	26.1702	39.06	596.8368	\$ 735.30	\$ 28.55	4.0%	
70	73.23	26.1702	39.06	721.1778	\$ 859.64	\$ 33.39	4.0%	
80	73.23	26.1702	39.06	845.5188	\$ 983.98	\$ 38.23	4.0%	
90	73.23	26.1702	39.06	969.8598	\$ 1,108.32	\$ 43.06	4.0%	

SAN JOSE WATER COMPANY
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES

RESIDENTIAL MONTHLY - 5/8 AND 3/4 INCH METERS

Usage Per Month, ccf (1)	Service charge \$76.51	Proposed rates 2027			Proposed Base Rate Bill (3)	Increase (4)	Percent Increase (5)
		Tier1 4.562	Tier2 6.809	Tier3 13.0052			
0	76.51	0			\$ 76.51	\$ 3.28	4.5%
1	76.51	4.562			\$ 81.07	\$ 3.48	4.5%
2	76.51	9.124			\$ 85.63	\$ 3.68	4.5%
3	76.51	13.686			\$ 90.20	\$ 3.88	4.5%
4	76.51	18.248			\$ 94.76	\$ 4.08	4.5%
5	76.51	22.81			\$ 99.32	\$ 4.28	4.5%
6	76.51	27.372			\$ 103.88	\$ 4.48	4.5%
7	76.51	27.372	6.809		\$ 110.69	\$ 4.78	4.5%
8	76.51	27.372	13.618		\$ 117.50	\$ 5.08	4.5%
9	76.51	27.372	20.427		\$ 124.31	\$ 5.38	4.5%
10	76.51	27.372	27.236		\$ 131.12	\$ 5.68	4.5%
11	76.51	27.372	34.045		\$ 137.93	\$ 5.98	4.5%
12	76.51	27.372	40.854		\$ 144.74	\$ 6.28	4.5%
13	76.51	27.372	40.854	13.0052	\$ 157.74	\$ 6.85	4.5%
14	76.51	27.372	40.854	26.0104	\$ 170.75	\$ 7.42	4.5%
15	76.51	27.372	40.854	39.0156	\$ 183.75	\$ 7.99	4.5%
16	76.51	27.372	40.854	52.0208	\$ 196.76	\$ 8.56	4.5%
17	76.51	27.372	40.854	65.026	\$ 209.76	\$ 9.13	4.6%
18	76.51	27.372	40.854	78.0312	\$ 222.77	\$ 9.71	4.6%
19	76.51	27.372	40.854	91.0364	\$ 235.77	\$ 10.27	4.6%
20	76.51	27.372	40.854	104.0416	\$ 248.78	\$ 10.85	4.6%
22	76.51	27.372	40.854	130.052	\$ 274.79	\$ 11.99	4.6%
30	76.51	27.372	40.854	234.0936	\$ 378.83	\$ 16.56	4.6%
35	76.51	27.372	40.854	299.1196	\$ 443.86	\$ 19.42	4.6%
40	76.51	27.372	40.854	364.1456	\$ 508.88	\$ 22.26	4.6%
50	76.51	27.372	40.854	494.1976	\$ 638.93	\$ 27.97	4.6%
60	76.51	27.372	40.854	624.2496	\$ 768.99	\$ 33.69	4.6%
70	76.51	27.372	40.854	754.3016	\$ 899.04	\$ 39.40	4.6%
80	76.51	27.372	40.854	884.3536	\$ 1,029.09	\$ 45.11	4.6%
90	76.51	27.372	40.854	1014.4056	\$ 1,159.14	\$ 50.82	4.6%

SAN JOSE WATER COMPANY
COMPARISON OF BILLS UNDER PRESENT AND PROPOSED RATES
COMMERCIAL (BUSINESS) MONTHLY - 1-INCH METERS

Usage Per Month, ccf (1)	Present Rate		Present	Proposed Rate		Proposed	Increase (4)	Percent Increase (5)
	Service Charge \$ 52.97	Quantity Rate 6.5194	Base Rate Bill	Service Char. \$70.44	Quantity Rate 6.2567	Base Rate Bill		
0	52.97	0	\$ 52.97	\$ 70.44	\$ -	\$ 70.44	\$ 17.47	33.0%
1	52.97	6.5194	\$ 59.49	\$ 70.44	\$ 6.26	\$ 76.70	17.21	28.9%
2	52.97	13.0388	\$ 66.01	\$ 70.44	\$ 12.51	\$ 82.95	16.94	25.7%
3	52.97	19.5582	\$ 72.53	\$ 70.44	\$ 18.77	\$ 89.21	16.68	23.0%
4	52.97	26.0776	\$ 79.05	\$ 70.44	\$ 25.03	\$ 95.47	16.42	20.8%
5	52.97	32.597	\$ 85.57	\$ 70.44	\$ 31.28	\$ 101.72	16.16	18.9%
6	52.97	39.1164	\$ 92.09	\$ 70.44	\$ 37.54	\$ 107.98	15.89	17.3%
7	52.97	45.6358	\$ 98.61	\$ 70.44	\$ 43.80	\$ 114.24	15.63	15.9%
8	52.97	52.1552	\$ 105.13	\$ 70.44	\$ 50.05	\$ 120.49	15.37	14.6%
9	52.97	58.6746	\$ 111.64	\$ 70.44	\$ 56.31	\$ 126.75	15.11	13.5%
10	52.97	65.194	\$ 118.16	\$ 70.44	\$ 62.57	\$ 133.01	14.84	12.6%
11	52.97	71.7134	\$ 124.68	\$ 70.44	\$ 68.82	\$ 139.26	14.58	11.7%
12	52.97	78.2328	\$ 131.20	\$ 70.44	\$ 75.08	\$ 145.52	14.32	10.9%
13	52.97	84.7522	\$ 137.72	\$ 70.44	\$ 81.34	\$ 151.78	14.05	10.2%
14	52.97	91.2716	\$ 144.24	\$ 70.44	\$ 87.59	\$ 158.03	13.79	9.6%
15	52.97	97.791	\$ 150.76	\$ 70.44	\$ 93.85	\$ 164.29	13.53	9.0%
16	52.97	104.3104	\$ 157.28	\$ 70.44	\$ 100.11	\$ 170.55	13.27	8.4%
17	52.97	110.8298	\$ 163.80	\$ 70.44	\$ 106.36	\$ 176.80	13.00	7.9%
18	52.97	117.3492	\$ 170.32	\$ 70.44	\$ 112.62	\$ 183.06	12.74	7.5%
19	52.97	123.8686	\$ 176.84	\$ 70.44	\$ 118.88	\$ 189.32	12.48	7.1%
20	52.97	130.388	\$ 183.36	\$ 70.44	\$ 125.13	\$ 195.57	12.22	6.7%
25	52.97	162.985	\$ 215.96	\$ 70.44	\$ 156.42	\$ 226.86	10.90	5.0%
30	52.97	195.582	\$ 248.55	\$ 70.44	\$ 187.70	\$ 258.14	9.59	3.9%
35	52.97	228.179	\$ 281.15	\$ 70.44	\$ 218.98	\$ 289.42	8.28	2.9%
40	52.97	260.776	\$ 313.75	\$ 70.44	\$ 250.27	\$ 320.71	6.96	2.2%
50	52.97	325.97	\$ 378.94	\$ 70.44	\$ 312.84	\$ 383.28	4.33	1.1%
60	52.97	391.164	\$ 444.13	\$ 70.44	\$ 375.40	\$ 445.84	1.71	0.4%
70	52.97	456.358	\$ 509.33	\$ 70.44	\$ 437.97	\$ 508.41	(0.92)	-0.2%
80	52.97	521.552	\$ 574.52	\$ 70.44	\$ 500.54	\$ 570.98	(3.55)	-0.6%
90	52.97	586.746	\$ 639.72	\$ 70.44	\$ 563.10	\$ 633.54	(6.17)	-1.0%

CHAPTER 16

WATER QUALITY

Prepared by Suzanne DeLorenzo, PhD

A. Water Quality Compliance

1. San Jose Water Company (SJWC) is in compliance with all State and Federal drinking water regulations, and is currently not in violation of any primary MCLs or Treatment Techniques.

On June 1, 2023, a failure of the chlorination system at San Jose Water's Saratoga Filter Plant resulted in a failure to maintain continuous disinfection. Approximately 50,000 gallons of filtered water entered the distribution system for 21 minutes between 4:32 PM and 4:53 PM that did not meet standards. The company received a Treatment Technique citation by the State Water Resources Control Board's Division of Drinking Water (DDW) on June 13, 2023, regarding the event. Customers who may have received this water were notified via direct mailing on June 21, 2023. The Saratoga Filter Plant remained offline for the duration of the season while a full control systems and reliability features vulnerability analysis was completed and additional corrective actions were implemented.

The company received a monitoring and reporting citation by the State Water Resources Control Board's Division of Drinking Water (DDW) on June 14, 2023. At no point during this event was the water provided to customers below regulatory standards. On May 5, 2023, SJWC sampled the untreated ground water at nine wells in the Williams Station wellfield. Water from each well is pumped to a tank on site before being treated with chlorine for disinfection as the water enters the distribution system. The results of this sampling were received on May 6, 2023. One sample collected from a well was positive for total coliform and *E. coli* (a type of coliform bacteria) prompting the immediate shut down of the well. On May 11, 2023, the well was flushed to waste, and a follow-up sample was collected to look for total coliform, *E. coli*, and general bacteriological activity. The results of this sampling event were received on May 12, 2023. All samples were negative for total coliform, *E. coli*, and bacteriological activity. The presence of total coliform bacteria or *E. coli* was not confirmed, and the well was eventually brought back online. Follow-up sampling at all wells in the Williams Station wellfield and routine site

inspections further confirmed the well was free of microbial contamination. On June 9, 2023, SJWC self-reported the failure to notify the Division regarding the *E. coli* positive result on the raw water sample collected on May 5th. On June 14, 2023 SJWC received a citation for failure to report an *E. coli* positive sample in 24 hours and failure to investigate a possible significant rise in bacteria count. Customers were notified via direct mailing on July 17, 2023. A corrective actions plan addressing communications and reporting failures has been implemented.

SJWC submits monthly reports to DDW for compliance with the Total Coliform Rule, the Interim Enhanced Surface Water Treatment Rule, fluoridation, flushing, and disinfectant tank boosting. SJWC submits quarterly reports for compliance with the Stage 2 Disinfection By-products Rule and corrosion control monitoring (Water Quality Parameters). Reports for other Title 22 monitoring requirements are submitted within the timelines required by the specific regulations. In accordance with the requirements of the Safe Drinking Water Act, SJWC publishes an Annual Water Quality Report (Consumer Confidence Report) that is made available electronically or as a printed copy to each of SJWC's customers. Copies of SJWC's three most recent Annual Water Quality Reports are included in Attachment 14, Response to MDR II.G.4.

2. In compliance with the Commission's Rate Case Plan, SJWC respectfully requests that because of SJWC's operational results and data in this proceeding, the Commission make an explicit finding that SJWC is in compliance with all pertinent state and federal water quality standards.

B. Funding for Compliance with New Requirements and Regulations

3. Drinking water regulations that have recently become effective, will become effective, or are reasonably expected to be promulgated in the next five years and/or have impacted or are expected to impact operating expense include:

- PFAS MCL (Federal and State Proposed)
- Microplastics
- Lead and Copper Rule Revisions (LCRR)

- Lead and Copper Rule Improvements (LCRI)
- Consumer Confidence Report Rule Revisions
- Maximum Contaminant Levels
 - Chromium-6
 - Arsenic
 - N-nitroso-dimethylamine
 - Styrene
 - Cadmium and Mercury
- Manganese Notification and Response Level
- Detection Limits for Purposes of Reporting
 - Metals
 - Organics
- Cyanotoxin Notification and Response Levels
- Microbial Disinfection Byproduct Rule (MDBPR)
- Unregulated Contaminant Monitoring Rule 6 (UCMR6)

Several of the regulatory changes listed above could have significant impacts on operating expenses. Quantifying these impacts is not possible at this time because none of the regulations listed have been finalized. It is SJWC's intention to file the appropriate Advice Letter or Memorandum Account requests once the regulations are finalized and their impacts can be understood.

4. Environmental regulations that are reasonably expected to be implemented in the next five years by the State Water Resources Control Board (SWRCB) and that are expected to impact operating expenses include:

- At this time there are no known SWRCB environmental regulations that are expected to impact operating expenses.

Adoption of a Federal MCL for PFOA, PFOS, PFNA, PFHxS, GenX, PFBS

5. EPA is proposing a National Primary Drinking Water Regulation (NPDWR) to establish Maximum Contaminant Levels (MCLs) for six PFAS in drinking water. PFOA and PFOS as individual contaminants, and PFHxS, PFNA, PFBS, and HFPO-DA (commonly referred to as GenX Chemicals) as a PFAS mixture. EPA is also proposing health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these six PFAS. The impact of this rulemaking would be significant. It would either require the abandonment of up to 10 wells or the installation of treatment facilities at a minimum of three groundwater stations. In anticipation of the MCLs, SJWC is currently in the detailed design phase of a 20,000-gpm ion exchange (IX) facility at Williams Station, a critical location and water source for the communities of San Jose and Campbell. The total project cost from design through construction is expected to meet or exceed \$59,500,000.

Statewide PFAS Regulations

6. California is at the forefront of addressing per- and polyfluoroalkyl substances (PFAS) in drinking water. The State Water Resources Control Board (SWRCB) has established notification and response levels for PFAS and is in the process of setting maximum contaminant levels (MCLs) for these compounds. Based on updated health recommendations by OEHHA, the Water Board in 2020 lowered the notification level (NL) – the non-regulatory standard for requiring notification and further monitoring – from 14 parts per trillion (ppt) to 5.1 ppt for PFOA and from 13 ppt to 6.5 ppt for PFOS. SJWC received monitoring orders on March 12, 2019 and on September 2, 2020. These monitoring orders for PFAS represented a significant increase in analytical costs. Ten wells were removed from service due to exceedances of the PFOS NL.

On October 31, 2022, the State Water Board issued a notification level of 3 parts per trillion (ppt) and a response level of 20 ppt for perfluorohexane sulfonic acid (PFHxS). SJWC received monitoring Order DW 2022-0001-DDW on November 1, 2022. Order DW 2022-0001-DDW completely rescinded and replaced Orders DW 2020-0003-DDW and DW-2021-0001-DDW. While analytical costs did not increase, SJWC exceeded the notification level at thirty-five wells. Twenty-two of these wells remain online and thirteen were already on standby (3 for no PFAS issues). Impacted customers were notified via CCR of the exceedances.

The Division of Drinking Water has identified PFOA and PFOS as a priority for a statewide MCL. While a timeline for implementation is unavailable at this time new Public Health Goals are expected imminently from the Office of Environmental Health Hazard and Assessment (OEHHA). In anticipation of the MCLs, SJWC is currently in the detailed design phase of a 20,000-gpm ion exchange (IX) facility at Williams Station, a critical location and water source for the communities of San Jose and Campbell. The total project cost from design through construction is expected to meet or exceed \$59,500,000.

As of August 12, 2023, SJWC has spent \$877,725 in analytical costs and \$50,500 in notification costs, dating back to March 1, 2019. SJWC was authorized a PFAS Memorandum Account and continues track past and future expenses for potential future recovery.

Microplastics Monitoring and Regulation

7. The Water Board adopted the definition of ‘Microplastics in Drinking Water’ on June 16, 2020. The State Water Board will employ a two-phase iterative approach for monitoring microplastics to obtain sufficient information to estimate risk through exposure via drinking water. Each step will last two (2) years, with an interim period to allow for State Water Board staff to assess results from the first phase and plan the second phase of monitoring accordingly. For both phases, the State Water Board will issue orders to public water systems and/or wholesaler providers to monitor microplastics in source waters and/or treated drinking water. In Phase I, monitoring will focus on characterizing occurrence of microplastics larger than 20 or 50 micrometers in length in source waters used for drinking in accordance with the specifications in the method employed by the laboratory. Phase II monitoring will be directed towards characterizing occurrence of microplastics both smaller than and larger than 20 micrometers in length in treated drinking water.

San Jose Water has been selected by the Water Board to monitor for microplastics in source waters used for drinking water during Phase I, which will occur between Fall 2023 and Winter 2025. Division of Drinking Water staff held a public staff workshop on May 22nd, 2023 to discuss monitoring considerations for microplastics per the Policy Handbook Establishing a Standard Method of Testing and Reporting of Microplastics in Drinking Water. Monitoring orders are

expected late 2023. The costs associated with these monitoring orders are difficult to quantify at present but may result in a significant increase in analytical costs.

Revised Lead and Copper Rule

8. The federal Lead and Copper Rule Revisions were adopted into the Federal Register on January 15, 2021. 2020-28691.pdf (govinfo.gov).

Community water systems in California were required to submit service line inventories that included portions of the service line from the water main to the water meter. The State Water Board intends to collect additional data for the remainder of the entire service line, as defined by the LCRR, in the electronic annual report. Under the EPA's LCRR, community water systems in California will need to inventory the privately-owned portion of the service line by October 16, 2024. Systems must also obtain by October 16, 2024, an inventory of schools and childcare centers served by the water system. SJW's current contract for engineering services related to the further development of a service line inventory estimates the cost at \$582,872.

The remaining costs associated with these monitoring orders are difficult to quantify at present but will result in a significant increase in costs.

Lead and Copper Rule Improvements (LCRI)

9. On December 16, 2021, EPA announced next steps to strengthen the regulatory framework on lead in drinking water. Following the agency's review of the Lead and Copper Rule Revisions (LCRR) under Executive Order 13990, EPA has concluded that there are significant opportunities to improve the rule to support the overarching goal of proactively removing lead service lines and more equitably protecting public health.

In a Federal Register Notice, EPA announced that the LCRR will go into effect to support near-term development of actions to reduce lead in drinking water. At the same time, EPA will develop a new proposed rulemaking to strengthen key elements of the rule. The agency anticipates finalizing the forthcoming Lead and Copper Rule Improvements (LCRI) prior to October 16, 2024, the initial compliance date in the LCRR.

Focus Areas for the Proposed Rulemaking

- **Replacing all Lead Service Lines.** Replacing all lead service lines is an important public health goal. EPA intends to propose requirements that, along with other actions, would replace all lead service lines as quickly as feasible. EPA’s proposal will fully consider the agency’s statutory authority and required analyses, including an economic analysis.
- **Compliance Tap Sampling.** EPA intends to assess data to consider opportunities to strengthen compliance tap sampling requirements. Robust tap sampling methods are essential to identifying locations with elevated lead, whether the source of the lead is a lead service line or leaded plumbing materials within a residence.
- **Action and Trigger Levels.** For the proposed rule, the agency plans to explore options to reduce the complexity and confusion associated with these levels with a focus on reducing health risks in more communities. The agency will also evaluate whether the trigger level requirements of the LCRR are still necessary with a proactive lead service line replacement and more protective action level.
- **Prioritizing Historically Underserved Communities.** EPA intends to explore how to replace lead service lines in a manner that prioritizes underserved communities. EPA will evaluate options to prioritize the removal of lead service lines in communities disproportionately impacted by lead in drinking water. The goal of these potential lead service line replacement regulatory improvements—coupled with non-regulatory actions—is to more equitably protect public health. The costs associated with these changes under the LCRI are difficult to quantify at present but may result in a significant increase in analytical or program costs.

The costs associated with these monitoring orders are difficult to quantify at present but may result in a significant increase in costs related to increased sampling related to schools and childcare facilities, increased distribution system sampling, and increased public notification costs related to action and trigger levels.

Consumer Confidence Report Rule Revisions

9. As part of the America’s Water Infrastructure Act of 2018 (AWIA), Congress instructed EPA to revise the CCR Rule. The proposed revisions support the goal of the SDWA “right-to-know” provisions by improving the CCRs so that people can make better decisions about their drinking water. EPA’s proposed CCR rule will work to further that goal by making sure important information in annual reports are accurate and accessible.

When finalized, EPA’s proposal would:

- Improve the readability, clarity, and understandability of water quality reports
- Enhance risk communication
- Encourage modern electronic delivery options
- Clarify information regarding lead levels and efforts to reduce lead in drinking water
- Provide translation for customers with limited English proficiency
- Require reports be issued twice a year (for systems that serve 10,000 or more people)
- Require states to submit compliance monitoring data to EPA

The costs associated with this potential rule revision are difficult to quantify at present.

Maximum Contaminant Levels (State)

10. The following constituents were listed on the Division’s *Prioritization of Drinking Water Regulations Development for Calendar Year 2023*

- Chromium-6: Hexavalent chromium has been detected in numerous drinking water sources in California. State Water Board staff have developed a draft proposal, which includes the regulation text. The proposed hexavalent chromium MCL is 10 ppb.
- Arsenic: California's revised arsenic MCL of 0.010 mg/L (equivalent to 10 micrograms per liter, µg/L) became effective on November 28, 2008. A 10-µg/L federal MCL for arsenic has been in effect since January 2006. Previous California and federal MCLs for arsenic were 50 µg/L. The online rulemaking file for this action can be found at the 2008 California Revised Drinking Water Standard for Arsenic rulemaking file.

The Division of Drinking Water is currently investigating the technological and economic feasibility of lowering the MCL below the current California and federal MCL and closer to the Public Health Goal (PHG).

- N-nitroso-dimethylamine: The Division of drinking water requested PHG from the Office of Environmental Health Hazard Assessment (OEHHA). A PHG is the first step in the regulatory process (for more about PHGs, [click here](#)). OEHHA (2006) established a 3-ng/L PHG for NDMA.
- Styrene
- Cadmium and Mercury

SJW does not expect to be significantly impacted by these regulations.

Manganese Notification and Response Level

January 27, 2023, The Division provided public notice of proposed revisions to the manganese notification (NL) and response levels (RL) to 20 µg/L and 200 µg/L, respectively.

NL and RL for manganese was presented as an informational item during the State Water Board meeting on March 21, 2023, and will be established by the Deputy Director of the Division in late 2023. SJW does not expect to be significantly impacted by these revised levels.

Iron, Manganese, and Zinc DLR

The State Water Board held a public workshop on Thursday, November 3, 2022 to present information and solicit public input regarding the proposed revisions to the antimony, arsenic, beryllium, cadmium, lead, mercury, nickel, and thallium detection limits for purposes of reporting (DLR) and the proposed adoption of iron, manganese, and zinc DLRs. Formal rule making process will commence late 2023. SJW does not expect to be significantly impacted by these revised levels.

Cyanotoxins

The Division has initiated the process of developing a notification level for cyanotoxins in drinking water by making a formal request to the Office of Environmental Health Hazard Assessment on February 4, 2021. On May 3, 2021, OEHHA submitted to the State Water Resources Control Board (SWRCB) notification level (NL) recommendations for microcystins, cylindrospermopsin, anatoxin-a, and saxitoxin. The Division has initiated the process of developing a notification level for cyanotoxins in drinking water, with a tentative schedule for issuance in late 2023. Additional analytical costs are expected but cannot be quantified at this time.

Microbial Disinfection Byproduct Rule (MDBPR):

EPA currently regulates microbials and disinfection byproducts (M/DBPs) through numerous rules including the Stage 1 and Stage 2 Disinfectant and Disinfection Byproducts Rule, Surface Water Treatment Rule, and the Ground Water Rule. These rules were developed with the purpose of balancing public health risk of microbials and DBPs. Water systems are required to assure

minimum removal of Giardia, Cryptosporidium, and viruses through filtration and disinfection while also setting maximum contaminant levels (MCLs) for disinfectants, haloacetic acids (HAAs), chlorite, and total trihalomethanes (TTHMs). These rules also require compliance to meet a treatment technique for the removal of total organic carbon.

In December 2016, EPA announced the completion of its third six-year review of existing National Primary Drinking Water Regulations (NPDWRs). EPA's Six Year Review determined that of 72 NPDWRs, 8 M/DBPs were candidates for regulatory review. A consent order in *Waterkeeper Alliance v. EPA* signed in 2020 set a firm deadline for EPA to complete this evaluation by 2024. It also provides for timeline extensions if EPA takes certain actions, such as engaging a federal advisory committee. As a result of the Third Six-Year Review, EPA is considering revisions to regulation of Legionella in drinking water. The costs associated with this potential rule revision are difficult to quantify at present but may result in a significant increase in analytical costs.

C. **Emerging Issues Not Yet Quantifiable**

The development of drinking water regulations related to Microplastics and PFAS cannot be assessed until regulatory limits (PHG and MCLs) are developed for these constituents. The ultimate regulatory outcomes for these constituents and the associated compliance costs cannot be estimated at this time. SJWC will watch developments closely and track any new expenses under the Water Quality Memorandum Account.

D. **Fluoride**

Fluoridation of drinking water supplies in California is governed by AB 733 and SB 96. State law states that if money is provided by a third party for a water supplier to fluoridate, the supplier must add fluoride to the water supply. Santa Clara County has obtained funding from various agencies to fluoridate groundwater in SJWC's service area. A contractual agreement is reached between SJWC and Santa Clara County to build one fluoridation facility at McLaughlin Station, SJWC will file an advice letter to recover the incremental O&M costs incurred in operating the fluoridation system. SJWC anticipates the completion and startup of a fluoridation facility at its McLaughlin Groundwater Station in early 2024. Per the contract, Santa Clara County funded all construction related costs and will fund the first year of Operating Costs. SJWC would manage the Construction

of the fluoridation facility. In accordance with D.18-11-025, SJWC will file an advice letter to establish a Fluoride Implementation Cost Memorandum Account to cover any operating costs in 2024-2026 that are above and beyond those provided by Santa Clara County.

E. **Water Quality Master Plan**

The Quality Master Plan (WQMP) specifically focuses on how treatment and transmission facilities are performing today with respect to current and potential future regulatory requirements and Customer needs. The WQMP also identifies and prioritizes potential opportunities to improve water quality.

The WQMP objectives are:

- Identify existing and future regulations that could impact the SJWC and its Customers;
- Assess the quality of finished water from the Montevina Water Treatment Plant, Saratoga Water Treatment Plant, all groundwater facilities and existing operations throughout the system SJWC to develop water quality and operational baselines, respectively;
- Provide guidance on implementation of strategies/methods for water quality improvements;
- Assess the potential implications of establishing systemwide water quality standards for delivered water.

The above objectives are will be further evaluated in the followed sections of the WQMP, which include (but are not limited to):

- Regulatory Review and Outlook for Drinking Water Quality, provides a review of existing and potential future drinking water quality regulations that may impact SJWC’s water supplies. Additionally, the existing treatment barriers at all treatment plants and groundwater stations are evaluated with respect to existing and potential future water quality targets.
- Current Conditions in the SJWC Water Supply System, is a summary of the historical data review that was conducted for the water treatment plans, groundwater and distribution system to develop the water quality baseline and operational baseline. A water quality dashboard is presented, and selected elements of the water quality baseline are explored in

detail, including raw water quality and variability, disinfection byproduct (DBP) formation, disinfectant residual stability, and monitoring results for unregulated contaminants. The operational baseline is characterized with respect to four major areas: source water withdrawal protocols, disinfection, flushing, and corrosion control.

- Treatment Evaluation for Additional DBP Removal, discusses potential drivers and strategies for reduced total organic carbon (TOC) concentrations in distributed drinking water in the distribution system. Reduced TOC concentrations have the potential to reduce DBP formation, increase disinfectant stability, and minimize taste and odor complaints. Preliminary strategies for TOC reductions may be evaluated at the treatment plant, or, alternatively, DBP removal strategies in the distribution system may be employed. For each strategy, a description, cost estimate, and discussion of advantages and disadvantages are presented.

The WQMP will ultimately develop strategies and actions to address water quality vulnerabilities. This might involve improvements to infrastructure, changes to operational practices, enhanced monitoring, and contingency planning. The development of a WQMP is essential for water SJWC to continue to ensure the delivery of safe and reliable drinking water. The cost associated with this project is anticipated to be approximately \$500,000.

F. Distribution System Master Plan

The Distribution System Master Plan (DSMP) builds upon the WQMP as a tool critical to the long-term planning of transmission and distribution assets. Faced with varying supply availability due to climate change and projected growth in the communities SJWC serves, a comprehensive plan is needed to guide infrastructure projects that wisely invest ratepayer funds. The DSMP will project the need for, and timing of, new transmission and distribution assets over a 30-year time horizon. Infrastructure needs will be informed by a distribution system model which will be developed to simulate flows under varying demand and supply availability scenarios. Model runs will be used to test infrastructure alternatives that improve overall system resilience. An additional benefit is the ability to model water quality related to chlorine residual and nitrification, including water age and blending of chlorinated and chloraminated water. The water quality module can also be used to evaluate the benefits of tank mixing, residual control systems, inlet/outlet modifications, and

alternative reservoir operating rules. This work can save SJWC ratepayers ongoing O&M costs by identifying redundant assets, such as tanks, that can be retired.

CHAPTER 17

OTHER RELIEF SOUGHT

Prepared by Nanci Tran

A. Supporting Documentation

1. Workpapers supporting this chapter can be found in Workpapers, Chapter 17.

B. Water Quality Compliance

2. As described by Suzanne DeLorenzo in Chapter 16 of the Report on the Results of Operations, based upon the Commission’s review of this filing and of San Jose Water Company’s (SJWC) operations, SJWC is requesting the Commission to make a finding that the Company is in compliance with all current water quality standards.

C. Disbursement of Current Balancing and Memorandum Accounts

3. The Company requests the recovery of an under-collection of \$23,492,544 for 2020, 2021, and 2022 and 2023 (balance as of September 30, 2023) accrued in its balancing accounts and memorandum account since January 1, 2020 (Workpapers, WP17-1 and WP 17-2).). Since the balance to be recovered constitutes less than 5% of gross revenue SJWC is proposing to recover the balance via a surcharge of \$0.5459 per cCcf, to commence concurrently with the new rates effective as a result of this General Rate Case (GRC) for 12 months or until recovered. SJWC is requesting that the balance in this account be updated with year-end 2023 balance during the 45 day update for this GRC. Below are the accounts that are included in the total amortization of \$23,462,000 (as of September 30, 2023):

Accounts	Period	Amount
Offsetable Expense Balancing Accounts 2020	January 1, 2020 - December 31, 2020	\$5,570,677
Offsetable Expense Balancing Accounts 2021	January 1, 2021 - December 31, 2021	\$6,098,279

Offsetable Expense Balancing Accounts 2022	January 1, 2022 - December 31, 2022	\$3,902,572
Offsetable Expense Balancing Accounts 2023	January 1, 2023 - September 30, 2023	(\$7,997,552)
Residual Amount from 2021 GRC Balancing and Memo Accounts	November 1, 2022 - September 30, 2023	\$300,899
Residual Amount from PRVMA	September 1, 2020 - September 30, 2023	\$117,138
Drinking Water Fees Memorandum Account (AL 572)	January 1, 2022 - September 30, 2023	\$291,568
Intervenor Compensation	January 1, 2022 - September 30, 2023	\$28,579
PFAS	October 1, 2020 - September 30, 2023	\$726,645
Interim Memorandum Account	January 1, 2023 - September 30, 2023	\$9,513,024
CEMA-COVID 19 (Expense and Bad Debt)	December 1, 2020 - September 30, 2023	\$4,469,801
CEMA-COVID-ELRP22--California Heat Energy Emergency	January 1, 2023 - September 30, 2023	\$1,119
CEMA-State of Emergency March 2023	March 1, 2023 - September 30, 2023	\$94,347
CEMA-State of Emergency-Storm 2023	January 1, 2023 - September 30, 2023	\$220,064
	Sub Total	\$23,3337,160
	Adjustment in Local Franchise Tax:	\$54,422
	Adjustment in Uncollectible:	\$71,048
	Total	\$23,462,630
	2025 Sales	42,980,000
	12-Month Surcharge(\$/CCF)	\$0.5459

Note

1. Offsetable Expense Balancing Account = Supply Cost Account (ICBA & FCBA, WRAP/CAP, Pension)
2. Negative amount is over-collection

SJWC will not amortize Water Conservation Expense Memorandum Account (WCEMA), Water Conservation Memorandum Account (WCMA), and Monterey Style-WRAM (M-WRAM). For WCEMA and WCMA, SJWC is currently in active Stage 1 of Schedule 14.1 and Rule 14.1. The drought surcharge collected thus far can be used to offset

WCEMA and the revenue loss due to conservation track in WCMA. For M-WRAM, there is currently an active surcharge to offset the under-collection, the surcharge will expire on May 8, 2024, after this GRC Application filing date.

D. Customer Assistance Program (Special Request 3)

4. SJWC’s Customer Assistance Program (CAP) offers a 15% discount to qualifying customers as well as automatically registers those who are enrolled in PG&E’s California Alternative Rates for Energy program. Per D.20-08-047 in Rulemaking R.17-06-024, SJWC requested to change the name of its WRAP to CAP. This request was approved in SJWC’s current GRC D.22-10-005. D.21-07-029 requires quarterly data matches between water and energy utilities to enroll new customers. As a result of more frequent data matches along with the economic impacts due to the COVID-19 pandemic, SJWC’s enrollment has increased over the past couple of years as shown below:

Year	Enrollment
2020	23,252
2021	27,864
2022	30,846

The CAP is supported by a \$1.45 surcharge on all customers who are not enrolled in the program. Since 2022 SJWC has provided significantly more discounts than it has collected as shown below:

	Discount Given	Surcharge Collected	Under/(Over) Collection
2020	\$3,408,791	\$3,531,602	-\$122,811
2021	\$4,346,226	\$3,433,903	\$912,323
2022	\$5,315,656	\$3,338,424	\$1,977,232
2023*	\$4,014,964	\$2,585,955	\$1,429,009

*As of 9/30/2023

Increase in CAP customers couples with increase in rates resulted in a high under-collection in the CAP balancing account. Therefore, the surcharge for the CAP account need to be updated to reflect the change.

SJWC is also proposing to include the estimated transaction fee for credit/debit or other forms of electronic payment (alternative payment fee) to the CAP expense balancing account to be recovered through a surcharge from non-CAP customers.

SJWC is proposing to include costs for credit card and alternative payment transactions in this GRC application as authorized by Assembly Bill (AB) 1058. The transaction fee is roughly one percent of the bill plus \$1.75 billed to every customer transaction. Rather than including the transaction fees in operating expense to be pay by all customer (including CAP customers), SJWC is proposing to include it the CAP balancing account expense to be paid for by non-CAP customers. Also, customers will no longer pay the current individual transaction fee of \$1.75 per transaction in authorized in Rule 9 via Advice Letter 547. Pursuant to AB 1058, customers enrolled in the Customer Assistance Program shall not fund the cost of the program. Therefore, SJWC is proposing to include the cost of the program in the CAP Balancing Account.

To that end, SJWC proposes to increase its CAP surcharge from \$1.45 per month to \$2.70 per month.

Current WRAP Surcharge	\$1.45
Increase due to WRAP discount	\$0.74
Increase due to CC Transaction fee	\$0.51
New WRAP Surcharge	\$2.70

This includes the cost of supporting the current CAP enrollment discount and the electronic payment fee. Supporting workpapers are provided in Exhibit I, Chapter 17-4.

F. Full Cost Balancing Account (FCBA) Enhancement (Special Request 1)

7. In D.22-10-005, SJWC was authorized an FCBA to capture the positive or negative impacts of the availability and mix of its water supply sources. Starting in January 2022, SJWC's FCBA replaced its Incremental Cost Balancing Account and tracked the difference between adopted and actual supply cost (Purchased Water, Purchased Recycled Water, Purchased Power, Pump Tax) $\$/CCF$ (Total Supply Cost $\$/$ Total Production) and applied it to actual total production.

Although the actual production includes surface water, the FCBA currently do not include surface water expense. A large part of surface water expense are chemical and waste disposal cost. When there is a higher than forecasted increase in surface water (seen in 2023), SJWC were able to pass on savings from the lower cost of water to customer. However, because chemical and waste disposal were not included in FCBA, SJWC is adversely effected with no venue of recovery. SJWC is proposing including chemical and waste disposal cost in FCBA. See Results of Operations, Chapter 21 for more detail.

G. Uncollectible Balancing Account

9. SJWC's uncollectible expense is affected by factors such as the total level of revenues, general economic conditions, changes in rate levels, and credit and collection policies including legislation and moratoriums on disconnections. SJWC's uncollectible rate has been calculated using a 5-year average and has remained fairly consistent prior to the COVID pandemic. The uncollectible amount markedly changed during the COVID pandemic when shutoffs for nonpayment were disallowed under Executive Order N-9 42-20, effective on April 2, 2020, and lasting through February 28, 2022, as well as limited by the implementation of Senate Bill 998 on February 1, 2020.

Calculating uncollectible expense using a 5-year average which include years with events, like the pandemic, that are unlikely to be repeated in the GRC cycle is mathematically defensible. However, it may not provide a reasonable matching of revenues and expenses and may overstate (or understate) the impact. Furthermore, and as of this

submission, we are still waiting for potential arrearage relief from the State of California's Extended Water and Wastewater Arrearage Payment Program which will cover COVID arrearages through December 31, 2022. Any arrearage relief received in 2024 as the GRC is processed will be applied to the appropriate memo or balancing account.

To that end, SJWC's proposed to establish an Uncollectible Expense Balancing Account to track the divergence between the authorized and actual uncollectible expenses. Any divergence, positively or negatively, in uncollectible from what is authorized will be captured in this account. Customers will receive either a surcharge or sur credit when the account is amortized. Similar to the Settlement Agreement for San Gabriel Water Company's 2022 GRC Application, SJWC proposes to use a five-year average uncollectible rate escalated by 50% to account for SB 998 implementation.

CHAPTER 18

Water Conservation

Prepared by Kurt Elvert

A. Conservation Framework

1. As California emerged from one of the most serious periods of drought in history, water conservation became a mandated reality for all water utilities. State Bill 606 and Assembly Bill 1668 which were both signed into law by Governor Brown in May 2018 provides the basis for making water conservation a California way of life. Locally, Valley Water Board of Directors, in July 2021, called for 15% conservation from 2019 levels. Following the formal Valley Water board declaration of drought, SJWC activated Stage 3 under Rule 14.1 within SJWC's Water Shortage Contingency Plan which is on file with the Commission as Tariff Schedule 14.1 (Attachment A). Already under mandatory conservation measures, specifically Rule 14.1, SJWC implemented Schedule 14.1 Drought Surcharges on November 15, 2021. While Rule 14.1 remains in effect, the drought allocations and surcharges were suspended on April 12, 2023. Rule 14.1 is in effect only at Stage 1 due to the indefinite call for conservation from Valley Water and water use restrictions which remain in effect today,

2. The 15% voluntary call for conservation by the Valley Water Board continues indefinitely. SJWC continued its assertive handling of water waste complaints by responding to online reports and calls to staff to investigate water waste violations, and Valley Water continued to handle county-wide water waste investigations that they received in both SJWC service territory as well as for non-SJWC retailers. These continued drought measures reduced overall SJWC customer demand by 5% in 2022 in comparison to 2019. However, during the irrigation months of April through October, SJW customer demand reduced by 12% in 2022 in comparison to 2019.

3. The response by customers and to the drought was overwhelming and has continued to keep water consumption below 2019 levels. Water conservation audits

completed by SJWC from 2020 through 2022 totaled 3,574. This is compared to a total of 7,758 water conservation audits from 2017 through 2019. We had plentiful water supply between 2020 and midway through 2021 then drought from mid-2021 through 2022. During this period, we completed less than 50% conservation audits in comparison to the base period of 2017 through 2019. This significant decrease in participation in this part of SJWC's Conservation Program is a direct result of the COVID pandemic starting in March 2020. We found that our customers had very little interest in having a SJWC employee visit their property during the pandemic. This has continued to persist as participation levels have not rebounded to pre-pandemic levels.

4. In order for SJWC to continue to meet the regional call for conservation and the State's call to *Make Water Conservation A California Way of Life*, additional programs were added by Valley Water and SJWC between 2020 and 2022. The programs outlined in this chapter will continue to support SJWC in our effort to achieve the required water conservation savings and goals set forth by Valley Water and the State of California.

5. In addition to cyclical drought and related calls for water conservation, the *Making Water Conservation A California Way of Life* legislation State Bill 606 and Assembly Bill 1668, will require all water utilities to focus further resources and programs towards water conservation. Although monthly and yearly GPCPD levels will fluctuate depending on several factors, additional conservation spending will be required to achieve and sustain these upcoming water use targets. However, due to the new requirements still being developed, SJWC is presently unsure which aspect of water use will need to be focused on to reduce consumer consumption to meet the upcoming target. For that reason, SJWC is only proposing any single new water conservation program focusing on enhancing the current CATCH program. We plan to propose additional targeted programs during the next General Rate Case cycle reflecting years 2028 - 2030 that will directly target identified water use sectors to assist us in meeting our upcoming production target.

B. SJWC Conservation Program - General Overview

6. SJWC has a long tradition of promoting water conservation. After the drought in the early 1990s, SJWC developed a comprehensive water conservation program that included free residential, commercial, institutional, and industrial water audits, educational

materials, and free low-flow devices to help customers use water more efficiently. SJWC customers can participate in a number of rebate and incentive programs offered by Valley Water and promoted by SJWC. SJWC continues to maintain Water Smart Demonstration Gardens at four different locations, one of which is complete with signage describing the plant types. SJWC also has a tiered rate structure for residential customers that has been in place since November 2008. Recycled water conversions from SJWC customers also have been decreasing potable water use in areas that have extensive turf grass areas and industrial building cooling.

C. Participation in CalWEP (Formerly CUWCC)

7. SJWC became a signatory to the California Urban Water Conservation Council (CUWCC), now called the California Water Efficiency Partnership (CalWEP), in March 2006 and has been an active member since that time. SJWC’s conservation program is closely linked to the Best Management Practices (BMPs) as they were originally established by the CUWCC. The following table lists the most recent BMPs, in which F denotes the Foundational BMPs and P the Programmatic BMPs. The table shows which BMPs are currently being implemented by SJWC, which are run by SJWC directly, and which are operated in conjunction with the Valley Water, or as a combination of the two. In the latest CUWCC reporting period, SJWC received an “on track” status for all BMPs.

Best Management Practices (based on CUWCC 2009 MOU)				SJWC Compliance	Executed By
Type	Category	BMP	BMP name		
F	Operations Practices	1.1.1	Conservation Coordinator	YES	SJWC
		1.1.2	Water Waste Prevention	YES	SJWC/Valley Water
		1.1.3	Wholesale Agency Assistance Programs	YES	Valley Water

Best Management Practices (based on CUWCC 2009 MOU)				SJWC Compliance	Executed By
Type	Category	BMP	BMP name		
		1.2	Water Loss Control	YES	SJWC
		1.3	Metering w/Commodity Rates for All New Connections and Retrofit of Existing Connections	YES	SJWC
		1.4	Retail Conservation Pricing	YES	SJWC
	Education Programs	2.1	Public Information Programs	YES	SJWC/Valley Water
		2.2	School Education Programs	YES	SJWC/Valley Water
P	Residential	3.1	Residential Assistance Program	YES	SJWC
		3.2	Landscape Water Survey	YES	SJWC/Valley Water
	CII	4	CII	YES	SJWC/Valley Water
	Landscape	5	Landscape	YES	SJWC/Valley Water

D. SJWC’s Current Water Conservation Program

8. The ongoing conservation programs offered by SJWC consists of the water audit program that provides distribution of information in both printed and online formats, personalized water conservation advice and in-person education, 5th grade in-class education program, and participation in various programs offered by Valley Water. Valley Water offers conservation programs that are the most cost effective to offer at a regional level and are

indirectly funded through the wholesale rates paid to Valley Water by SJWC and other water retailers in Santa Clara County. The programs offered by Valley Water include rebates for multi-family properties, a laundry-to-landscape gray water rebate program, and a complete landscape rebate program. The landscape rebate program includes a turf removal rebate, rebates for upgrading specific types of irrigation hardware such as sprinkler bodies, nozzles, and weather-based irrigation controllers, as well as the conversion of spray irrigation in shrub beds to in-line drip irrigation. Commercial customers can participate in a variety of programs in addition to the ones already listed, such as a custom rebate program that allows businesses to make process improvements and receive a rebate according to water savings achieved, and the installation of sub-meters for multi-family properties. Typically, customers are recommended to specific rebate programs during a SJWC water audit. Additionally SJWC customers have the option to connect to the recycled water system if their property is adjacent to existing recycled water pipelines.

9. SJWC also collaborates with Valley Water on public outreach and education including conservation campaign advertising. Over the last several years, SJWC has increased the outreach and educational programs on outdoor water use. SJWC continues to maintain a water-smart demonstration garden that is open to the public. Customers can visit the garden in person or take a virtual tour on the SJWC website. SJWC has also developed a dedicated “Water Wise Gardening” website (<http://www.sanjose.watersavingplants.com/>) where customers can access a plant information database that includes hundreds of low water use plants as well as a photographic database of water wise gardens in the San Jose-Santa Clara County area. This website was enhanced in 2017 with 12 new Fact Sheets to enhance the wise use of water in the garden. Topics included Dealing with Drought, Sustainable Landscaping Fundamentals, Solving Runoff Problems and The Magic of Mulch. The landscaping website and the demonstration garden tour can be accessed from the home page of SJWC’s website www.sjwater.com. There is also a substantial amount of water conservation information, water efficiency tips, and additional reference resources on the SJWC website. In 2021, we expanded the water conservation tips offerings with Spanish, Vietnamese and Chinese translations. The following section provides more detail on the individual program elements that are currently being supported.

10. **Water Audits:** The cornerstone of SJWC's conservation program is the water audit program, called the CATCH program which is an acronym for Community Awareness To Conserve H₂O. This program is an existing program and will continue through the GRC period of 2025-2027. CATCH appointments are performed at no charge at customer request, typically in response to a billing concern and/or in response to water efficiency marketing efforts. CATCH appointments are performed for residential, commercial, institutional, and industrial customers. The purpose of a CATCH appointment is to educate customers about the efficient use of water in order to make their homes and businesses as water efficient as possible. A CATCH checklist on a paper form is used throughout the appointment for residential customers. For larger business customers a summary document is created customizing water savings for each site. One copy is kept by SJWC and one is given to the customer. The CATCH appointment usually starts with SJWC's inspector demonstrating to the customer how to read the water meter for current usage and for signs of leaks. This can help customers become more aware of their own usage and to be proactive when a leak is detected.

11. An examination is then performed throughout the household or business to identify any water leaks. Since the COVID-19 pandemic, SJWC has focused our water conservation efforts for residential customers solely on the landscape component of the CATCH program allowing us to provide an extensive evaluation of the customer's landscape irrigation system where on average half of annual water use goes. We no longer perform indoor water audits personally but provide the customer with general guidance and leak detection tables to look for toilet leaks. During this part of the appointment, customers are provided with recommendations for an irrigation schedule based on the specific plant materials and irrigation system hardware. The inspector will then check the irrigation system for leaks and efficiency while offering to program the customer's irrigation controller with the recommended schedule. The following is a summary of the typical CATCH appointment process:

Indoors:

- Provide toilet leak detection tablets allowing the customer to check their toilets for leaks while the Conservation Inspector focuses on the outdoor landscape.

Outdoors:

- Thoroughly check the irrigation system including inspecting sprinkler heads for proper functioning. Note and describe any excessive runoff, broken sprinkler heads, or any other leaks in the irrigation system.
- Review the irrigation schedule with the customer and make recommendations for improving the schedule. If requested, the inspector will implement the new schedule by changing the customer’s irrigation controller.
- Check all outdoor hose bibs, pool pumps, and water softeners for leaks.

12. The following table lists the number of CATCH appointments performed by customer class:

	2020	2021	2022	2023*
Single-Family Residential	603	1,049	1,693	752
Multi-Family Residential	150	0	0	0
Commercial	12	19	20	10
Dedicated Landscape	2	8	18	2
Total Audits	767	1,076	1,731	764

*Indicates only through September 15

- Participation in this program fell significantly from pre-COVID levels due to our customers not being comfortable with having SJWC staff visit their home. As a result we are proposing a virtual CATCH appointment option in later sections of this chapter.

13. SJWC is finalizing the electronic data collection for the CATCH program to meet our customer’s increased demands. This technology allows for a transition from paper to electronic audit data collection resulting in a significant enhancement to the CATCH program. Potential benefits include:

- Standardized reports that provide clear and concise water efficiency

recommendations that are emailed to customers allowing them to access the results.

- Modern data collection that ensures that all site information is gathered.
- Customer information collected during the appointment integrated with the Customer Information System, allowing for company-wide access.
- Enhanced reporting capability.

14. As a result of institutional plumbing efficiency requirements, Valley Water has stopped all indoor water conservation rebate programs. WaterSense labeled toilets, clothes washers, showerheads, and faucet aerators predominate the retail market and provide the consumer with water efficient options available when purchasing new indoor water using devices. As a result, Valley Water redirected funding for their conservation programs to focus on landscape efficiency programs. This change was made during the previous rate case cycle. As the below tables show there was still participation in the indoor hardware conservation programs. The hardware is primarily distributed at SJWC events and will only be continue until Valley Water exhausts the supply.

15. The following table shows the number of showerheads, faucet aerators, and indoor Water Wise Survey Kits that have been distributed by SJWC and Valley Water in the last three and a half years. These water conservation devices will continue to be offered through the GRC period of 2025-2027:

	2020	2021	2022	2023*
low flow showerheads	306	780	2,937	507
low flow faucet aerators	13	4,050	4,336	926
Water Wise Indoor Survey Kits	41	653	639	94

*Indicates only through June

16. **Commercial, Industrial, and Institutional Programs:** SJWC, in conjunction with Valley Water, offers a variety of conservation programs for Commercial, Industrial, Institutional (CII) customers. The current program includes a variety of rebates

for the purchase of various high efficiency low water use fixtures and machines including: commercial food steamers, air-cooled ice machines, high efficiency toilets and urinals and high efficiency clothes washing machines. There is also a rebate program for the purchase of individual water sub-meters for condominium complexes, apartment complexes and mobile home parks. In addition to the above-mentioned programs, CII customers are eligible for the various landscape rebate program components which are discussed in a later section. Finally, CII customers are eligible for a custom, measured rebate which is based on water savings. In this custom program, a customer would invest in process changes that would improve water use efficiency; the rebate amount is based on the resulting water savings as a result of the improvements. Below is a list of SJWC customer participation in a variety of CII programs. These rebates and programs will continue to be offered through the GRC period of 2025-2027:

	2020	2021	2022	2023*
Pre-Rinse Sprayers	0	5	8	1
Commercial Rebates	17	0	315	0
Direct Install Toilets	0	25	1,211	348
Direct Install Urinals	0	0	7	0

*Indicates only through June

17. **Large Landscape Conservation Program:** Review of landscape irrigation has always been an important part of SJWC’s water conservation program. SJWC inspectors perform comprehensive landscape evaluations for customers during CATCH inspections whenever appropriate. SJWC inspectors perform the landscape evaluations for all single-family residential properties. For commercial and multi-family residential properties with large landscapes (5,000 square feet or more of irrigated area) Valley Water offers a large landscape survey program that is now managed by their consultant Waterfluence. Valley Water’s large landscape surveys are funded through rates paid by SJWC to Valley Water. The Waterfluence program provides the customer with a water budget, based on irrigated area and types of plantings. The following table lists the number of large landscape surveys and water budget reports completed for SJWC

customers. This existing program will continue into the GRC period of 2025-2027:

	2020	2021	2022	2023*
Large landscape (Waterfluence) surveys completed by Valley Water for SJWC customers	26	68	70	0
Large Landscape (Waterfluence) water budgets provided by Valley Water for SJWC customers	12,630	12,852	15,348	7,674

*Indicates only through June

18. **Landscape Rebate Program:** SJWC customers are eligible to participate in Valley Water’s Landscape Rebate Program (LRP). Customers are qualified for the program through a visit from Valley Water staff or pre-qualification through Valley Water’s program processes, which must be completed prior to starting any landscape project. The maximum rebate for single family homes and multi-family homes up to 4 units is \$2,000. For CII properties and multi-family properties of 5 or more units the maximum rebate is \$50,000. The maximum rebate applies to all below mentioned categories, combined or single projects. This program offers rebates in three main categories for customers interested in landscape water use efficiency. This existing program will continue through the GRC period of 2025-2027:

- 1) Landscape Conversion Rebate
- 2) Irrigation Hardware Upgrade Rebate
- 3) Weather Based Irrigation Controller (WBIC) Rebate
- 4) Drip Conversion Rebate
- 5) Rain Garden Rebate

19. The landscape conversion rebate offers a dollar amount per square foot of turf grass removed when replaced with low water using plants. The current rebate is \$1.00 per square foot. Under this program, turf grass must be removed and replaced with low water use plants from an approved list. In addition, there can be no spray irrigation in the

newly converted area; only drip or micro-spray irrigation is permitted. Below is the amount of turf removed by SJWC customers:

	2020	2021	2022	2023*
Square Feet Removed	128,396	238,872	821,686	674,229

*Indicates only through June

20. The irrigation hardware upgrade rebate is for the upgrade of specific types of inefficient irrigation hardware to the most efficient products currently available: low precipitation sprinkler nozzles, pressure regulated sprinkler spray bodies, rain sensors and weather-based irrigation sensors. Below is how many efficient irrigation products SJWC customers installed:

	2020	2021	2022	2023*
Irrigation Hardware Installed	4,367	1,721	1,530	425

*Indicates only through June

21. The third component of this program is a rebate for customers who replace their irrigation controller with a Weather Based Irrigation Controller (WBIC). The following table lists the number of WBICs that SJWC customers installed:

	2020	2021	2022	2023*
Number of WBICs installed	265	271	353	123

*Indicates only through June

22. The fourth component of this program is a rebate for customer who convert shrub areas (non-turf) from spray sprinklers to in-line drip irrigation. The following table lists the square feet of spray irrigated landscape converted to in-line drip irrigation:

	2020	2021	2022	2023*
Square Feet Converted	3,987	27,813	71,316	24,977

*Indicates only through June

23. The fifth component of this program is a new addition to the LRP. This

rebate provides \$1.00 per square foot of roof area diverted to a low water use garden. The maximum rebate is up to \$300 per site. The following table lists the amount of roof space diverted to a rain garden:

	2020	2021	2022	2023*
Square Feet of Roof Space Diverted	9,328	12,128	10,484	1,506

*Indicates only through June

24. **Rain Collection Rebates:** SJWC customers are eligible to participate in the new Valley Water Rain Collection Rebates. Customers are qualified for the program through a direct visit from Valley Water staff which they need to have completed prior to starting any project. These rebates are designed to assist customers in collecting and storing rainwater from the rainy season to be used in spring and summer. The rebate for a rain barrel of 40 to 199 gallons is up to \$35. For rain cisterns of 200 gallons or more, the rebate is \$0.50 per gallon stored. The following table lists the number of rain barrels installed and gallons of cistern space installed by SJWC customers:

	2020	2021	2022	2023*
Rain Barrels Installed	65	62	52	48
Gallons of cistern space installed	4,885	0	3,605	550

*Indicates only through June

25. **Graywater Rebate:** This rebate is available to SJWC customers through Valley Water. This program is relatively new and is likely to increase in popularity. This Laundry to Landscape rebate program provides up to \$200 for a customer to install plumbing from their washing machine to the landscape. There are required parts and procedures to install that can provide a participation barrier, but we are seeing some SJWC customers participate in this program. The following table lists the number of customers who have installed Laundry to Landscape systems:

	2020	2021	2022	2023*
Installed Laundry to	7	8	7	2

Landscape Systems				
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*Indicates only through June

26. **Public Information and Outreach Programs:** Public information involves promoting water efficiency through various means including conservation brochures, bill inserts, advertising, public speaking engagements, and postings on SJWC’s web site and social media platforms. The goal of this program is to increase customer awareness of habits or procedures that waste water, as well as awareness of water capacity, available sources, system capacity, and treatment and distribution issues. Public information campaigns are designed to promote understanding and create a dialogue in the community on water conservation topics as well as to motivate customers to conserve. Public information is provided directly by SJWC and in conjunction with Valley Water.

27. SJWC distributes three to five conservation bill inserts annually. One such bill insert promotes SJWC’s CATCH program and the annual Water Awareness Night event held annually in May. However, Water Awareness Night has not occurred since 2019 due to the Pandemic.

28. SJWC has developed a variety of water conservation literature which is available free and is downloadable from the SJWC website at <https://www.sjwater.com/customer-care/help-information/conservation-tips>. This information is also translated into many languages.

29. A variety of public information relating to conservation is available on the SJWC website. Customers can also download a variety of literature and can request a CATCH appointment via e-mail or phone call. The SJWC website features information about water wise landscaping, including links to a specific water wise landscaping website and plant database, as well as a “virtual tour” of the SJWC public water-smart demonstration garden. In addition, there are several videos available on the website to provide additional information to customers. The three videos that relate specifically to water conservation include:

1. Top Ten Ways to Save Water:

<https://www.youtube.com/watch?v=NkF6z7nI1to>

2. How to Read Your Water Meter:
<https://www.youtube.com/watch?v=emqpgL9nCXo>
3. What Goes on During a CATCH appointment:
<https://www.youtube.com/watch?v=Kb9eUysrWSE>

SJWC has a blog page which focuses on the latest news, stories and updates on all things water related. Located at <https://www.sjwater.com/blog>, topics include e-books for water-wise gardening and AMI technology advancements plus water use checklists and gardening tips during a drought.

30. SJWC offers several public information events and services, including:
 - **Water Awareness Night:** SJWC began sponsoring this annual event in 2002. Through a bill insert, a message on the bill, social media reminders and a front-page banner on the SJWC website, customers are invited to attend the event, which is part of a San Jose Giants baseball game at San Jose Municipal Stadium. Typical attendance for this event is about 4,000 people. SJWC personnel set up various displays at the entrance to the stadium, including games for the children and conservation information for the adults. This event has not happened since 2019 due to the Pandemic and will be reevaluated in 2024.
 - **Cupertino Earth Day** – Beginning in 2017, SJWC attended the City of Cupertino’s Earth Day Festival. Nearly 7,000 community members attended this popular event and SJWC provided water conservation information for adults and conservation-themed giveaways for children. SJWC participated in this event once again in 2023 and will likely continue in future years.
 - **Speaker’s Bureau** - SJWC provides conservation related programs to local service and civic groups, homeowners associations and similar organizations.

31. **School Education Kits Program:** This program, approved by the CPUC in a prior General Rate Case, and planned to continue during this proposed rate case

period, is a turn-key set of classroom activities and hands-on home projects for fifth grade students to increase their water conservation awareness. The program addresses the priorities of obtaining measurable water and energy savings results and cost effectiveness through a proven program format. Participating classroom teachers receive guides that lead them through the curriculum while students receive a Student Workbook for in-class instruction and a “WaterWise Kit” for the take-home portion of the program. The Teacher Guide and Student Workbook include information specific to the local community and include SJWC-specific information such as water sources, drought history and storage facilities. This program satisfies the requirements of CUWCC BMP 2.2 as well as meeting both state and national academic standards.

32. SJWC contracts with the firm AM Conservation (AM), which provides all materials and services for the program. The scope of work includes the outreach to schools and teachers within the SJWC service area.

33. The CPUC-authorized budget was \$318,000. The average budget of \$106,200 per year for this program sponsors a total of 2,400 students annually, or approximately 80 classrooms of 30 students each.

34. AM markets the program to local schools and signs up 5th grade classrooms. SJWC is billed for the actual number of students that participate in the program up to the authorized budget amount per year. AM staff handles all enrollment, training and communication with 5th grade teachers, distribution of materials, collection of data, and report preparation. Complete implementation services are included with the program.

35. Students have the following specific objectives as part of the take home assignment:

- Install one high efficiency showerhead and two faucet aerators
- Check at least one toilet for leaks
- Collect household water use information
- Reshape family resource usage habits and attitudes

36. The “WaterWise Kit” kit contains the following items:

- A High-efficiency Showerhead (1.5 G.P.M. max)

- 5-minute Shower Timer
- Kitchen Aerator (1.5 G.P.M.), Bathroom Aerator (1.0 G.P.M. max)
- Digital Thermometer
- Toilet Leak Detector Tablets
- Teflon Tape
- Miniature Tape Measure
- Rain / Drip Gauge
- Natural Resource Facts Slide Chart
- Flow Rate Test Bag

37. **Estimated water savings:** AM calculates water savings for this program per participant (student). The assumption is that one student will take the school kit home to install the low flow devices with their family. The savings calculation considers the average number of persons per home and assumptions about usage of each device. The savings numbers listed here represent the savings resulting from each school kit provided in the program; one kit represents one student participant and one household. Based on 2,409 participants from the 2020 program, AM estimates that the total projected program savings per household to be 5,780 gallons per household annually with a lifetime savings per household of 31,367 gallons.

38. **Commercial, Industrial, and Institutional (CII) Custom Audit Program:** This program approved by the CPUC in the last GRC and will continuing into the GRC period of 2025-2027 provides customer detailed water inspections to large and complex CII customers. This program addresses the needs and priorities of some of the largest and most complex water users in our service territory. Current staff is unable to provide adequate conservation services to customers with such devices as commercial kitchen appliances, cooling towers, medical equipment, ice machines, and other specialized water consuming appliances and devices. Participating sites receive a detailed in person inspection of the facility by SJWC's Water Conservation staff as well as a representative from an outside contractor (Contractor).

39. The specific site information is collected by the Contractor during the detailed site visit. The Contractor uses the collected data for each water using device/appliance, documented flow rate or settings, and enters the information into their water use program. Once all water use information is collected water savings potential is then generated.

40. The product is a tailored report documenting all water using devices/fixtures, how much water each use, and recommendations on efficiency upgrades based on total water savings potential and pay-back period. This report is then provided to the site manager/decision maker and reviewed in detail. This review provides the most valuable aspect of this program as the customer can clearly be presented with water efficiency options, cost estimates, and pay-back periods.

41. There will be approximately 10 sites per year that will receive a detailed assessment of their water use.

42. Estimated Water Savings: Water Savings from this program varies significantly based on each site survey. Due to complexity of the water use of large CII sites water savings can occur in many different aspects of a facility. Most commonly savings are found in the following sectors:

- Cooling towers: under normal operation a cooling tower will be set to cycle the water based on a conductivity controller. Many sites manage their conductivity controllers conservatively utilizing fewer chemicals than necessary resulting in fewer cycles than the cooling tower can manage. By adding an extra cycle or two the cooling tower can typically save thousands of gallons per day.
- Flush Valve Toilets: Most flush valve toilets are designed to flush 1.6 gallons per flush. However repeated use will lead to these toilets flushing upwards of 5 gallons per flush. The diaphragm will begin to wear leading to prolonged flushing times and wasting water. Many large sites such as concert venues and convention centers will have dozens of flush valve toilets that are heavily utilized. By timing the amount of seconds the toilets take to complete a flush it is possible to identify which toilets are flushing more water than designed allowing for considerable water savings.

- Leaks: Leaks are prevalent throughout all customer water systems.

However, leaks in CII businesses tend to generate significant water loss due to the size of the customer's water system. Additionally, CII businesses tend to be complex and the leaks can occur in a variety of different locations from pressurized lines feeding multiple buildings, or unnoticed continuous flow from specialized equipment. Leak identification typically takes time and resources to pinpoint the problem.

43. **Virtual CATCH Appointment Program:**

This new program that has not been offered yet, proposes offering a browser-based platform allowing SJWC Conservation project managers along with SJWC Conservation Inspectors the ability to connect with customers who have a smartphone and basic LTE/WiFi connection to conduct thorough inspections by seeing and documenting SJWC customer sites remotely. The program will use a platform developed by Vimotely which is a turn-key product allowing for SJWC to quickly implement the program. This new program will provide SJWC customers another option in having a trained water conservation professional evaluate and assess their water use, but without having to visit the site in person. We hope this will allow for greater overall participation in SJWC's CATCH program.

44. End users do not have to download or install any software on their device. With a stable internet connection and a device with a web browser, virtual inspections can be completed and recorded. For the customer starting a Remote Video Inspection is as easy as opening a text message. Inspectors can easily take and markup high quality images, geo-locate customers, extract text, and more, all from the browser of any smart device. With this program, SJWC inspectors can conduct thorough inspections by seeing and documenting work sites remotely. The hassle-free platform will allow SJWC to cut down on travel time and expenses, which also supports green initiatives while providing a service to a customer not comfortable with having a SJWC employee visit their property, or a customer who has a disability not allowing them to meet with a SJWC employee directly. Because this program is easy to navigate for both the SJWC team and our customers, we will prevent frustrating experiences and skip complex, unhelpful systems. The end result is a report with all aspects

of the inspection recorded and documented that can be emailed to the customer allowing for the customer to review and reference the survey results and recommendations.

45. The following features will be available in the latest version of Vimotely:
SaaS – Software as a Service subscription model
- App-less functionality
 - Invitation via SMS or Email
 - Reporting, analytics & visibility for administrators
 - Multi-participant calls
 - 2-3x magnification of video Tools
 - Documentation of Date, Time & Location tracking
 - High quality image capture
 - Live collaborative markup
 - Color-coded AR pointer
 - Optical Character Recognition
 - Client Branding of the Vimotely Platform
 - Recordings kept for 180 days (Option to connect to Azure or AWS long term retention and storage to meet SJWC data retention requirements).

46. SJWC is not proposing solely using this program for the CATCH program, but rather to supplement our current program to offer a service to customers that are not comfortable with SJWC staff visiting their home.

47. **Recycled Water Expansion Program**

SJWC has been an active proponent of using recycled water (treated wastewater) that otherwise would be discharged into the San Francisco Bay. A backbone existing system runs from the San Jose Water Pollution Control Plant to certain areas of the City of San Jose. Although 275 SJWC customers have been connected to the recycled water system; for this proposed rate case additional connections are needed in order to achieve the desired reduction in potable water use throughout the service area. A Recycled Water Master Plan has been prepared that calls for the addition of 11 new recycled customers during 2025-2027. The addition of these recycled customers should result in the savings of more than 450 acre-feet of potable water per year by the end of 2027. In order to be able to connect to the recycled water system, customers must have their landscaping service separated from the domestic service and retrofitted with purple piping per California Department of Public Health requirements.

48. The expansion of the recycled water system to these 11 customers will address water use for turf at schools, a public 9-hole golf course, public parks, and Emma Prush Park. The turf that is currently irrigated by potable water is used by students of all ages at all of the sites. By converting these sites to recycled water they will have a drought proof water source allowing for continued operation and use of these critical use areas for the community. This also allows for City of San Jose sites to further their goal of increasing sustainability at their locations.

CHAPTER 19

SPECIAL REQUEST #2

Prepared by Nanci Tran

A. Supporting Documentation

1. Workpapers supporting this chapter can be found in Workpapers, Chapter 17.

B. Justification

2. Per D.22-06-013, SJWC is to bill customers by the number of days of each bill period by applying the uniform formula below:

$$\left(\frac{\text{Number of Billing Days at Effective Service Charge}}{30.4375} \right) \times (\text{Effective Service Charge}) = \text{Billed Service Charge}$$

SJWC is to apply the uniform formula to the monthly service charge and come up with the overall service charge for each customer's bill. Prior to this change, SJWC billed service charges monthly as long as the billing duration fit within our billing cycles of between 27 to 33 days for monthly billed customers and 54 and 66 days for bimonthly billed customers. In a 12-month period, customers were billed for a full 12 months of service charges unless there billing cycles falls much shorter or longer than the referenced durations.

On August 24, 2022, SJWC filed Advice Letter 578 to implement the new uniform formula to its billing practice. This calculation assumes that every account would be active for a full 365.25 days of the year whereas $365.25/12=30.4375$. Once the change was implemented, SJWC noticed that actual bill days is not the assumed 365.25 days but actual 362.02 days. Starts and stops happen frequently when customer move in and out of premise. Through reviewing 12-month (August 2022-July 2023) worth of bi-monthly bill data for residential and non-residential customer, the actual bill days is 362.02 days. **Table 1** below shows the shortfall at last test year 2022 rates:

	Days	2022 Rate	Daily Rate	2022 Actual Customer	Revenue
Adopted Average	365.25	50.88	1.67	217,307	\$132,550,208
Actual	362.02	50.88	1.67	217,307	\$131,378,032
				Revenue Shortfall	\$1,172,176

Table 2 below shows the shortfall at proposed test year 2025:

	Days	2025 Proposed	Daily Rate	2025 Customer	Revenue
Adopted Average	365.25	\$70.34	2.31	223,603	\$188,660,000
Actual	362.02	\$70.34	2.31	223,603	\$186,991,631
				Revenue Shortfall	\$1,668,369

As you can see from the tables above, by implementing the uniform formula, SJWC is not able to fully recover its authorized service charges authorized in D.22-06-013. The shortfall will only grow larger with every rate increase. By not allowing SJWC to update the average bill days used in the uniform formula, the Commission is removing more than one million of SJWC's authorized revenue.

To that end, SJWC proposes to revise the service charge calculation to account for the actual bill days. The new calculation retains the same daily rate approach and divides the number of days in the billing cycle over 30.1682 (362.02/12 = 30.1682) days as provided in the proposed tariff language below:

$$\left(\frac{\text{Number of Billing Days at Effective Service Charge}}{30.1682} \right) \times (\text{Effective Service Charge}) = \text{Billed Service Charge}$$

Just as the Commission allowing utility to update its customer forecast in every rate case by applying the actual historical customer count, the Commission should allow SJWC to

update its bill days used in the uniform formula by using actual bill days. Supporting workpapers are provided in Workpapers, Chapter 17, Workpaper 17-5).

CHAPTER 20

SAFETY, SECURITY, AND EMERGENCY MANAGEMENT

A. GENERAL SAFETY as Prepared by Curty Rayer

1. **Public Safety:** SJWC diligently adheres to all safety laws and regulations when working in public spaces. We ensure the safety of pedestrians and traffic by setting up work zones and traffic controls, providing safe pedestrian routes that are ADA-compliant and free of obstructions, avoiding water discharge and mid-block crossing, offering well-lit paths during nighttime work, ensuring operators of heavy equipment are licensed, and setting up fire prevention measures. These practices are applicable across all our construction, emergency repairs, and routine maintenance sites.
2. **Employee Safety:** In line with the Commission's Safety Action Plan and Regulatory Strategy, SJWC focuses on four key safety areas:
 - a. **Safety Policy:** Our efforts here include the creation of a Health & Safety Policy, the formation of a new group level Health and Safety Committee reporting to the Employee Health, Safety, and Security (EHSS) Council, consistent safety communications, and employee perception surveys.
 - b. **Safety Compliance:** We ensure annual Form 300 reporting, revision of our Injury and Illness Prevention Program (IIPP), completion of annual refresher training requirements, and annual updates of workplace safety programs. We implemented an electronic ticketing system dedicated to safety topics. The system allows hazard identification and hazard control. It can track open items for compliance.
 - c. **Risk Management:** Procedures like Job Hazard Analysis, incident investigations, trend analysis, and unannounced job site inspections form part of our risk management activities. We created a new Near Miss reporting system to identify close calls in our day-to-day operations.

- d. Safety Promotion: We provide annual safety training on assorted topics, new employee safety orientation, and regular safety talks throughout the organization. Our S.A.Y.S (Safety According to Your Supervisor) series are continuing to make an impact on the organization. Having Supervisors conduct presentations about safety promotes employee engagement in safety efforts.
3. Our response to the COVID-19 pandemic has included the following:
- a. Implementing an Emergency Response Plan and a modified Pandemic Plan.
 - b. Holding weekly coordination meetings.
 - c. Setting up remote work processes and office building access protocols.
 - d. Establishing a COVID-19 Risk Assessment Process and certifying compliance with Santa Clara County COVID-19 protocols.
 - e. Updating Standard Operating Guidance to protect employees and the public during the COVID-19 pandemic, covering a wide range of activities from disinfection protocols to social distancing measures.
4. Going forward, SJWC plans to enhance its occupational health and safety programs through:
- a. *A detailed plan for additional safety program development:* SJWC is working on a comprehensive plan for expanding its safety initiatives. We plan to allocate 400 hours for specialized consultancy at \$300 per hour totals an investment of \$120,000 toward identifying gaps in current programs, studying best practices in the industry, engaging with employees for feedback and suggestions, and setting clear, measurable objectives for improving safety performance. The plan will involve a timeline for implementation and mechanisms for regular review and updates.

- b. *Increased safety considerations during the design phase of Capital Improvement Program (CIP) projects:* Safety is an integral part of all SJWC projects. In the design phase of CIP projects, SJWC will now incorporate more extensive safety considerations to proactively mitigate risks. This might include consulting with safety experts, applying Prevention-through-Design (PtD) principles to eliminate hazards from the outset, and considering safety in the selection of materials, procedures, and equipment.
- c. *Expanded safety awareness training for field staff and supervisors including expansion of the Learning Management System (LMS):* SJWC is increasing the scope and frequency of its safety awareness training. The focus will be on practical, applicable knowledge that can be used immediately on the job. Furthermore, we are improving our LMS to better track and manage these training courses, ensuring that every staff member stays up to date with their safety education and that we can easily identify areas for improvement or further education. A full-time position of a Learning & Development Specialist is proposed for managing company-wide training efforts to enhance our operations.
- d. *Broadening OSHA outreach training programs to include additional OSHA 10/30-hour training:* The OSHA 10 and 30-hour outreach training programs provide valuable instruction on safety and health hazards, workers' rights, employer responsibilities, and how to file a complaint. To increase the depth of our workforce's safety knowledge, SJWC is planning to broaden these programs to cover more teams and roles within the organization. We plan to conduct a series of six OSHA 10 and three OSHA 30-hour courses which cost \$4,372 and \$8,525, respectively per course, up to 10 students in each course. This includes not just training more employees but also diversifying the range of safety topics covered in the training.

- e. *Leveraging internal publications such as Straight-Talk for company-wide safety communication:* Internal publications like Straight-Talk play a vital role in maintaining a safety-conscious culture at SJWC. We are planning to increase the frequency of safety-focused content in these publications, covering everything from safety achievements and updates, to learning from incidents to safety tips and reminders. This will not only keep safety top of mind for all employees but also open a dialogue around safety, encouraging employees to share their ideas and experiences.

B. ENVIRONMENTAL SAFETY as prepared by Curt Rayer

- 1. Environmental Risk Management:** At SJWC, we recognize that our water utility activities have the potential to impact the environment. To proactively address this by conducting an Environmental Hazards Assessment (EHA) process. Every project, from its inception to completion, undergoes this assessment to identify potential environmental risks. Once these risks are flagged, we apply mitigation measures tailored to address them, ensuring compliance with regulations. This approach underlines our proactive stance on environmental conservation, wherein we anticipate challenges and address them before they materialize.

- 2. Environmental Compliance Policies:** Navigating the complex landscape of environmental regulations requires a clear, codified framework. Our Environmental Quality (EQ) division has crafted policies that ensure our compliance across various environmental parameters. Our policies and procedures for air quality permits, industrial wastewater discharge permits, Statewide general NPDES portable water discharge permits, hazardous material storage, and hazardous waste management serve as robust guidelines for the company. These are living documents, evolving based on updated scientific knowledge, technological advancements, and shifts in regulatory landscapes. This adaptive approach ensures our policies are always current and up to the mark.

3. **Environmental Programs:** Our Environmental Programs, which are designed by the EQ, specify how different departments within SJWC collaborate to meet the standards established by our compliance policies. Recognizing that each department has unique workflows and challenges, these programs are tailored to ensure environmental compliance while ensuring success of our operations. It's a balancing act that underscores our commitment to both environmental responsibility and service excellence.
4. **Environmental Management Systems (EMS):** In the age of data, we believe in harnessing the power of information to bolster our environmental initiatives. By continuously collecting, analyzing, and interpreting environmental data, we're able to make informed decisions, forecast trends, and fine-tune our strategies. Some of our recent achievements in this domain include 3rd party gap analyses, establishing a robust documentation scheme, and laying down a roadmap that will guide our EMS initiatives into the future. These milestones signify our commitment to an evidence-based approach to environmental management.
5. **Environmental Stewardship:** At the heart of all our initiatives lies a deep-seated respect for the environment. Environmental Stewardship is not just a responsibility for SJWC; it's one of our Building Blocks. By actively promoting employee awareness and championing sustainable business practices, we strive to reduce our ecological footprint. From harnessing renewable energy sources to robust recycling initiatives, our actions reflect our dedication. Additionally, through partnerships, outreach programs, and community engagements, we aim to spread the message of environmental conservation, creating ripples of positive change beyond our immediate operations.
6. **Going forward,** SJWC plans to enhance its environmental quality efforts in the following ways:
 - *Workflow Integration for Environmental Hazards Assessment:* We intend to establish a streamlined workflow for EHA that spans from the conceptual design

phase to full-scale operations in collaboration with our Engineering team. This strategic integration aims to bolster our proactive approach, ensuring environmental considerations are integrated at every project stage, reducing unforeseen challenges and costs down the line.

- *Engaging Waste Management Consultants:* Leveraging expertise from specialized waste management consultants will enable us to refine and enhance our existing waste management practices. With their insights, we will fortify our commitment to sustainability, ensuring minimal environmental impact and adherence to best industry practices. Approved budget for 400 hours at \$180/hr, a total of \$72,000.
- *Air Quality (AQ) Gap Assessment:* Air quality remains a paramount concern for us. By conducting a comprehensive AQ gap assessment, we aim to identify areas of improvement, potential risks, and opportunities for innovative solutions. This rigorous analysis will guide our future strategies, ensuring we exceed standard compliance benchmarks and set new industry standards. Approved budget for 60 hours at \$200/hr, a total of \$12,000.
- *Integration of Programs into our Environmental Management System (EMS):* By aligning our environmental programs with the broader EMS framework, we aim to create a cohesive and holistic approach to environmental quality. This alignment will optimize resources, improve inter-departmental collaboration, and ensure consistent, top-tier performance across all environmental initiatives.
- *Leveraging Internal Publications for Enhanced Environment Communication:* Publications like Straight-Talk are invaluable tools for promoting an environment-conscious workplace. By amplifying environment-centric content in these channels, we aim to foster an organizational culture where environment is a part of our mission.

C. PHYSICAL SAFETY as prepared by Mark Hatcher

SJWC's plan for Physical Security requires a combination of capital expenditure and operation expense. It's described as a whole in Capital Improvement Porject and Program Justifications, Index #5284 Physical Security Improvement.

D. EMERGENCY MANAGEMENT as prepared by David Fernandez

Please see report Attached Report on Emergency Management

CHAPTER 20

Emergency Management

Prepared by David Fernandez



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Purpose

San Jose Water Company is committed to ensuring continuity of service during emergencies and disasters. To that end, the SJWC Office of Emergency Management has established an emergency management program. This program goes beyond just preparedness. The SJWC Emergency Management program is a comprehensive framework encompassing various components and activities to prepare for, mitigate, respond to, and recover from emergencies and disasters. Several key elements contribute to the effectiveness of the SJWC EM program. Below, SJWC addresses Emergency Management topics and needs related to protecting, mitigating, preparedness, and recovering water and distribution system integrity before, during, and after an emergency or disaster. It is important to note that security is an integral part of emergency management and due to the complexity of this function, for this current General Rate Case (GRC) it is addressed in a separate document. In the execution of the program mission Physical Security is integrated within Emergency Management.

This document focus on the needs and justification to comply with regulatory requirements and ensure mission critical activities the SJWC Emergency Management program needs to operate, ensure continuity of service during emergencies and disasters, provide support and recover to the communities it serves, including those with Access and Functional Needs (AFN).

Corporate Responsibility

In addition to regulatory mandates outlined in the sections below, SJWC is responsible for protecting public health and safety. The SJWC emergency management program and emergency response plan outline procedures and protocols for addressing emergencies, disasters, and water quality incidents, such as chemical spills or biological contamination, in a timely and effective manner.

SJWC has an explicit and visible commitment of senior leadership to emergency management¹, and continues refining its emergency management posture, including security and business continuity, by reassessing policies, identifying potential risks, establishing monitoring systems, and implementing appropriate response measures to safeguard the public.

One mark of a utility that can respond effectively to emergencies is a strong preparedness culture. This culture is evident when staff is trained in their responsibilities as they relate to the Emergency Response Plan (ERP), the plan is kept current, a budget supports resources necessary to implement the ERP, and a management process is in place for staff to take corrective action when necessary improvements are identified.

Population Increase

San Jose's population density is 2,230 people per square kilometer, making it one of America's most densely populated major cities. Substantial population growth can be observed in the increasing number of multi-housing complexes currently in construction. This growth directly impacts emergency preparedness, response, and recovery to sustain and maintain the proper water service for drinking water, fire response, and more significant incidents.

Equity and Social Justice as it Relates to Emergency Management

In developing and sustaining SJWC emergency management program it is important to understand the impact of the program on our customer, and most specifically those with vulnerabilities.

The CPUC's ESJ Action Plan lists the following goals that outline the broad vision and steps the CPUC will take to ensure equity in its programs and services. SJWC has embraced those goals described in Table-1. SJWC OEM has outlined its plan to contribute to achieving these goals. SJWC has a separate document addressing all the CPUC goals

¹ AWWA G-440-22 Standard, Section 4.1

outlining the different initiatives, including those of the Office of Emergency Management.

TABLE 1 CPUC ESJ GOALS	
Goal	Description
Goal 1:	Consistently integrate equity and access considerations throughout CPUC regulatory activities.
Goal 2:	Increase investment in clean energy resources to benefit ESJ communities, especially to improve local air quality and public health.
Goal 3:	Strive to improve access to high-quality water, communications, and transportation services for ESJ communities.
Goal 4:	Increase climate resiliency in ESJ communities.
Goal 5:	Enhance outreach and public participation opportunities for ESJ communities to meaningfully participate in the CPUC’s decision-making process and benefit from CPUC programs
Goal 6:	Enhance enforcement to ensure safety and consumer protection for all, especially for ESJ communities.
Goal 7:	Promote high-road career paths and economic opportunities for residents of ESJ communities.
Goal 8:	Improve training and staff development related to environmental and social justice issues within the CPUC’s jurisdiction.
Goal 9:	Monitor the CPUC’s environmental and social justice efforts to evaluate how they are achieving their objectives.

Santa Clara County and the City of San Jose, Los Gatos, Monte Sereno, Saratoga, Cupertino, Campbell are multicultural jurisdictions. More than 100 languages are spoken by residents. The top five languages (other than English) spoken in the community are Spanish, Asian Languages, Pacific Islander languages, and others.

Many SJWC service connections are located where the most vulnerable populations live. Appendix-A contains the San Jose Equity Atlas with race, income, and combined scores. Additionally, SJWC has developed several maps identifying the disadvantaged communities, ABAG Equity Priorities communities 2035, Low Income Census Tract (ACS 2011-2015), 2020 Social Vulnerability Index, and 2019 SEVI, and overlay them

into the service area. These maps allow SJWC to prioritize emergency preparedness, security, and operational initiatives to ensure equitable water service for all.

The Federal Emergency Management Agency (FEMA) defines social vulnerability as the *susceptibility of social groups to the negative impacts of natural hazards (e.g., wildfire), which include disproportionate death, injury, loss, or disruption of livelihood* (FEMA 2022). A sole hazard occurrence can bring about considerably different impacts for distinct individuals, even if the magnitude of the hazard was the same for the entire community. Specific groups of individuals may be more susceptible to natural hazards because of socioeconomic status, physical state, or other factors. For instance, elderly individuals may have more difficulty in quickly evacuating during wildfire emergencies, which may make them more susceptible to entrapment. In other cases, low-income individuals may be less able to harden and upgrade their homes to reduce structural damage, indicating that they can face a higher probability of their home being damaged or destroyed should an earthquake occurs.

ESJ Population and Wildfires

As defined by the U.S Forest Service's (USFS's) Wildfire Risk to Communities (USFS 2022), socially vulnerable populations include the following: *families living in poverty, people with disabilities, people over 65 years of age, people who have difficulty with English, households with no car, and people living in mobile homes*. Statistics on socially vulnerable populations with the entirety of Santa Clara County as estimated by the USFS's Wildfire Risk to Communities is provided in Table-2 below. Populations particularly at risk from wildfire include people over 65, people with disabilities, and people dwelling in mobile homes. Visitors and non-local property owners may also be at higher risk if they are not familiar with local guidelines regarding property management (defensible space, fire-resistant vegetation, fire-resistant building materials, etc.) and may not be registered or within reach of local emergency notifications. In addition, renters of these properties may not receive emergency alerts as they are not local residents. Socially vulnerable populations may need additional support with regard to preparing for wildfire, evacuating from wildfire, and returning to their community post-fire/

Population at Risk	Number	Percent
Families in poverty	19,668 ± 1,059	4.3 ± 1.6
People with disabilities	155,216 ± 2,654	8.1 ± 1.5
People over 65 years	259,988 ± 2,946	13.5 ± 2.3
Difficulty with English	158,711 ± 3,531	8.8 ± 0.7
Households with no car	33,974 ± 1,371	5.3 ± 1.4
Mobile homes	18,498 ± 1,002	2.9 ± 2.6

Historically, fire in Santa Clara County has been responsible for injuries and destruction of property. For example, the Santa Clara Lightning Complex fires of 2020 were responsible for 225 destroyed structures and six injuries over the course of 44 days of active burning (State of California 2020). Mitigating the risks of severe wildfires on the landscape and within the WUI will reduce the chances of wildfire hazards impacting firefighters and other vulnerable populations.

According to the 2017 Santa Clara County Multi-Jurisdictional Hazard Mitigation Plan, social vulnerability for wildfire hazards is elevated for sensitive populations in the County, including children, the elderly, and individuals with underlying respiratory and cardiovascular diseases (Santa Clara County 2017). See Map 10 in Appendix J for Centers for Disease Control and Prevention (CDC) socially vulnerable populations.

Unhoused Populations

A continued economic and social trend exacerbates the level of housing insecurity, urban areas throughout the United States have recently experienced significant increases in unhoused populations. Santa Clara County and the SJWC service area are no exception to this trend. As a result, there is a growing number of incidents involving fires that impact unhoused people and their shelters or encampments. To survive in often harsh environments without adequate protection from the elements, many people living in unhoused communities utilize fire as a tool for general survival. This includes burning open flames to allow themselves to keep warm and cook food. Very few people living under these conditions are aware of fire safety. Additionally, unhoused people are often situated in areas of existing high flood and/or fire risks, such as densely vegetated areas

like SJWC watershed as well as creek and riverbank. Jurisdictions across the country face difficulties addressing the houselessness crisis due to legislative and political barriers, causing the issue to stagnate and risks to persist among these vulnerable populations. In terms of incidents impacting these groups, the variable nature of floods and fires affecting unhoused people can add complexity to have effective mitigation and response protocols.

Unhoused encampments can be found near SJWC critical infrastructure assets. The location varies from purely urban setting to the Wildland Urban Interface (WUI). These encampments cannot be easily removed and required local jurisdiction to intervene, and on many occasions, demand the exercise of either wildland or urban fire response capabilities and occasionally may necessitate a hybrid approach. SJWC staff must also account for other safety concerns, such as hazardous materials and other issues derived from mental health conditions when conducting work around those areas.

For more detailed information, refer to the SJWC Equity and Social Justice GRC justification Document.

Emergency Management Regulatory Requirements & Standards

Regulations and compliance standards mandate emergency management and preparedness for all water utilities. SJWC is subject to regulatory requirements and emergency preparedness and response standards. SJWC's emergency management program aims to adhere to all relevant laws, The complex ecosystem required to protect today's water systems, the ever-increasing confluence of incidents, including natural disasters, physical and cyber systems in remote locations, and the significant investment in emergency management, The regulatory requirements also require ongoing planning and preparedness, enhanced coordination, and increased community engagement. Increased funding is necessary to ensure regulation compliance and avoid penalties or legal consequences. It demonstrates SJWC's commitment to upholding industry standards and meeting the expectations of regulatory bodies. This includes compliance with local, state, and federal regulations and the following Americas Water Works Association:

US Environmental Protection Agency - America's Water Infrastructure Act of 2018 (AWIA)

AWIA Section 2013(b) certification requirements for community water systems serving populations over 3,300 states that a water utility must certify to the U.S. EPA that they have completed an Emergency Response Plan incorporating the risk and resilience assessment findings.

Emergency Planning and Community Right-To-Know Act of 1986

A community water system, SJWC must, to the extent possible, coordinate with local emergency planning committees (42 U.S.C. 11001 et seq.) when preparing or revising its risk and resilience assessment and emergency response plan under the AWIA.

AWWA J100-Risk and Resilience Management of Water and Wastewater Systems.

This standard is an American National Standard, as designated by the American National Standards Institute, and falls under the American Water Works Association (AWWA) jurisdiction. This standard is aligned with the intent of the National Homeland Security Policy, including the National Infrastructure Protection Plan (NIPP), National Incident Management System (NIMS), and National Response Framework (NRF). This standard

applies to risk evaluation and supports risk reduction and resilience improvement in water and wastewater utilities.

AWWA Manual M19-Emergency Planning for Water and Wastewater Utilities.

This manual presents an all-hazards approach to water utility emergency planning principles, practices, and guidelines. It walks through all areas of emergency preparedness, including plan development, mutual aid partnerships, communication strategies, staff preparedness, risk mitigation, and more.

AWWA G440-22 Emergency Preparedness Practices

This standard covers the minimum requirements to establish and maintain an acceptable level of emergency preparedness based on the identified and perceived risks facing utilities within the water sector. This standard is referenced to evaluate, develop, implement, and maintain emergency preparedness practices. Stipulations of this standard apply when this document is referenced and only to the emergency preparedness practices of the utility.

AWWA G430-Security Practices for Operation and Management.

This standard covers the minimum requirements for a protective security program for a water, wastewater, or water reuse utility.

National Incident Management System (NIMS)

The National Incident Management System (NIMS) guides all levels of government, nongovernmental organizations, and the private sector to work together to prevent, protect against, mitigate, respond to, and recover from incidents. NIMS provides stakeholders across the community with the shared vocabulary, systems, and processes to successfully deliver the capabilities described in the National Preparedness System. NIMS defines operational systems that guide how personnel work together during incidents.

Federal Emergency Management Agency (FEMA) -Homeland Security Exercise and Evaluation Program.

Guiding principles for exercise and evaluation programs and a common approach to exercise program management, design and development, conduct, evaluation, and

improvement planning. Using HSEEP, SJWC develops, executes, and evaluates exercises that address preparedness priorities. Risk and capability assessments, findings, corrective actions from previous events, and external requirements inform these priorities. These priorities guide the overall direction of an exercise program and the design and development of individual exercises.

U.S. EPA-Business Continuity Plans for Water Utilities.

Guidance for maintaining solid operations - financially, managerially, and functionally, after any incident. Utilities that operate other systems, such as gas and electrical, can also utilize this guidance, although specific technical terminology may be different.

California Water Code: The California Water Code establishes requirements for water suppliers, including emergency preparedness and response provisions. It includes emergency water shortage contingency planning, water supply reliability assessments, and developing emergency response plans.

California Code of Regulations, Title 22: Title 22 of the California Code of Regulations outlines California's water systems requirements, including emergency preparedness and response. It includes provisions related to emergency water supply plans, emergency disinfection procedures, and contingency plans for disruptions in the water supply.

California Office of Emergency Services (Cal OES) Guidelines: The Cal OES provides guidelines and resources for emergency management in California. While not regulations, these guidelines provide recommendations and best practices for emergency planning, response, and recovery efforts.

California Public Utilities Commission (CPUC) Requirements: Water companies that the CPUC regulates have specific emergency preparedness and management requirements. These requirements include developing emergency response plans, reporting incidents or emergencies, and coordinating with local agencies and authorities.

Program Goals and Objectives:

SJWC's Mission is that we are trusted professionals, passionate about delivering life-sustaining, high-quality water, and exceptional service to families and communities while protecting the environment and providing a fair return to shareholders. SJWC continues promoting a culture whereby management and employees understand and contribute to enhanced utility preparedness.²

Our vision is to serve our customers, communities, employees, shareholders, and the environment at world-class levels.

Ensuring Continuity of Service is the premise of SJWC's emergency management program. The program is essential for protecting public health, maintaining service continuity, complying with regulations, and effectively responding to emergencies. SJWC's emergency management program aims to meet and exceed its goals and objectives, enhance employee, customer, and community preparedness, improve response capabilities, and mitigate the impact of emergencies or disasters.

Emergency Management Program Budgetary Needs

A budget is necessary to fund emergency management activities that include mitigation, preparedness, response, and recovery. **SJWC has an “*explicit and visible commitment of senior leadership to preparedness.*”** As outlined in AWWA G-440, Section 41. SJWC shall establish an explicit, visible, and easily communicated commitment to emergency preparedness. This commitment ensures that SJWC and the communities it serves are prepared to respond effectively to emergencies and demonstrates the company's “sustains focus on preparedness by maintaining it as a high priority³”.

One mark of a utility that can respond effectively to emergencies is a strong preparedness culture. This culture is evident when staff is trained in their responsibilities as they relate to the Emergency Response Plan (ERP), the plan is kept current, a budget supports

² AWWA G-440-22 Standard, Section 4.2.1

³ AWWA G-440-22 Standard, Section 4.2.2

resources necessary to implement the ERP, and a management process is in place for staff to take corrective action, when necessary, improvements are identified. See Table 5 - Opex budget overview for additional funding necessary to support SJWC OEM program development and maintenance.

Increased emergencies and disasters

The rise in incidents affecting communities and water utilities, such as wildland fires, earthquakes, physical attacks, sabotage attempts, or terrorist activities, requires strengthening the emergency management posture. SJWC has experienced natural disasters, infrastructure emergencies, security incidents, and breaches resulting in multi-day downtime of water production facility supplying water to at-risk and underserved communities, threats of gun violence upon employees, vehicles theft, and theft of materials and tools that resulted in the death of a burglar by electrocution.

Major Past Hazard Events

Presidential disaster declarations are typically issued for hazard events that cause more damage than state and local governments can handle without assistance from the federal government, although no specific dollar loss threshold has been established for these declarations. A presidential disaster declaration puts federal recovery programs into motion to help disaster victims, businesses and public entities. Some of the programs are matched by state programs. Santa Clara County has experienced 14 events (11 major disaster declarations, one emergency declaration, one fire management assistance declaration, and one fire suppression declaration) since 1950 for which presidential disaster declarations were issued. These events are listed in Table 3.

TABLE 3 – PRESIDENTIAL DISASTER DECLARATIONS

Type of Event	FEMA Disaster Number ^a	Date
Severe Winter Storms, Flooding, Mudslides	DR-4308	April 1, 2017
Severe Winter Storms, Flooding, and Mudslides	DR-4301	February 14, 2017
Summit Fire	FM-2766	May 22, 2008
Croy Fire	FS-2465	September 25, 2002
Severe Winter Storms and Flooding	DR-1203	February 9, 1998
Severe Storms, Flooding, Mud and Landslides	DR-1155	January 4, 1997
Severe Winter Storms, Flooding Landslides, Mud Flow	DR-1046	March 12, 1995
Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1044	January 10, 1995
Severe Freeze	DR-894	February 11, 1991
Loma Prieta Earthquake	DR-845	October 18, 1989
Severe Storms and Flooding	DR-758	February 21, 1986
Grass, Wildlands, and Forest Fires	DR-739	July 18, 1985
Coastal Storms, Floods, Slides, and Tornadoes	DR-677	February 9, 1983
Severe Storms, Flood, Mudslides, and High Tide	DR-651	January 7, 1982
Drought	EM-3023	January 20, 1977

a. DR = Disaster Declaration; EM = Emergency Declaration; FM = Fire Management; FS = Fire Suppression
 Source: FEMA, 2016

Review of these events helps identify targets for risk reduction and ways to increase SJWC’s and the community’s capability to avoid large-scale events in the future. Still, many natural hazard events do not trigger federal disaster declaration protocol but have significant impacts on their communities. These events are also important to consider in establishing recurrence intervals for hazards of concern.⁴

Recent Fire Occurrence

This section was developed using fire history data from CAL FIRE’s Fire and Resource Assessment Program (FRAP) (CAL FIRE 2022). Although the fire history data from CAL FIRE is the most comprehensive digital record of fire perimeters in California, it has its limitations. CAL FIRE states that the earlier data (i.e., prior to 1950) is subject to significant uncertainty due to poor and inconsistent record keeping. In addition, data for some fires may be missing or have incorrect information. This is due to the loss or damage

⁴ Office Of Emergency Services, County Of Santa Clara & Santa Clara County Fire, Santa Clara County Operational Area Mitigation Plan 10/15/17

of historical records as well as inadequate documentation (CAL FIRE 2022f). Given the limitations of the data, our fire history analysis may contain discrepancies.

An analysis of Santa County's wildland fire history (1931–2020) (CAL FIRE 2022a) shows that the county's most substantial fires have occurred in forested mountain areas, with smaller fires occurring at a higher frequency in the foothills and valley (Appendix-A, Figure 6). Though a significant number of fires have taken place throughout the county since 1950, it is worth noting that larger fires began to occur in the 1980s (Appendix-A, Figure 6). In addition to fires showing an increase in magnitude over time within the county, they are also occurring at a higher frequency. Santa Clara County suffered a higher number of wildfires between the years 2020 and 2022 alone than the entirety of wildfires occurring from 1950 to 2019. This increase in wildfire frequency and severity is shown in Appendix-A Figures 6 through 11. Representing the largest fire in county history, the SCU Lightning Complex took place in 2020 and burned through a significant portion of the eastern region of the county. Having occurred just outside of the planning area, but within a similar vegetative community as the western region of county, was the 2020 CZU Fire Complex. This highly destructive fire burned through 86,509 acres of Santa Cruz and San Mateo Counties, resulting in a fatality. These occurrences demonstrate the county's and surrounding area's capacity to experience devastating wildfire events given the climate, vegetation, population, and other key risk factors present.

In the past decade, Santa Clara County has experienced several major wildfire events, two of which took place during the 2020 fire season. Occurring in in the Santa Cruz Mountains and burning 4,474 acres over the course of 357 days, the Loma Fire destroyed 28 structures and required the suppression efforts of 62 firefighter personnel. The cause of ignition for this fire remains uncertain (CAL FIRE 2016). Burning just east of the 101 Highway in the city of Gilroy from July 8 to July 13, the Crews Fire would go on to scorch 5,513 acres of land, claiming four structures. The suppression efforts involved the use of 10 fire engines, 125 firefighting personnel (CAL FIRE 2020a). The cause of ignition for this fire is still under investigation. The SCU Lightning Complex fires burned across Santa Clara, Alameda, Contra Costa, San Joaquin, and Stanislaus Counties over the course of 46 days, claiming 396,624 acres of land. The fires lead to the destruction of 225

structures, damage of 26 structures, and six personnel and civilian injuries (CAL FIRE 2022g).). The SCU Lightning Complex is the fourth largest fire in state history (CAL FIRE 2022a).

Critical Facilities, Infrastructure and Assets

SJWC provide service to critical facilities and infrastructure essential to the health and welfare of the community. These features become especially important after a hazard event. Critical facilities typically include police and fire stations, schools, department operation centers, and emergency operations centers, other utilities that provide electricity, and communication services to the community. SJWC has identified and mapped in its geographic information system (GIS) databases these facilities. Table 4 below list provides a high-level detail of critical facilities and infrastructure in Santa Clara County.

TABLE 4 – CRITICAL FACILITIES AND INFRASTRUCTURE IN SANTA CLARA COUNTY OPERATIONAL AREA

Jurisdiction	Emergency Response / Public Health & Safety	Infrastructure Lifeline	Military Facilities	Recovery Facilities	Socioeconomic Facilities	Hazardous Materials	Total
Campbell	8	27	0	0	53	5	93
Cupertino	8	36	0	0	47	4	95
Gilroy	15	45	0	1	50	7	118
Los Altos	6	31	0	0	36	0	73
Los Altos Hills	1	48	0	0	6	0	55
Los Gatos	14	40	0	0	24	1	79
Milpitas	12	68	0	0	56	42	178
Monte Sereno	1	2	0	0	2	0	5
Morgan Hill	9	14	0	0	39	7	69
Mountain View	17	84	0	0	50	23	174
Palo Alto	19	71	0	0	95	22	207
San José	116	593	0	1	654	115	1479
Santa Clara (city)	19	79	0	0	103	94	295
Saratoga	7	33	0	0	30	0	70
Sunnyvale	16	81	0	0	86	49	232
Unincorporated County	20	248	1	2	51	5	327
Total	288	1500	1	4	1382	374	3,549

Office of Emergency Management Activities

The following section addresses specific activities and initiatives SJWC OEM must undertake to fulfill its goals.

SJWC OEM has the following specific components:

Emergency Risks and Resilience Assessment Compliance

Emergency Planning

Response And Recovery Coordination

Physical Security

Cyber Security

Emergency Operations Center (EOC) Activities

Resource Management

Training and Education

Partnerships & Collaboration

Evaluation and Continuous Improvement

Emergency Risk & Resiliency Assessments Compliance

Regulatory requirements instruct all water utilities to conduct periodic risk assessments is crucial to identify potential threats and vulnerabilities within the utility's environment. SJWC's emergency management program foundation starts with a thorough **assessment of the risks and hazards** that the company faces. This includes identifying natural disasters (e.g., floods, wildland fires, earthquakes), technological hazards (e.g., chemical spills, power outages), safety, cyber-security, physical security threats, and other potential threats. The Risk Assessment and Hazard Analysis help SJWC understand the risks and allow for better planning and resource allocation. Budget to conduct new risk and resiliency assessments will enable SJWC understand the ever changing environment and threats, and to invest in advanced technologies, infrastructure upgrades, and specialized expertise to address these evolving risks effectively.

SJWC also complies with AB1650, which specifies that all investor-owned water utilities regularly review their emergency response plans with local emergency planning agencies to ensure effective communication and coordination for emergency response events.

SJWC Emergency Management requirements and guidelines governing SJWC's operational practices and procedures were instituted in response to the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (the "Act").

SJWC's compliance effort involved engagement with a consultant (ABS Consulting) to identify system risks and develop appropriate mitigation, followed by formal publication and submission of the SJWC Vulnerability Assessment to the Environmental Protection Agency ("EPA") on March 13, 2003.

As of September 30, 2020, SJWC complies with the America Water Infrastructure Act (AWIA) requirements by completing and certifying required actions as outlined in AWIA.

Risk and Resilience Assessments are mandated to be performed every five years. SJWC will need to be performed again no later than 2025 as part of the EPA's regulatory mandates and will consist of the following:

- Performing comprehensive Risk and Resilience Assessment
- Identifying specific threats, developing threat-asset pairs, evaluating relative risk for threat-asset pairs
- Updating its Emergency Response Plan
- Developing action plans, future facility investments, and modification of emergency response operations plans to address the highest risks
- Submission of Certification Letter to EPA for successful completion of items 'a' and 'b' above

In the following years, SJWC will continue a series of Capital Improvement investments to upgrade its infrastructure to address items identified in the Vulnerability Assessment.

SJWC continues to revise many of its internal policies and procedures to address risks identified in the original Assessment and later studies and assessments.

As required and AWIA and AWWA G-440, Section 4.4.2, SJWC shall perform a risk assessment in 2024. This risk assessment will be conducted by a formal 3rd party assessment conducted by emergency management professionals with expertise in water utilities and will follow tools or methods that support the application of a consistent assessment methodology to be used on multiple water sector utility services and reviewed or updated on a regular basis.⁵

Gap Assessment

In addition, to the above Risk and Resiliency Assessment, SJWC completed a self-assessment of the Emergency Management program following the AWWA G-440-22 Standard. The evaluation was used as a starting point for evaluating SJWC preparedness efforts and **does not include** other phases of the Emergency Management Cycle.

The requirements listed in this standard complement requirements in ANSI/AWWA G430, Security Practices for Operation and Management, and are meant to apply to all water sector utilities and assume that all applicable regulatory requirements are met or exceeded. This self-assessment provided positive findings as well as gaps and improvements needed.

SJWC leadership is committed to emergency preparedness. In 2022, there was funding allocated to support a new Security Manager position, facilities and physical security technology study, and EOC modernization. SJWC continues improving its security and emergency preparedness culture. Near-term efforts in Health and Safety, Security, and Emergency Management have resulted in an increasing level of awareness.

See Table 5 - Opex budget overview for funding necessary to support SJWC OEM risk management requirements.

⁵ AWWA G-440-22 Standard, Section 4.4

Emergency Planning

The OEM is responsible for planning. This essential function is administratively and operationally intensive, requiring a long cycle (6-12 months). Additional budget and personnel will improve meeting regulatory timelines, as well as the quality and actionability of the various emergency plans. Without the planning process gaps in mitigation, preparedness, response, recovery, and resiliency will occur which will result, as demonstrated in many incidents after-action-reports, in jeopardizing the ability to provide service to the community.

Emergency planning goes beyond preparedness planning⁶. SJWC emergency planning involves developing strategies, procedures, and protocols to guide actions during emergencies. This includes the creation and maintenance of the following plans: Emergency Operations Plans, Emergency Response Plans, Continuity of Operations Plans, Business Continuity Plan. The development and update process is tedious and ranges from 6 – 18 months, depending on the complexity, and involves many stakeholders.

The planning requires a deep understanding of the risks and hazards in the service area and working collaboratively with other agencies and stakeholders to create effective plans. Plans must be regularly updated to maintain operational relevance and meet statutory requirements⁷. The Emergency Response Plan helps SJWC meet its obligations and demonstrate its commitment to public safety. It ensures compliance with regulations, such as the Safe Drinking Water Act, which requires water utilities to have emergency response plans.

During the GRC cycle there will be a need to review several emergency plans, standard operating procedures (SOPs) and Incident Specific Response Procedures (ISRPs). Request for funding to comply with this requirement can be found in Table 5 - Opex budget overview.

⁶ AWWA G-440-22 Standard, Section 4.5

⁷ AWWA G-440-22 Standard, Section 4.5.2

Emergency Response & Recovery Coordination

Coordinating response efforts among multiple departments, utilities, agencies, organizations, and jurisdictions is critical for an effective emergency management program. SJWC program includes establishing mechanisms for internal communications, interagency cooperation, mutual aid agreements, and clear lines of communication. Coordination extends to the recovery phase, facilitating the return to normalcy and long-term community resilience.

Collaborating with other water utilities, local, state, and federal partners, non-profit entities, and community groups enhances the effectiveness of SJWC response and recovery. Partnerships allow for sharing of resources, expertise, and information, leading to more robust emergency preparedness and response capabilities.

The OEM is also responsible for engaging with the community to ensure residents are prepared for emergencies and disasters. This coordination, engagement, and development needs new additional budget. The requested additional personnel will improve the quality and frequency of community outreach efforts, which can, in turn, improve the overall level of preparedness within the community and ensure SJWC meets its Equity and Social Justice goals as outlined by the CPUC in the prior section.

SJWC continues to engage and coordinate with multiple agencies in utility infrastructure, security, emergency response, and operational resiliency, including:

- Local, State, and Federal agencies
- SCVWD EM Subcommittee
- Santa Clara County Emergency Managers Association
- Bay Area Emergency Security Information Collaborative (BAESIC)
- California Resiliency Alliance (CRA)
- Santa Clara Fire Safe Council
- Business Recovery Managers Association (BRMA)
- Joint Venture Silicon Valley (JVSV)

- Collaborating Agencies Disaster Relief Effort (CADRE)
- California Water and Wastewater Agency Response Network (CALWARN).

CALWARN is a critical partner for SJWC as it is a network of utilities helping each other to respond to and recover from emergencies. The purpose of a WARN is to provide a method whereby water/wastewater utilities that have sustained or anticipate damages from natural or human-caused incidents can provide and receive emergency aid and assistance in the form of personnel, equipment, materials, and other associated services as necessary from other water/wastewater utilities.

Physical Security

SJWC Implementation of Emergency Management Program, Practices, and Procedures complying with specific guidelines and regulations, SJWC has implemented numerous emergency management practices related to physical security and cyber security

SJWC has embark in the revamping of its Physical Security program. In 2022 SJWC established a dedicated physical security manager. The demands of the large number of facilities (over 280), and the complexity of physical security functions and programs have significantly increased in the last several years. The 2023 physical security studies provided actionable items necessary to comply with all regulatory and physical security standards required of water utilities. Physical Security. The gaps identified in the security studies has been translated into strategic and tactical improvement plans.

SJWC continues prioritizing and initiating necessary capital expenditures for security-related infrastructure and technology deployments. Additionally, SJWC assesses new infrastructure projects at supply, storage, pumping, and building facilities on an ongoing basis and integrates improved security measurements with other facility improvements.

The items and funding necessary to support and execute a viable the physical security program are outline in the SJWC Physical Security 2024-2026 GRC Justification.

Cyber-Security

SJWC Emergency Management and Physical Security are integrating efforts to strengthen the company's resiliency against cyber-attacks. SJWC continues to invest capital and operating expenditures for cyber-security improvements. These expenditures are required to reduce cyber-security risk to protect customer information and water operations. SJWC will continue to invest in cyber-security to minimize the risk of cyber-security impact on customer information and water operations. These investments include areas focused on employee training, network perimeter protection, behavioral analytics, third-party network penetration testing, cyber-security posture assessments (C2M2 framework), and other network performance and activity analysis tools. Cyber-Security justification is a separate justification document.

SJWC Emergency Operations Center (EOC) Activities

Coordination is at the core of any emergency, and SJWC Emergency Operations Center (EOC) serves as the command and coordination hub during emergencies. The EOC brings representatives from various departments, agencies, organizations, and disciplines to facilitate communication, decision-making, and resource allocation.

During emergencies and disasters, the OEM must coordinate with various stakeholders, including other government agencies, non-profit organizations, and other private sector partners. Additional personnel will improve the OEM's ability to coordinate effectively and ensure all necessary resources are brought to bear on the emergency response. This enhanced coordination will directly impact SJWC employees, customers, and other stakeholders.

A key performance metric on the effectiveness of the SJWC emergency management program is establishing and maintaining the EOC so that it is adequately equipped, staffed, and supported. Operational budget is necessary to ensure the core infrastructure for emergency response remains in the appropriate state of readiness.

Resource Management

Effective resource management is essential for a successful emergency response. The Office of Emergency Management partners with internal departments and has resource identification, acquisition, deployment, and tracking mechanisms. This includes personnel, equipment, supplies, and external support, such as mutual aid agreements and coordination with state or federal agencies.

Training & Education

The program must provide ongoing training and education to staff and the community.

Training matrix.

SJWC shall develop a training requirements matrix for employees. At a minimum, employees with roles in preparedness plans must be trained on their organization, content, and use. Employees need be trained on the NIMS and ICS. Other staff may be trained on general emergency preparedness in accordance with maintaining an overall preparedness program.⁸

Initial and refresher training.

Initial training shall be conducted for new employees with specific roles in preparedness during the initial orientation or before being given such a responsibility. Refresher training should be conducted at least annually, or more often as dictated by new and/or potential threats and hazards to the organization, or following an incident where lessons learned should be immediately incorporated into overall preparedness plans and/or procedures.⁹

Conduct exercises.

SJWC shall conduct an exercise of its emergency preparedness plans and/or procedures annually. At least once every three years, SJWC should conduct operational-based

⁸ AWWA G-440-22 Standard, Section 4.7.1

⁹ AWWA G-440-22 Standard, Section 4.7.2

exercises involving outside response agencies. Tools and guidance exist on how to conduct exercises, including the DHS Homeland Security Exercise and Evaluation Program (HSEEP) and USEPA preparedness tools.¹⁰

Exercises and training help understand individual and team roles and responsibilities, familiarize with emergency procedures, and acquire the necessary skills to respond effectively. SJWC community education initiatives shall promote public preparedness and enhance resilience. Regular training and exercises based on the plan help build a culture of preparedness and improve the overall response capabilities of the organization.

Request for funding to comply with this requirement can be found in Table 5 - Opex budget overview.

Communications

Prompt and accurate communication is vital during emergencies. The SJWC Emergency Management Program (EMP) aims to incorporate reliable notification and warning systems to alert staff, jurisdictions, and partner agencies of impending threats. SJWC has established communication protocols, both within the company and with external stakeholders, to ensure timely and consistent dissemination of information.

Notification And Warning Systems

SJWC is transitioning to a new Emergency Mass Notification System. This system will be used to make a variety of emergency notifications, from recalling the SJWC incident management team to alerting employees and local jurisdiction of emergent incidents or emergencies. The requested budget will assist in expanding this new system capabilities to be able to have a two-way communication with employees, being able to received alerts if employees do not check-in during dangerous situations or work. These capabilities have a direct nexus to SJWC Health and Safety program. It is critical to SJWC the wellness of our employees.

¹⁰ AWWA G-440-22 Standard, Section 4.7.3

Stakeholders Communications

During emergencies, effective communication with stakeholders is crucial. The EMP ensures that communication protocols and strategies for engaging with various stakeholders are aligned, including customers, local authorities, and the media. It provides clear and consistent messaging, promotes transparency, and helps maintain public trust and confidence in the water company's ability to handle emergencies.

Partnerships & Collaboration

SJWC utilizes the NIMS and ICS frameworks in its preparedness plans/procedures. Incorporating these frameworks contributes to enhanced coordination between utility personnel and outside first responders and fulfills FEMA recommendations for local government and not-for-profit, non-governmental organizations or cooperatives, such as water sector utilities within the United States.

SJWC recognizes the interdependencies within its community and forges reliable and collaborative partnerships with communities served; managers of critical and interdependent utilities, companies, and infrastructure; and local emergency planning, management, and response organizations and agencies.

SJWC has identified vital agencies, organizations, vendors, and companies essential to emergency preparedness, response, and recovery to establish and maintain collaborative partnerships with these entities. Customer and community/public agencies and organizations such as police and fire, public health and safety, water quality and environmental protection, and critical or interdependent infrastructure managers, utilities, or other services such as fuel delivery, chemical vendors, equipment and spare parts companies, power companies, communication companies, first responders, and adjacent or downstream utilities have been identified critical external partnerships.

SJWC has established collaborative partnerships with key agencies and other groups as appropriate (e.g., SSC OEM and Local Jurisdictions OEMS, and state emergency management agencies; regional and State Departments of Homeland Security and Fusion Centers, State Water/Wastewater Agency Response Networks [WARNs]). Additionally,

SJWC has relationships with neighboring water utilities and other potential mutual aid and preparedness, response, and recovery assistance/interdependency providers or contractors to ensure cooperation and effective coordination during emergency response and recovery.

SJWC is part of the CAWARN. The SJWC emergency response plan includes provisions for the utility to participate in local, regional, and state mutual aid and assistance agreements. Such agreements should be documented in the appendix of the plan.

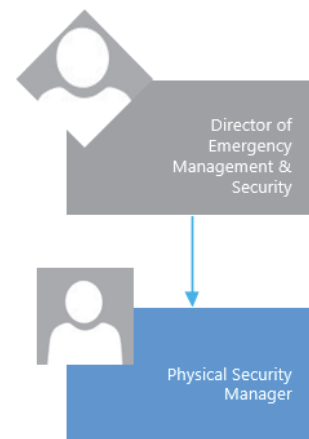
These partnerships enhance the overall effectiveness and efficiency of the SJWC emergency management program. While SJWC tries to leverage resources or cost-sharing arrangements, when possible, monetary and human resources are needed to maintain and enhance these partnerships.

Evaluation & Continuous Improvement

SJWC’s learning culture focuses on continuous improvement. SJWC regularly evaluates and assesses all areas of the emergency management program. It is crucial to identify strengths, weaknesses, and areas for improvement. SJWC conducts after-action reviews following exercises and actual incidents, collecting stakeholder feedback, and implementing changes based on lessons learned.

Justification for Emergency Management Personnel

SJWC has made progress in supporting emergency management efforts from the human resource perspective. Two full-time SJWC administrative employees (Director of Emergency Management and Security Manager) are responsible for all SJWC emergency preparedness and physical security activities¹¹. The justification for additional personnel for the Office of emergency management (OEM)



¹¹ AWWA, G-440, Section 4.3.1

is primarily based on the need to improve the ability of the office to respond effectively to emergencies and disasters due to:

Number and severity of emergencies and disasters

A substantial increase in the number and severity of incidents has also increased the administrative burden of the OEM. Requested personnel will ensure the SJWC can respond effectively to all incidents and emergencies. It will also assist in maintaining all the regulatory and administrative paperwork.

Improved planning and preparedness

The OEM is responsible for planning and preparedness activities, such as developing emergency response plans and conducting training exercises. These essential functions are administratively and operationally intensive, requiring a long cycle (6-12 months). Requirements for exercises vary from 2-6 depending on the area. Additional personnel will improve the regulatory timeliness, quality, and scope of these activities, which can, in turn, improve the overall readiness of the community.

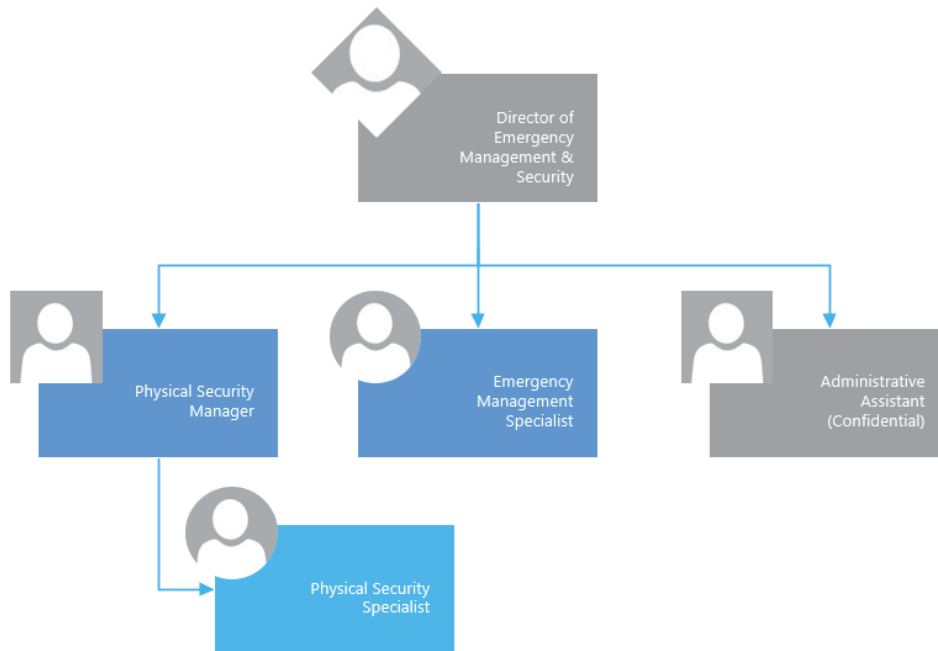
Enhanced coordination

During emergencies and disasters, OEM must coordinate with a wide range of stakeholders, including other government agencies, non-profit organizations, and private sector partners. Additional personnel would help improve OEM's ability to coordinate effectively and ensure all necessary resources are brought to bear on the emergency response. This enhanced coordination will directly impact SJWC employees, customers, communities, the environment, and other stakeholders.

Increased community engagement

OEM is also responsible for engaging with the community to ensure residents are prepared for emergencies and disasters. The requested additional personnel will improve the quality and frequency of community outreach efforts, which can, in turn, improve the overall level of preparedness within the community and ensure SJWC meets its Equity and Social Justice goals as outlined by the CPUC.

Below is the proposed OEM organization. Overall, the organizational structure of an OEM is designed to ensure that the SJWC can effectively coordinate with other agencies and stakeholders to prepare for, respond to, and recover from emergencies and disasters.



Budget Rationale

A perpetual budget for emergency management functions is necessary to ensure that SJWC can mitigate, prepare, respond to emergencies and disasters, and recover as quickly as possible. These justifications are based on the critical role that emergency management plays in ensuring continuity of service, public health, and safety, and recovering the company and community in the event of emergencies and disasters. The cost of not investing in emergency management can be devastating in terms of continuity of service, human lives, and economic impact, making it a worthwhile investment.

High-Level OPEX Budget Overview

Explain how each type contributes to the overall effectiveness of the program.

Item	Regulatory	One-Time Cost 2025	2025	2026	2027
Maintenance Cost of EOC, Comms Equipment, Other Improvements	Yes		\$10,000.00	\$10,000.00	\$10,000.00
EM Program Management	Yes		\$13,333.33	\$13,333.33	\$13,333.34
Risk and Resiliency Assessment	Yes	\$ 50,000.00			
Business Continuity Document Review and Gap Analysis	Yes	\$15,000.00			
Business Continuity Plan Development	Yes	\$52,000.00		\$26,500.00	\$26,500.00
Emergency Response Plan Updates/Revision (Core)	Yes		\$15,000.00	\$15,000.00	\$15,000.00
Emergency Response Plan Development and Updates	Yes				
Security Plan	Yes	\$45,000.00			
Hazard Mitigation Plan	Yes	\$50,000.00			
Dams Emergency Response Plan Development and Updates	Yes				\$15,000.00
Annual Review and updates Security Plan	Yes		\$5,000.00	\$5,000.00	\$5,000.00
Reviews Hazard Mitigation Plan	Yes				\$5,000.00
Emergency Response Plan Development and Updates	Yes		\$5,000.00	\$5,000.00	\$5,000.00
SOPs Development	Yes		\$5,000.00	\$5,000.00	\$5,000.00
Development of Employees Preparedness (ICS & EM), Development of Incident Management Team (IMAT) , Education program and Annual updates	Yes		\$ 25,000.00	\$ 25,000.00	\$ 25,000.00
Development and execution of Table-Top, Functional, and Full Scale Exercises	Yes		\$ 27,000.00	\$ 27,000.00	\$ 27,000.00
		\$212,000.00	\$105,333.33	\$131,833.33	\$151,833.34
				Total GRC	\$ 601,000.00

TABLE 5 - OPEX BUDGET OVERVIEW

Appendix A

San Jose Equity Atlas - Race

Each scored category represents 20% of the 1,013,337 people in San Jose census tracts. The scores and percentages below indicate the people of color in the area's population:

- 5 = 92.4% - 99.9%
- 4 = 83.3% - 92.3%
- 3 = 71.3% - 83.0%
- 2 = 56.1% - 71.1%
- 1 = 32.0% - 55.7%

Source: ACS 2021

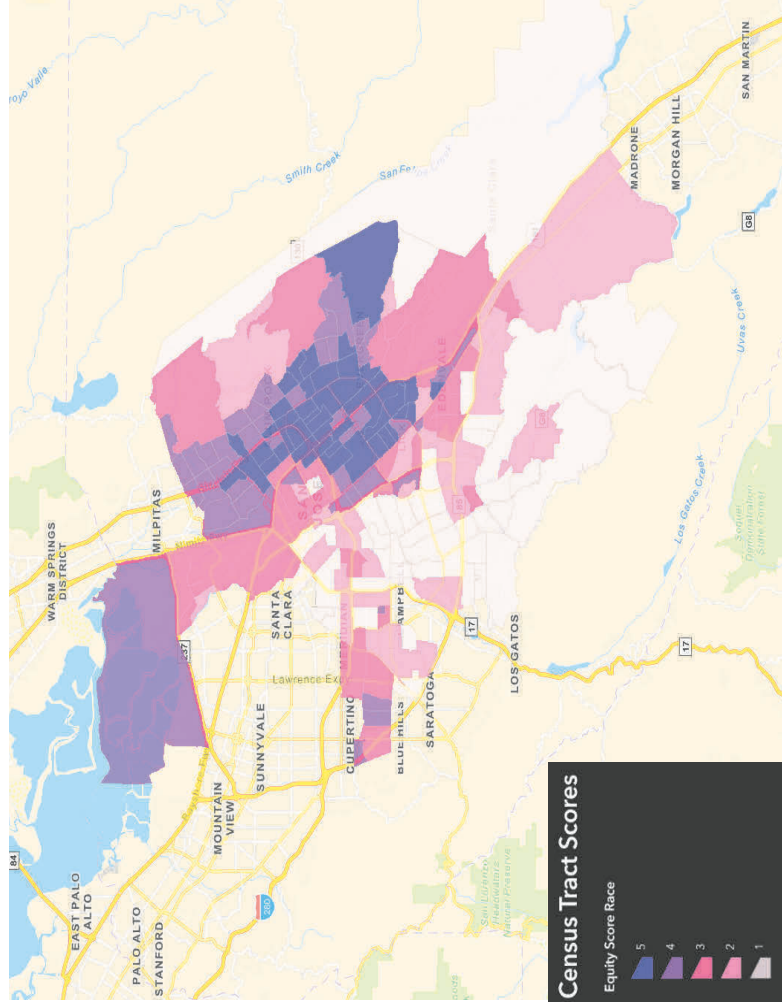


FIGURE 1

San Jose Equity Atlas - Income

Each scored category represents 20% of the 1,013,337 people in San Jose census tracts. The scores and percentages below indicate the median household income:

- 5 = \$33,973 - \$94,375
- 4 = \$94,583 - \$115,109
- 3 = \$117,361 - \$139,750
- 2 = \$141,184 - \$168,816
- 1 = \$168,846 - \$250,000+

Source: ACS 2021

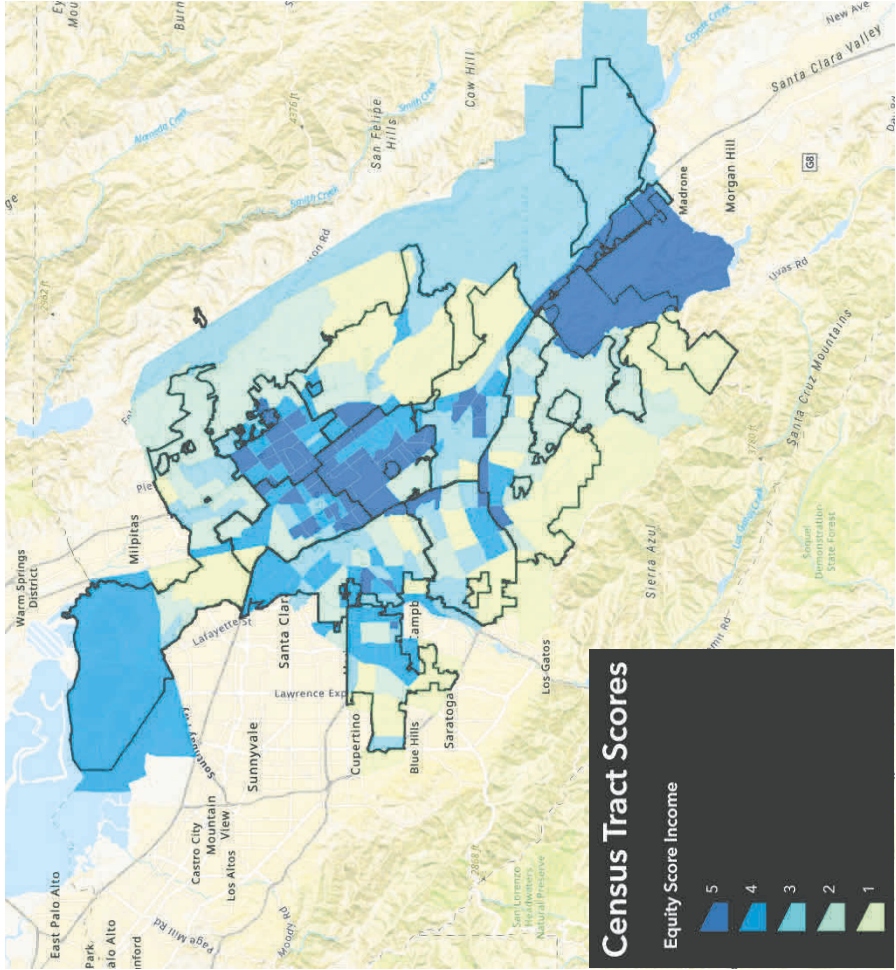


FIGURE 2

20-39

San Jose Equity Atlas - Combined Score (Race & Income)

The race and income tabs' combined score (range from 2 to 10) indicates that the higher the number, the higher the concentration of people of color and low-income households in the selected census tract.

Source: ACS 2021

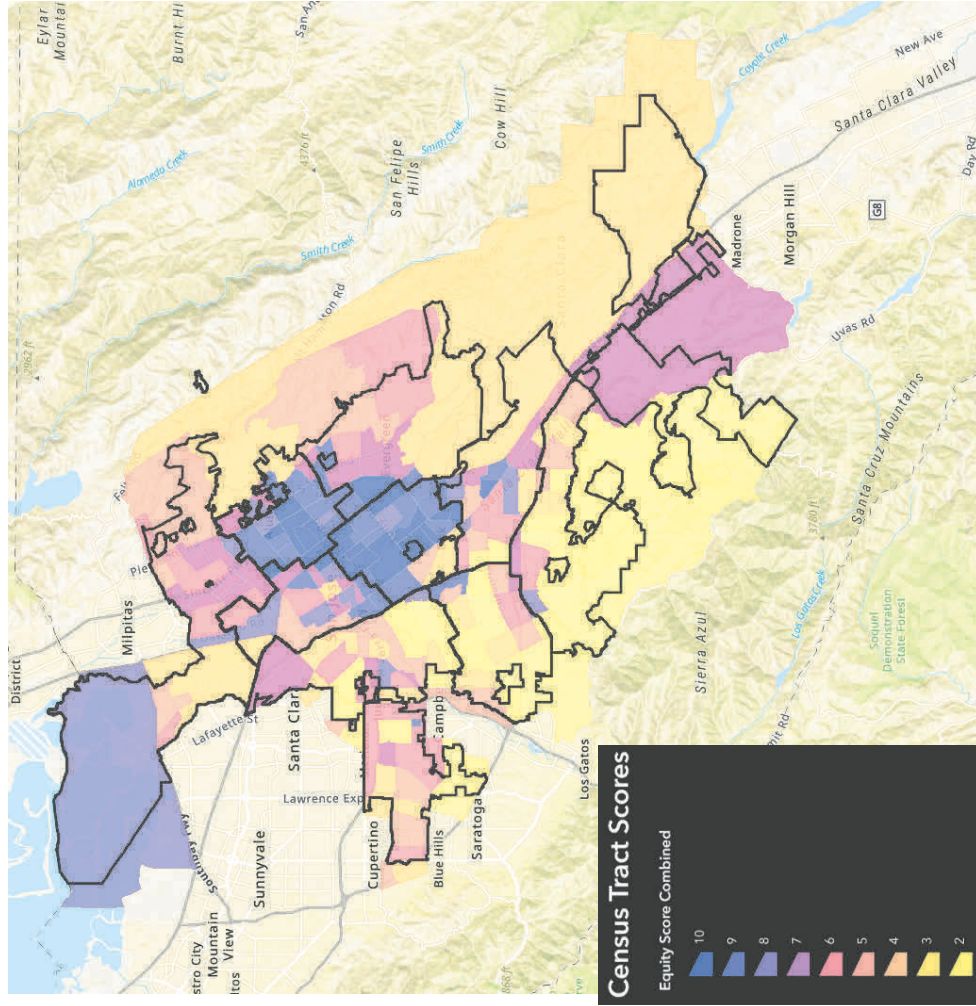


FIGURE 3

SJWC EJS Community Map

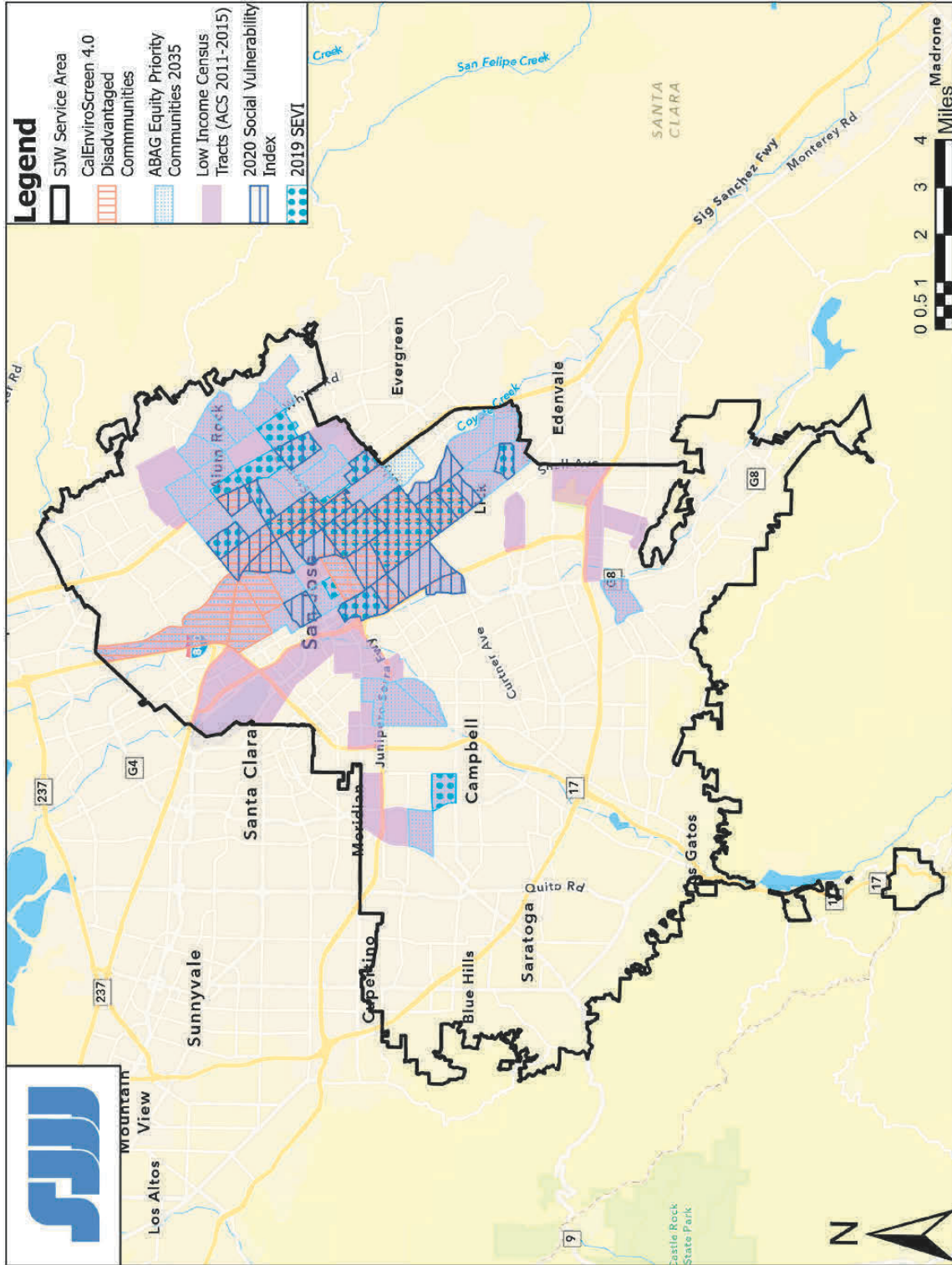
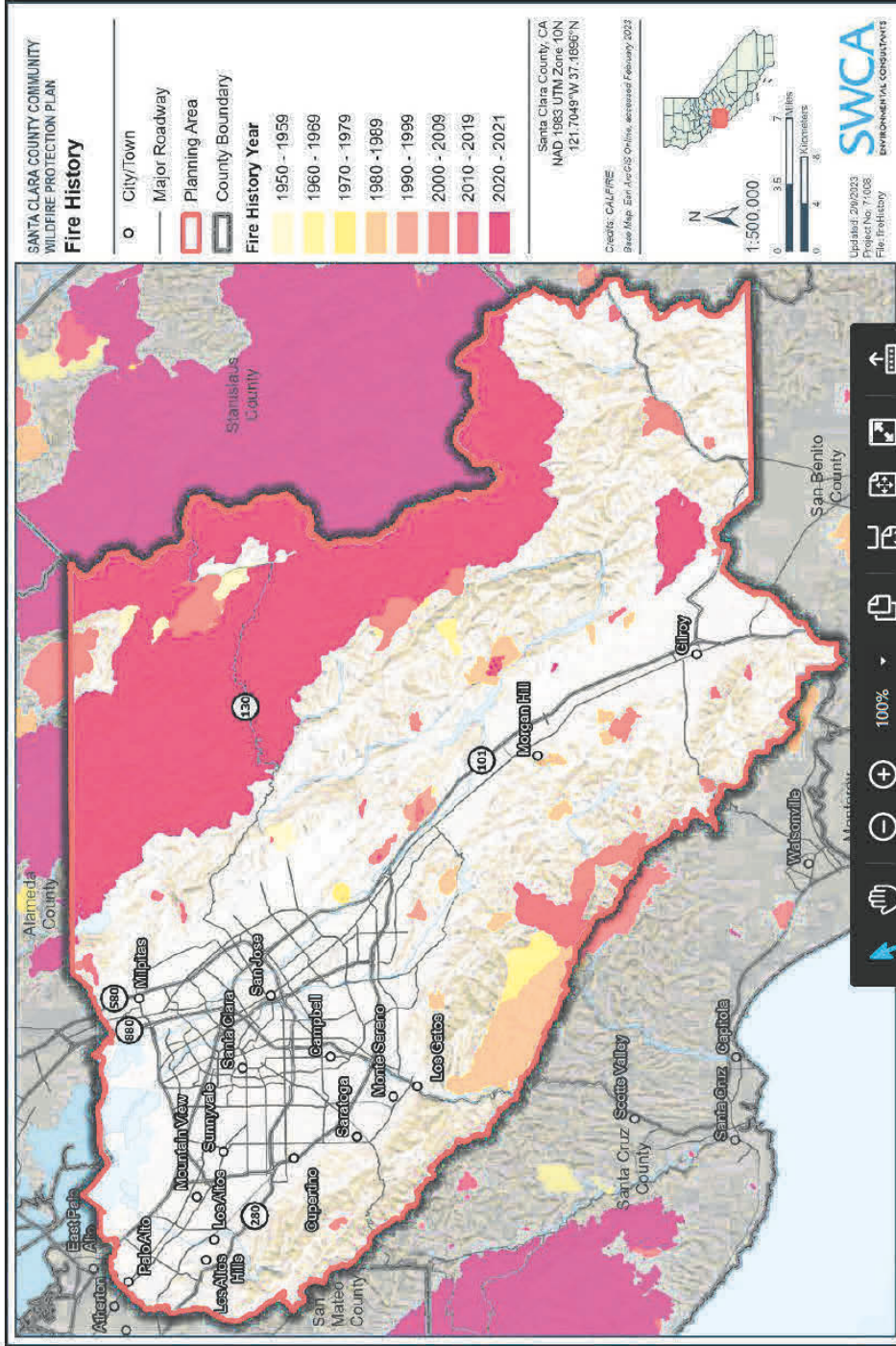


FIGURE 5

FIGURE 6 - RECENT FIRE HISTORY SCC



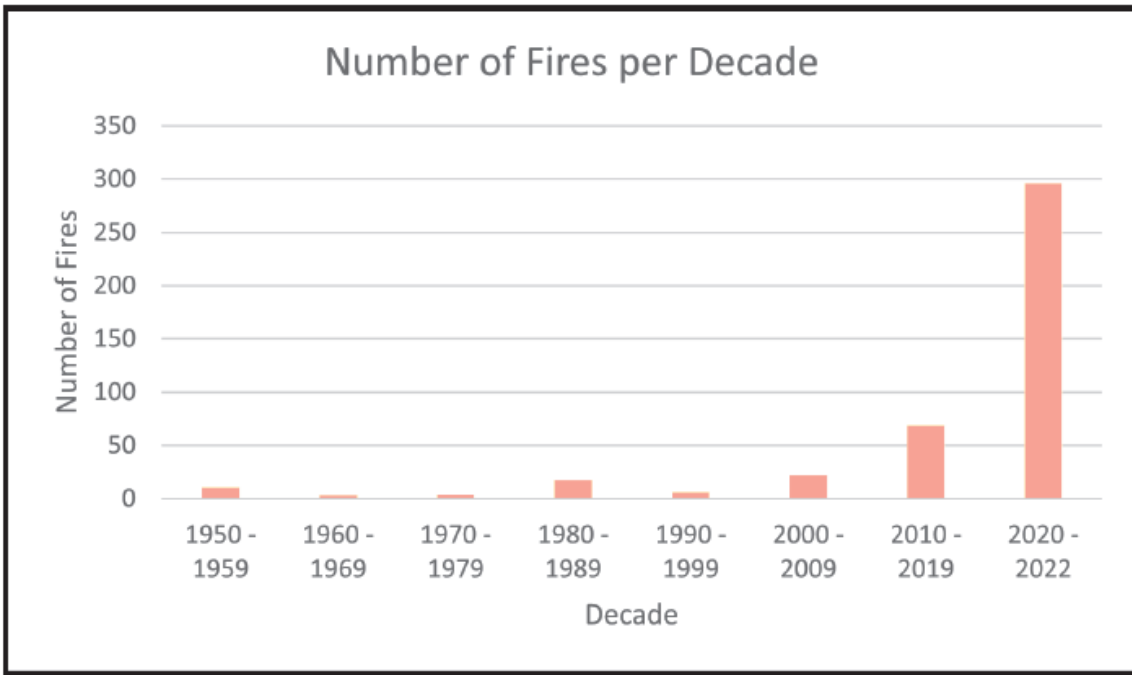


FIGURE 7 - FIGURE 2.10. DECADAL WILDFIRE FREQUENCY FOR SANTA CLARA COUNTY FROM 1950 THROUGH 2022, BASED ON AVAILABLE DATA.

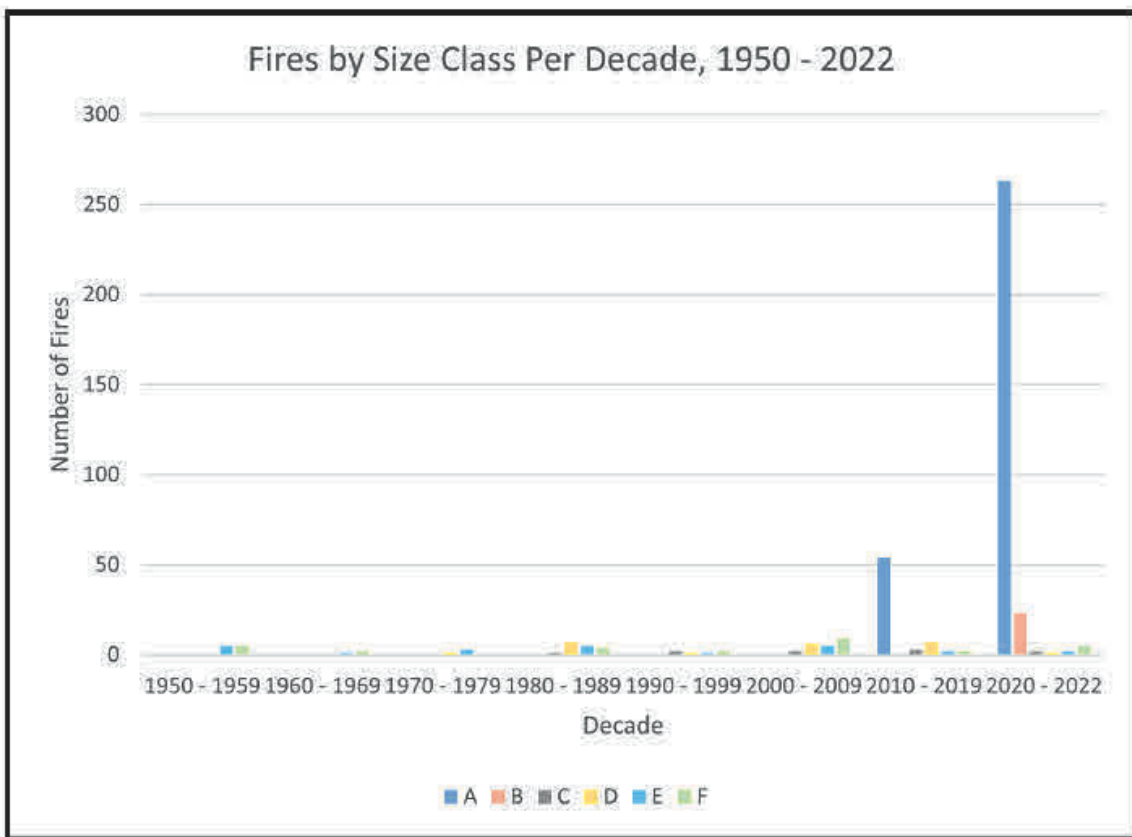


FIGURE 8 -DECADAL FIRE SIZE STATISTICS FOR SANTA CLARA COUNTY BASED ON FIRE HISTORY DATA FROM 1950 THROUGH 2022.

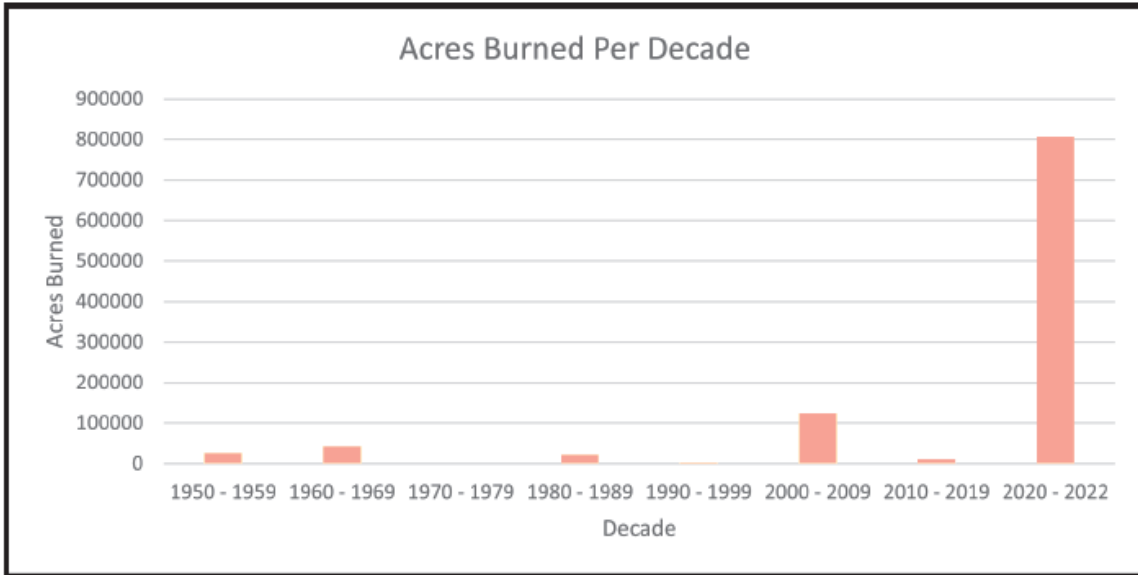


FIGURE 9 - DECADAL ACRES BURNED PER DECADE FOR SANTA CLARA COUNTY BASED ON FIRE HISTORY DATA FROM 1978 THROUGH 2022.

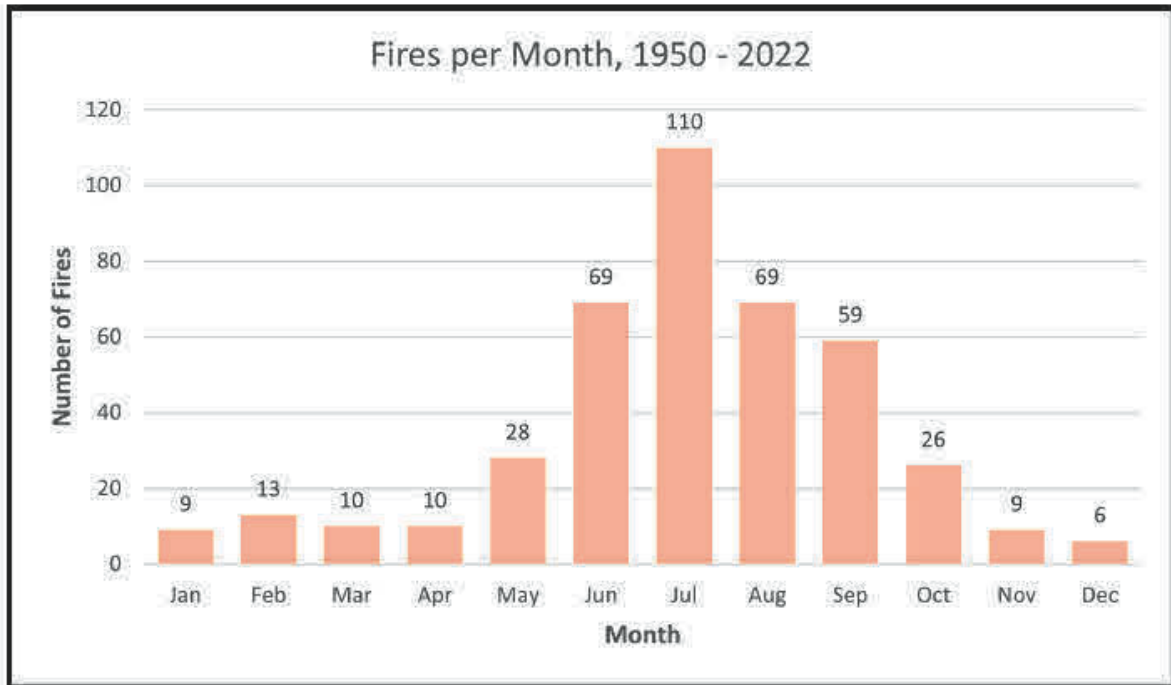


FIGURE 10 - NUMBER OF RECORDED FIRES PER MONTH IN SANTA CLARA COUNTY FROM 1978 THROUGH 2022

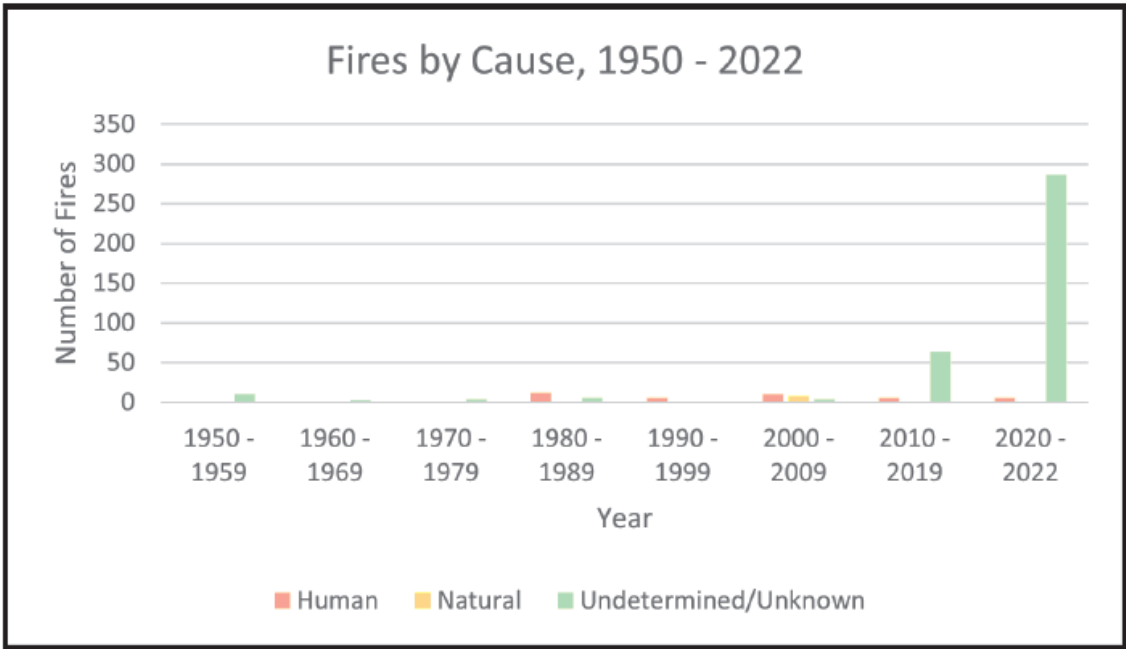


FIGURE 11 - CAUSE OF WILDFIRE IGNITIONS IN SANTA CLARA COUNTY FROM 2014 THROUGH 2022.

CHAPTER 21

SUPPLY COST FORECAST AND SPECIAL REQUEST 1

Prepared by Colby Sneed and Nanci Tran

A. Source Water Production Forecasts (Prepared by Colby Sneed)

SJWC's source of supply is made up of three major sources: purchased water, groundwater, and surface water. The first source to consider when forecasting production is purchased water due to contractual obligations under the Purchase Water Contract with our wholesaler, SCVWD. The forecasted purchased water quantities shown in Table 7-02C are the contracted amounts reduced by 23% by SCVWD in response to its Board of Director's ongoing call for conservation as a way of life. The second source to consider when forecasting production is surface water. As SJWC's lowest cost source of water, its production is maximized when available. The forecasted surface water quantities shown in Table 7-04C are based on the five-year average from 2019-2023. The 2023 annual total is annualized based on measured production through August and SJWC's release plan for the remainder of the year based on storage in Lake Elzman. The 2023 annualized projection is conservative and does not account for potential rain prior to the end of the calendar year. The final source of supply to consider is groundwater. Groundwater supplies act as the largest source of local water reserves, so it is only produced to meet demands once purchased water contracts have been met and surface water supplies have been maximized. The forecasted groundwater quantities shown in Table 7-01C are based on the difference between total demand projections and the projections for the other two sources (purchased and surface).

B. Full Cost Balancing Account (FCBA) (Prepared by Nanci Tran)

In Decision 22-10-005, the Commission authorized replacing SJWC's Incremental Cost Balancing Account (ICBA) for each supply cost with the FCBA. SJWC's current FCBA tracks the difference between adopted supply cost \$/CCF and actual supply cost \$/CCF. It tracks supply cost as a whole rather than individual source of supply. To calculate the supply cost \$/CCF, the sum of total purchased water cost, pump tax, and purchased power is divided by total production, which includes purchased water, pumped water, and surface water. The FCBA assumes that surface water has no costs. However, that is inaccurate, surface water does have a cost that is

directly linked to the production of surface water. The majority of surface water’s cost is the associated chemical and waste disposal.

C. Surface Water Costs (Prepared by Colby Sneed)

The estimated cost of surface water is the summation of the chemical cost and the waste disposal cost. The chemical cost is based on the forecasted quantity of water produced from Company surface water treatment plants shown in Table 7-04C, then applying the chemical cost per million gallons (see table below). The waste disposal cost is based on the forecasted quantity of water produced from Company surface water treatment plants shown in Table 7-D, then applying the waste disposal cost per million gallons (see table below).

YTD	Surface Water Chemical Costs	Surface Water Production (MG)	Surface Water Chemical Cost/MG
8/31/2023	\$479,257	3355.1	\$142.84

YTD	Surface Water Waste Disposal Costs	Surface Water Production (MG)	Surface Water Waste Disposal Cost/MG
8/31/2023	\$321,438	3355.1	\$95.81

Forecasted Chemical Costs and Waste Disposal Costs for Surface Water

	2023	2024	2025	2026	2027
Chemical \$/MG*	\$142.84	\$142.68	\$145.09	\$148.10	\$151.62
Waste Disposal \$/MG	\$95.81	\$95.970	\$97.32	\$99.34	\$101.70
Surface Water (MG)		2,583	2,583	2,583	2,583
Chemical Cost		\$368,537	\$374,776	\$382,546	\$391,625
Waste Disposal Cost		\$247,197	\$251,381	\$256,593	\$262,683

*2024-2027 \$/MG was forecasted by escalating 2023 at CPUC composite rate

D. Ground Water Costs (Prepared by Colby Sneed)

The estimated cost of groundwater is the summation of the extraction cost and the chemical cost for disinfection. The extraction cost is based on the forecasted quantity of water produced from Company wells shown in Table 7-01C, then applying the latest known pump tax rate which became effective July 1, 2023. It is anticipated that SJWC’s water wholesaler, Valley Water, will increase the groundwater extraction charge unit cost between the Application filing (January 2022) and the beginning of the Test Year (January 2025). SJWC requests that the groundwater extraction charge unit cost effective at the beginning of the Test Year be incorporated into rates to be determined in this GRC.

	2025	2025	2027
Pumped Water (MG)	14,926	14,937	14,946
Pump Tax per MG [2]	\$6,058	\$6,058	\$6,058
Total Pumped Water Cost	\$90,422,000	\$90,488,000	\$90,543,000

The chemical cost is based on the forecasted quantity of water produced from Company wells shown in Table 7-01C, then applying the chemical cost per million gallons (see table below).

YTD	Groundwater Chemical Costs	Groundwater Production (MG)	Groundwater Chemical Cost/MG
8/31/2023	\$187,031	5861.7	\$31.91

Forecasted Chemical Costs Ground Water

	2023	2024	2025	2026	2027
Chemical \$/MG*	\$31.91	\$31.87	\$32.41	\$33.09	\$33.87
Ground Water (MG)		16,227	14,926	14,937	14,946
Chemical Cost		\$517,217	\$483,802	\$494,196	\$506,231
Treated Tanks & Reservoirs					
Chemical Cost	\$111,135	\$111,009	\$112,888	\$115,229	\$117,963

*2024-2027 \$/MG was forecasted by escalating 2023 at CPUC composite rate

E. Purchased Water Costs (Prepared by Colby Sneed)

The estimated cost of purchased water is based upon the forecasted quantities of purchases as shown in Table 7-02C. The rate is based on the latest known purchased water rate which became effective July 1, 2023. It is anticipated that SJWC’s water wholesaler, Valley Water will increase the purchased water unit cost between the Application filing (January 2024) and the beginning of the Test Year (January 2025). The same method is employed for purchased recycled water. However recycled water forecasted is based on recycled water sales shown on Table 7-01B. SJWC requests that the purchased water unit cost effective at the beginning of the Test Year be incorporated into rates to be determined in this GRC.

Purchased Potable Water	2025	2025	2027
Purchased Water (MG)	17,356	17,356	17,356
Cost per MG [1]	\$6,411	\$6,411	\$6,411
Total Purchased Water Cost	\$111,268,000	\$111,268,000	\$111,268,000

Recycled Water	2025	2025	2027
Recycled Water (MG)	920	943	966
Cost per MG	\$5736	\$5736	\$5736
Total Recycled Water Cost	\$5,278,000	\$5,406,000	\$5,539,000

F. Power Costs (Prepared by Colby Sneed)

7. The estimated cost of purchased power (WP 8-05) is based on the quantities of water delivered, as shown in Table 7-01C, the projected kilowatt-hour usage associated with the water delivered, and the unit cost per kWh and kWh/Ccf is based upon the 2022 power cost for the water system. 2022 is the most current year where we have a full year data. Total purchased power cost for the test period is obtained by multiplying total projected kilowatt-hours with the 2022 power cost.

	2025	2025	2027
Estimated production in KCCF	46,611	46,623	46,636
Estimated kWh used based on 2022 recorded KWH/KCCF	34,146	34,156	34,165
Estimated Unit Power Cost (\$/kWh):	\$0.2508	\$0.2508	\$0.2508
Total purchased power cost:	\$8,563,000	\$8,565,000	\$8,567,000

H. Special Request 1 – Full Cost Balancing Account (Prepared by Nanci Tran)

As shown in Sections C, D, and E above, purchased water, pump tax, and purchased power make up the majority of water supply production costs, it is not inclusive of all costs related to water supply production. The FCBA is predicated on the fact that water production and source of supply mix are variable based on consumer demands and unpredictable hydrological conditions. Like the variable costs already included, groundwater and surface water cannot be produced without the addition of chemicals and removal of waste. To that end, SJWC respectfully requests that chemical and waste disposal be included in the FCBA as variable costs for surface water and ground water.

Between the period of January 1, 2022 – August 31, 2023, SJWC has produced more surface water than adopted and the associated supply cost savings of roughly \$8.4 million is refunded to customer through the FCBA. However, by doing so, SJWC’s chemical and waste disposal expenses have increased beyond what is authorized in and is not recoverable in rates. SJWC’s actual annualized 2023 chemical and waste disposal cost is roughly \$999,000 and \$509,000 respectively. The authorized 2023 chemical and waste disposal cost is roughly \$546,000 and \$160,000. That is an increase of \$802,000 in expense that SJWC has no way of recovering. Including chemical and waste disposal in the FCBA will ultimately incentivize SJW to continue to produce the lowest cost supply mix and minimize the water supply production cost impacts to its customers. SJWC has remained good stewards of the water supply by maximizing the production of low-cost, high-quality, local surface water only to be harmed financially for doing so. In the FCBA’s current state, it is financially disadvantageous for SJWC to maximize the production of surface water because there is no mechanism for recovery for the increase in chemical and waste disposal costs. Chemical and waste disposal costs are variable costs that are

directly linked to water productions. Including them in the FCBA will represent the true cost of water supply and allow SJWC to make optimal source of supply decisions to serve its customers and remain excellent stewards of water supply.

Chapter 22

Environmental and Social Justice

Introduction

In 2022, the California Public Utilities Commission (CPUC) adopted an updated Environmental and Social Justice (ESJ) Action Plan to serve as a roadmap for implementing the CPUC's vision to advance equity in its programs and policies for disadvantaged communities, Tribal lands, and low-income households and census tracts. At SJWC, we support the CPUC's efforts in this area and are excited about the many ways in which our company continues to be a force for good. Simply put, we believe there is no company without community. As trusted, passionate, and socially responsible professionals, it is core to who we are and what we do. Since established in 1866, SJWC has steadfastly remained committed to delivering life-sustaining, high-quality water and exceptional service while protecting the environment and enhancing the communities where we live, work, and serve.

Within SJWC's service area, over 42% of all customers fall within an ESJ community, amounting to over 76,000 services or approximately 427,000 people. To ensure reliability for these communities and all customers in SJWC's service area, the potable water distribution system is configured as an interconnected network of assets and pressure zones working together to wheel water throughout the system and meet customer demand. Interconnection between these pressure zones ensures capacity and operational flexibility to reliably meet customers' water demand and local fire flow protection needs, even in the face of natural disasters, drought, power outages, and other system emergencies (e.g main break or equipment failure). This network of pressure zones is therefore critical to providing a safe and dependable water supply to all customers. Moreover, any station improvements made within one part of the system not only increases the reliability and quality of the specific zones the improvement primarily serves, but also in all adjacent connected zones within the larger SJWC service area.

Definition of ESJ Communities

The CPUC's Environmental and Social Justice Action Plan defines ESJ communities as those where residents are predominantly communities of color or low-income; underrepresented in the policy setting or decision-making process; subject to a disproportionate impact from one or more environmental hazards; or likely to experience disparate implementation of environmental regulations and socio-economic investments in their communities.¹ Based on the CPUC's definition of ESJ communities, SJWC identified ESJ communities in its service area using the following data sets:

- Disadvantaged communities (DACs) as defined by Senate Bill 535 using CalEnviroScreen 4.0, which identifies communities most affected by various sources of pollution, and communities where people are especially vulnerable to the effect of pollution. This is defined as census tracts

¹ CPUC, Environmental & Social Justice Action Plan Version 2.0, April 7, 2022, pg. 21-22

receiving the highest 25% of overall scores in CalEnviroScreen 4.0; census tracts that score in the highest 5% based on cumulative pollution burden scores but do not have overall scores due to data gaps; census tracts identified in the 2017 DAC designation as disadvantaged, regardless of their CalEnviroScreen 4.0 scores; and lands under the control of federally recognized Tribes.²

- Tribal lands as defined by the U.S. Bureau of Indian Affairs (there are no federally recognized Tribal lands in the SJWC service area).³
- Low-income households, defined as those households participating in SJWC’s Customer Assistance Program (CAP) which provides a discount on the total water bill.
- Low-income census tracts, defined as census tracts with greater than 20% of their population under the Federal Poverty Level or median family income below 80% of state or metro area medians.⁴
- Customers who have provided SJWC with documentation from a medical provider of chronic health conditions which require water service. These Health Alert customers do not have service discontinued for nonpayment.
- Association of Bay Area Government (ABAG) 2035 Equity Priority Communities.⁵
- Centers for Disease Control and Prevention and Agency for Toxic Substances and Disease Registry 2020 Social Vulnerability Index (SVI).⁶
- California Public Utilities Commission (CPUC) Socioeconomic Vulnerability Index (SEVI).⁷

Communities with Access and Functional Needs (AFN) are important members of ESJ communities; however, datasets which include all individuals with AFN are not presently available. AFN populations include those who live with developmental or intellectual disabilities, physical disabilities, chronic conditions, injuries, limited English proficiency or who are non-English speaking, are older adults, children, people living in institutionalized settings, or those who are low-income, homeless, or transportation disadvantaged. Some of these populations are represented in the ABAG 2035 Equity Priority Communities, SVI, and SEVI datasets. As more data becomes available for the communities with AFN, SJWC will incorporate that into the ESJ community definition for the service area. While our definition of ESJ communities and our counts of service lines rely heavily on datasets discussed above, SJWC is committed

² California Office of Environmental Health Hazard Assessment, SB 535 Disadvantaged Communities, <https://oehha.ca.gov/calenviroscreen/sb535>

³ US Department of the Interior Indian Affairs, Branch of Geospatial Support, <https://www.bia.gov/bia/ots/dris/bogs>

⁴ Santa Clara County Public Health Department, Low Income Census Tracts (Poverty Zone), <https://data-sccphd.opendata.arcgis.com/datasets/sccphd::low-income-census-tracts-poverty-zone/about>

⁵ ABAG, Equity Priority Communities – Plan Bay Area 2050, <https://opendata.mtc.ca.gov/datasets/MTC::equity-priority-communities-plan-bay-area-2050/about>

⁶ Centers for Disease Control and Prevention/ Agency for Toxic Substances and Disease Registry/ Geospatial Research, Analysis, and Services Program. CDC/ATSDR Social Vulnerability Index 2020 Database California. https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html. Accessed on 3/3/2023.

⁷ CPUC, 2019 Annual Affordability Refresh, <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/affordability/2019-annual-affordability-report>

to prioritizing ESJ communities not only based on these datasets but also based on customer feedback and our customer service and field staff’s daily interactions in the community.

A map showing ESJ communities in SJWC’s service area is presented in Figure 1.⁸

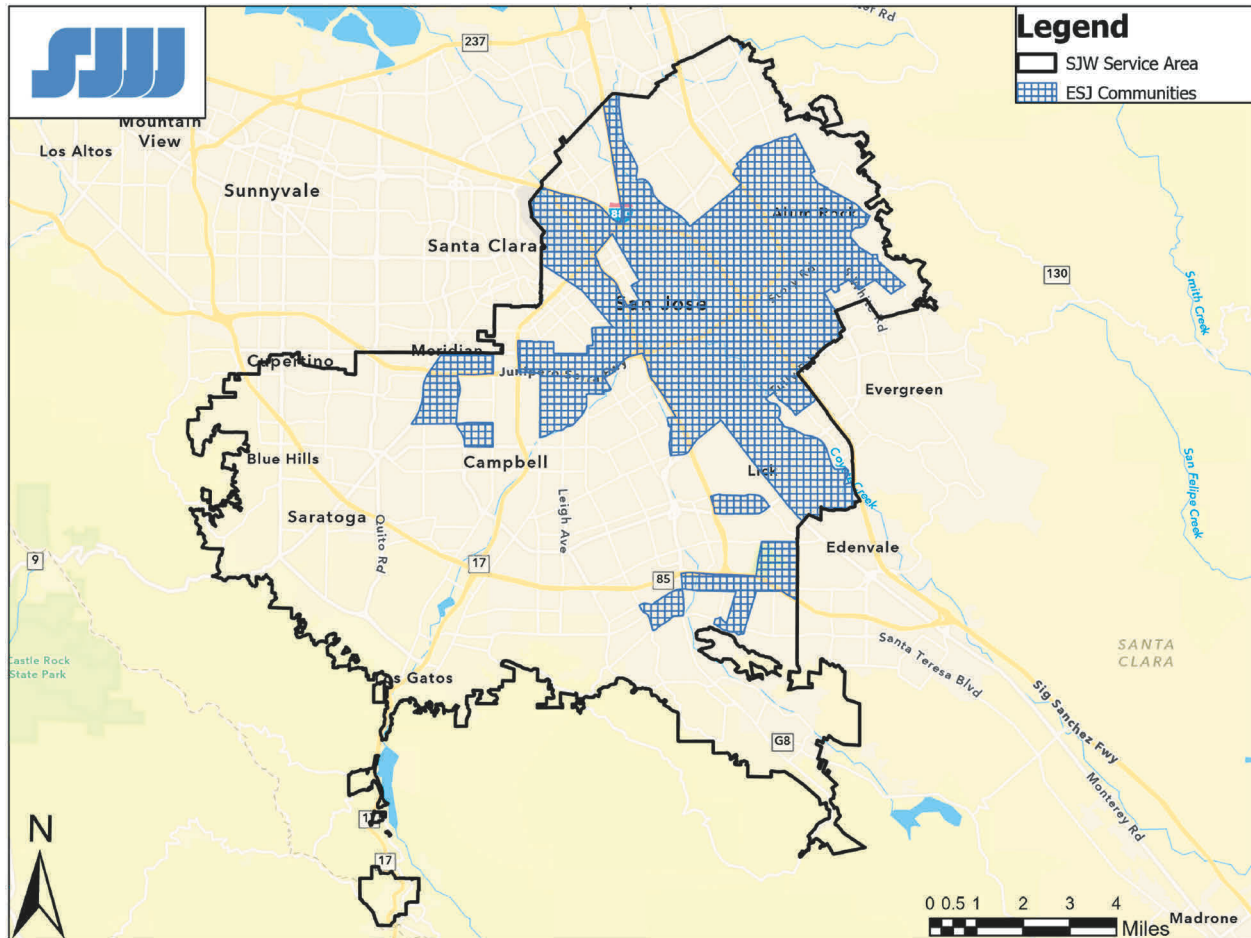


Figure 1. Map of ESJ Communities in SJWC Service Area

⁸ Individual households, CAP customers and health alert customers are not represented in the map for privacy reasons.

Action Plan Goals

The CPUC's ESJ Action Plan lists the following goals which outline the broad vision and steps the CPUC will take to ensure equity in its programs and services.

- Goal 1: Consistently integrate equity and access considerations throughout CPUC regulatory activities.
- Goal 2: Increase investment in clean energy resources to benefit ESJ communities, especially to improve local air quality and public health.
- Goal 3: Strive to improve access to high-quality water, communications, and transportation services for ESJ communities.
- Goal 4: Increase climate resiliency in ESJ communities.
- Goal 5: Enhance outreach and public participation opportunities for ESJ communities to meaningfully participate in the CPUC's decision-making process and benefit from CPUC programs.
- Goal 6: Enhance enforcement to ensure safety and consumer protection for all, especially for ESJ communities.
- Goal 7: Promote high road career paths and economic opportunity for residents of ESJ communities.
- Goal 8: Improve training and staff development related to environmental and social justice issues within the CPUC's jurisdiction.
- Goal 9: Monitor the CPUC's environmental and social justice efforts to evaluate how they are achieving their objectives.

The following subsections discuss SJWC's role in supporting Goals 1 through 8 through SJWC's Capital Improvement Program (CIP) and other programs. Goal 9 is internal to the CPUC, and SJWC stands ready to assist as needed.

SJWC's CIP projects increase investment in clean energy resources, improve access to high-quality water service, increase climate resiliency, and promote economic and workforce development opportunities. Key examples of CIP projects that benefit ESJ communities are highlighted in the following subsections. Additional details regarding CIP projects can be found in the project and program justifications of Capital Improvement Project and Program Justifications and the proposed 3-year CIP Budget.

Outside of the CIP associated with the GRC, SJWC has additional initiatives that support Action Plan goals (discussed in SJWC's Enterprise Asset Management Plan and SJW Group's Sustainability Report). These other initiatives include, but are not limited to, advanced metering infrastructure (AMI), watershed stewardship, and wildfire management.

Integrate Equity and Access Considerations in Regulatory Process

Goal 1: Consistently integrate equity and access considerations throughout CPUC regulatory activities.

This is a CPUC goal; however, SJWC is committed to doing its part to further the CPUC's efforts in this area. To this end, SJWC implemented several CPUC programs that touch on this goal including a Customer Assistance Program, tiered residential rates to encourage and reward customers who conserve water, and multi-language services to assist all customers when they contact the company.

Increase Investment in Clean Energy Resource

Goal 2: Increase investment in clean energy resources to benefit ESJ communities, especially to improve local air quality and public health.

The 3-year CIP Budget and Capital Improvement Project and Program Justifications include numerous SJWC projects and programs that support investment in clean energy resources, and both directly and indirectly benefit ESJ communities by improving air quality and public health. Examples are provided below.

Solar Systems (Index #5575, 6121, 6131, 6191, 6193, 6194, 6198, 6199, 6203)

SJWC is advancing new solar systems at the 110 West Taylor, Three Mile, Franciscan, Belgatos, Columbine, Dow, McKean, Will Wool, and Santa Rosa stations. The solar systems will generate renewable energy for use at these stations and offset use of energy from the grid, which is not fully sourced from 100% renewable energy.

Backup Energy Storage Systems (Index #6189, 6263)

SJWC plans to replace large diesel-powered standby generators at Williams and Three Mile stations with backup energy storage systems, also referred to as batteries. Like diesel-powered standby generators, backup energy storage systems provide resiliency against grid power outages while reducing GHG emissions that are typically associated with diesel fuel deliveries and consumption of diesel fuel. Three Mile station is located adjacent to an ESJ community and therefore the installation of a backup energy storage system at this facility will eliminate emissions that otherwise would have the potential to negatively impact these customers. Also, in conjunction with the solar system installation at Three Mile station, the backup energy storage system could be fully powered by renewable energy. When solar power is not available, SJWC will source its grid energy from a Community Choice Aggregator (CCA) to ensure 100% of the power used is generated from carbon-free sources and about 40% is generated from renewable sources.

Fleet Vehicle Electrification (Index #6133)

SJWC plans to continue advancing the electrification of its fleet by replacing gas-powered vehicles with electric vehicles to meet SJWC's sustainability goal of reducing carbon emissions by 50% from 2019 to 2030 and adhere to California regulations that ban the sale of internal combustion engine vehicles after 2035. The electrification of SJWC's vehicle fleet will improve local air quality for all customers, including ESJ communities.

Hydro Turbines (Index #5282, 5301, 6039)

SJWC is advancing the design and permitting of new hydro turbines as part of larger pump station projects at More, Bascom, and Sunol stations. These hydro turbines will be used to harvest excess pressure when water is moved between pressure zones via pressure reducing valves. Electricity that is generated through the hydro turbines will be tied into the grid via the utility's electrical panel. The hydro turbines will improve SJWC's energy efficiency and decrease power drawn from PG&E's grid, which benefits all customers, including ESJ communities.

Improve Access to High Quality Water Services

Goal 3: Strive to improve access to high-quality water, communications, and transportation services for ESJ communities.

The 3-year CIP Budget and Capital Improvement Project and Program Justifications discuss various SJWC projects and programs that support investment in high-quality water service for ESJ communities. Examples of these projects are provided below, with additional details in the Budget and respective justifications.

Chloramination Systems (Index #5579, 5301, 5576, 5732, 5211)

SJWC plans to design, permit, and construct onsite chlorine generation and chloramination dosing systems at its 12th Street, Bascom, Cottage Grove, Gish, and Mabury stations, which serve groundwater to ESJ communities. The chloramination systems will allow SJWC to transition to chloramine disinfectants and improve its ability to maintain stable disinfectant concentrations in the drinking water system. In addition, chloramination systems will reduce the formation of disinfection byproducts that can lead to taste and odor issues. These chloramination projects will improve the quality, safety, and taste and odor of water served to ESJ communities.

Removal of Potential Lead Service Lines (Index #28)

SJWC plans to reduce its inventory of potential lead service lines (includes partial lead service laterals and service lines constructed of an unknown material) through planned service replacements connected to the main replacement program and individual inspections and replacements to achieve complete elimination by 2030. SJWC's main replacement program for 2024 through 2026 will replace about 72 miles

of pipelines and 988 potential lead service lines from its inventory, which represents over a 20% reduction in the current population of potential lead service lines. Most of these potential lead service lines are in ESJ communities; therefore, the elimination and replacement of these service lines will reduce the risk of lead exposure for these vulnerable populations.

PFAS Treatment Systems (Index #6122, 6265)

SJWC plans to install ion exchange (IX) treatment systems to remove per- and polyfluoroalkyl substances (PFAS) from groundwater detected in drinking water wells at Williams, Willow Glen, and Malone Stations, which directly serve groundwater to ESJ communities. As groundwater supplies from Williams, Willow Glen, and Malone Stations may be used elsewhere in the distribution system, many additional customers will benefit from the IX treatment systems and improved water quality.

Miguelito Station Tanks (Index #5209)

The existing earth embankment reservoirs at SJWC's Miguelito Station are planned for replacement with two 0.8-million gallon, pre-stressed concrete water storage tanks. The tanks will provide water storage for communities on the east side of San Jose in Alum Rock, which include several ESJ communities. Construction of the new tanks will resolve structural, seismic, water quality, and sanitary issues associated with the old earth embankment reservoirs.

Cambrian Station Tanks (Index #5280)

The existing earth embankment reservoirs at SJWC's Cambrian Station are planned for replacement with two 8-million-gallon, pre-stressed concrete water storage tanks. The tanks will provide water storage for over 238,000 residents including much of San Jose's downtown region, which include a number of ESJ communities. Construction of the new tanks will resolve structural, seismic, water quality, and sanitary issues associated with the old earth embankment reservoirs.

Fluoridation

SJWC has been working with interested parties including the Health Trust and the County of Santa Clara to fluoridate a portion of its water system. Fluoridation has been described as one of the top 10 public health achievements of the 20th century. Numerous studies have shown a positive correlation between tooth decay and an optimal dose of fluoride in the drinking water supply. ESJ communities often benefit from fluoridation as they have less access to preventative dental care.

The initial fluoridation system will be constructed at SJWC's McLaughlin Station. This facility was identified by the Health Trust and the County of Santa Clara as one where fluoridation would provide significant benefit to residents who are challenged with access to adequate dental care. These organizations will pay for the initial capital and provide for one-year of operations and maintenance (O&M) costs. SJWC will then take responsibility for future O&M and replacement of the fluoridation system. SJWC anticipates completing this project in 2024 and will continue to work with these organizations to evaluate future

fluoridation facilities throughout the distribution system that provide the most benefit for residents who may not have access to adequate dental care. This partnership demonstrates SJWC's commitment to improving access to high quality water services in ESJ communities.

Emergency Water Distribution Unit (Index #6321)

The purchase of an Emergency Water Distribution Unit (EWDU) fully supports the delivery of water to ESJ communities during and after water disruptions due to storms, natural disasters, or other infrastructure-crippling emergencies. The unit allows for rapid response and enables the distribution of drinking water anywhere in the service area for thousands of people. The use of an EWDU also has a direct impact on the environment, with the possibility of reducing the number of water bottles traditionally delivered during outages. The unit is designed to fill a variety of water containers, which is critical because meeting the needs of those with Access and Functional Needs (AFN) is a key requirement.

Community Outreach and Education Programs

SJWC conducts community outreach to educate vulnerable communities about water safety and hygiene practices. By raising awareness about waterborne diseases, proper water storage, and purification methods, SJWC empowers individuals to maintain high-quality water standards even in challenging circumstances.

SJWC will be working on establishing reliable communication channels specifically designed for vulnerable communities. Currently, SJWC utilizes its website portal to inform ESJ community members of outages in their area. SJWC also communicates via social media for maximum messaging distribution. Lastly, SJWC is implementing a new Emergency and Customer Mass Notification System to provide updates on emergency situations, water distribution points, and other relevant information. The system allows for the delivery of phone messages, text messaging, and e-mail. These methods and channels ensure that vulnerable populations have access to critical information during emergencies.

SJWC has strong partnerships with local government, private and non-profit organizations to ensure that high-quality water and communication resources are readily available to vulnerable communities. By leveraging existing community networks, SJWC can effectively reach those who are most in need and establish sustainable solutions for long-term resilience.

SJWC also considers language and accessibility barriers. SJWC's Communications Department and Customer Service Department prioritize language accessibility by providing information and resources in multiple languages commonly spoken within vulnerable communities. Additionally, ensuring physical accessibility to water distribution points and communication centers for individuals with disabilities is crucial to ensuring equitable access during emergencies.

Emergency Preparedness Planning

Emergency management at SJWC uses a community approach for preparedness planning, which involves collaboration with agencies representing vulnerable communities during the planning and decision-making processes. By including their perspectives and experiences, SJWC continues its ongoing effort to develop more effective emergency preparedness plans that specifically address the unique needs of ESJ communities.

As SJWC continues to update and standardize its emergency management policies and procedures, it will continue developing relevant guidelines that reflect the unique nature of public engagement during disaster response. Public engagement is not limited to traditional one-way outreach, nor is it limited to the general public. Rather, engagement includes providing opportunities for all community voices and concerns to be considered.

Customer Assistance Programs

Beyond capital investments defined in the 3-year CIP Budget, SJWC's parent company, SJW Group, has a formalized Human Right to Water Policy. The policy affirms SJWC's belief that everyone should have access to clean and reliable water at just and reasonable rates that accurately represent the cost of treating and delivering high-quality water.

SJWC is committed to being responsible stewards of customer dollars and keeping costs down while also investing appropriately in its water systems to ensure quality and reliability for customers of all income levels, now and for future generations. These consistent, incremental investments in infrastructure blunt the costs and rate impacts for customers. SJWC is also adapting several programs to ensure equitable delivery of water service, such as:

- Special programs during COVID-19
- Tiered rates to promote conservation
- Customer assistance programs
- Investment in its communities

SJWC continues to advocate for state and federal funds and programs to assist low-income customers with payment of their water bills. Several programs exist including the American Rescue Plan Act, the Low Income Household Water Assistance Program, and the Emergency Rental Assistance Program. Funding from these programs has already been secured to relieve some customer arrearages and SJWC continues to seek ways to address water affordability, create equity at the local level, and assist customers.

Increase Climate Resiliency

Goal 4: Increase climate resiliency in ESJ communities.

The 3-year CIP Budget and Capital Improvement Project and Program Justifications discuss various SJWC projects that support investment in climate resiliency for ESJ communities by reducing GHG emissions, protecting local ecology, and promoting alternative sources of water supply. Examples of these projects

are provided below, with additional details in the Budget and respective justifications. Solar systems, backup energy storage systems, fleet vehicle electrification, and hydro turbine projects previously mentioned under Goal 2 also contribute to Goal 4 by reducing GHG emissions.

Groundwater Well Blowoff Systems (Index #5176, 5177, 5250, 5665)

SJWC plans to design and construct well blowoff systems at its Needles, Meridian, Williams, and 17th St. stations. The current configuration of these groundwater well stations result in direct discharges of well blowoff water to local creeks that flow through ESJ communities. These direct discharges can cause adverse impacts on the physical and chemical characteristics of surface waters and aquatic and riparian habitats. The erosion can increase suspended sediment in the river and modify the receiving waters' hydromorphologies. Improvements to system blowoff configurations will prevent riparian erosion and hydromodification by implementing flow dissipation, erosion control measures, and hydromodification-prevention measures to bring SJWC facilities in compliance with National Pollutant Discharge Elimination System (NPDES) General Permit provisions.

17th Street Station Retaining Wall (Index #5261)

The construction of a new retaining wall is planned at SJWC's 17th Street Station. Erosion from severe flood events in recent years has encroached into the station and threatens to undermine the well infrastructure at this critical groundwater production site. The proposed sheet pile wall will protect the wells and stabilize the bank of Coyote Creek, which runs through ESJ communities, preventing further erosion of the creek embankment.

Recycled Water Alignment D Phase 3 (Index #5628)

This proposed alignment will provide recycled water service to ESJ communities. Prospective customers for this alignment include five parks, three schools, a high-density residential development, a golf course, and the Mexican Cultural Heritage Center. Within SJWC's service area, common applications for recycled water include irrigation, commercial uses (dual-plumbed buildings), and industrial uses (cooling towers). Recycled water has fewer restrictions than potable water during droughts, and recycled water resources are more resilient to climate change than potable water resources.

Ensure Outreach and Public Participation

Goal 5: Enhance outreach and public participation opportunities for ESJ communities to meaningfully participate in the CPUC's decision-making process and benefit from CPUC programs.

SJWC is committed to ensuring customers in ESJ communities have meaningful opportunities to participate in the CPUC's decision-making process and programs and has a comprehensive communications and community engagement program designed to support this goal.

Rate Proceedings

CPUC's public participation hearings for SJWC's rate filings are now held virtually, increasing access to disadvantaged customers who may have historically had difficulties attending in-person meetings. SJWC's website provides customers with information on how to reach the CPUC if needed and encourages their involvement in the CPUC's decision-making processes.

Increased Outreach and Customer Protections

SJWC has taken several actions with respect to its operations, employees, and customers in response to the COVID-19 pandemic and other emergencies. Specifically, SJWC implemented several emergency customer protections as part of its Disaster Relief Plan. SJWC continues to work with those affected to offer flexible financial arrangements and other assistance as necessary.

Multilingual Notices and Forms

SJWC posts notices for GRC Applications in both English and Spanish on its website. More broadly, SJWC maintains many of its notices and forms in multiple languages to reach the ESJ communities it serves. For example, copies of the customer applications for its Customer Assistance Program are available in English, Spanish, and Vietnamese on its website. The Water Shutoff Policy is available in English and six other languages. Translation services are also available to customers that call SJWC's customer service center.

Community Activities

SJWC engages in numerous activities to help ESJ communities. For example, the company's Community Investment Committee, supported with shareholder funding, provides direct financial support to non-profit organizations delivering health services, youth and education enrichment programs, and arts and cultural opportunities. SJWC participates in volunteer opportunities throughout the year at events like Earth Day and Rotary Fall Festivals. SJWC also supports and encourages employees to give back to their community through a separate employee-led 501(c)(3) organization.

Customer Assistance Program

SJWC's Customer Assistance Program (CAP) is a CPUC-mandated program that provides a 15% discount on the total water bill to income-qualified customers. Income qualifications are the same as the California Alternative Rates for Energy Program (CARE). SJWC and PG&E currently conduct a quarterly data match to update enrollment. SJWC also conducts its own outreach about this program via multiple customer channels. These include the company website (sjwater.com), which features CAP on the home page (as well as its own landing page). Applications are available on the website in four languages. In addition, CAP information is distributed via a digital customer newsletter, bill message, social media, and bill inserts.

The digital version of SJWC’s bill inserts is translated into Chinese, Vietnamese, and Spanish and are available on the website. As of 3/21/2023, there are 28,112 customers enrolled in the CAP.

The success of SJWC’s CAP was lauded by San Francisco Bay Area Planning and Urban Research Association (SPUR), a regional planning organization, in a recent report comparing SJWC’s enrollment and customer access to information on SJWC’s website to local peers.

Low Income Household Water Assistance Program

Since its implementation in 2022, SJWC has actively promoted the Low Income Household Water Assistance Program (LIHWAP) which provides up to a \$15,000 benefit for qualifying customers to pay their water bill. SJWC promotes this program on its website in both Spanish and English and by pushing details out on social media, its customer newsletter, bill inserts and via a multi-lingual postcard (three languages). SJWC also ran a Google Ads campaign in 2023 with LIHWAP information to gain greater exposure.

Ensure Safety and Consumer Protection

Goal 6: Enhance enforcement to ensure safety and consumer protection for all, especially for ESJ communities.

SJWC is committed to providing safety and consumer protection for its ESJ communities through developing and maintaining security-related practices and procedures to address potential terrorist attacks and the purposeful damage or destruction of facilities and infrastructure that may affect water service. The security-related practices include completing a master security review and assessment, establishing standard designs for all security infrastructure, assessing supply, storage, pumping and building facilities on an ongoing basis, integrating improved security measures with other facility improvements, and investing in capital and operating expenditures for cybersecurity improvements. SJWC also engages and coordinates with multiple local agencies on utility infrastructure security, emergency response, and operational resiliency.

SJWC is working towards increasing security around water treatment plants, reservoirs, and distribution facilities to prevent unauthorized access and protect infrastructure from vandalism, theft, or sabotage. SJWC deploys security personnel, such as guards or patrols, to monitor access points, conduct regular inspections, and respond promptly to any security incidents or breaches. Projects for fencing, access control systems, and surveillance cameras are focused on deterring intruders and ensuring the physical security of critical water infrastructure. Many CIP projects, including those discussed in the 3-year CIP Budget and Capital Improvement Project and Program Justifications, involve facility security improvements such as improved fencing and gate infrastructure. These projects provide critical protection for the water infrastructure serving ESJ communities. Other current projects include the improvement of surveillance systems, including CCTV cameras, motion sensors, and alarm systems, which monitor critical water infrastructure and detect unauthorized activities or threats. Implementing these surveillance systems can provide real-time monitoring and alerts, allowing quick response and mitigation of security risks. Access

control measures, such as electronic keycards to restrict entry to authorized personnel only, are also under improvement. This prevents unauthorized access to water facilities and ensures that only trained individuals come into contact with the water supply. These projects also aim to maintain adequate lighting around SJWC water infrastructure and distribution points, as well-lit areas deter potential criminal activities and enhance the safety of all communities.

In addition to physical security improvements, SJWC is developing a comprehensive emergency security response plan that addresses security threats. These plans outline procedures for responding to security incidents, including protocols for communication, evacuation, and coordination with local law enforcement and emergency management. SJWC is also developing a training program for staff and emergency responders on security protocols, threat identification, and response to enhance its capabilities in securing water infrastructure and ensuring the safety of vulnerable communities. Engaging with vulnerable communities and raising awareness about the importance of protecting water infrastructure can foster a sense of ownership and vigilance. SJWC encourages community members to report any suspicious activities and provides channels for communication with authorities to enhance security and safety.

Promote Economic Opportunity

Goal 7: Promote high road career paths and economic opportunity for residents of ESJ communities.

SJWC is committed to seeking and maintaining business relationships to broaden its network of service providers through SJWC's Utility Supplier Diversity Program (USDSP). The CPUC goals shown in Figure 2 are aligned with the USDSP to encourage and recruit women, minority, disabled-veteran and lesbian, gay, bisexual and transgender (LGBT) business enterprises. SJWC uses the established goals from the CPUC to diversify engagement of businesses to participate in all aspects of supply chain procurement. The CPUC has a list of qualified diverse suppliers and requires certification as a Diverse Business Enterprise (DBE) by the Supplier Clearinghouse or, in the case of disabled-veteran owned businesses, the California Department of General Services.

SJWC recently submitted its 2022 Supplier Diversity Report and 2023 Plan to the CPUC. SJWC's Supplier Diversity efforts delivered outstanding results in 2022, marking the third consecutive year of improvements. The CPUC's metric includes a total diverse spend goal of 22%. SJWC exceeded the goal with an overall addressable spend totaling 35.7% or \$46.0M with diverse suppliers. Importantly, SJWC's spend in the key sub-goals for minority, women-owned, and disabled veteran-owned business enterprises all exceeded the CPUC's metrics.

OVERALL	MBE	WBE	DVBE
GOAL: 22%	GOAL: 15%	GOAL: 5%	GOAL: 1.5%
SPEND: 35.7%	SPEND: 27.8%	SPEND: 5.1%	SPEND: 2.6%



Figure 2. Summary of SJWC's Supplier Diversity Spend for 2022

Although DBEs are not included in the definition of ESJ communities, the ESJ Action Plan recognizes the USDP as a program upon which the ESJ Action Plan was built. For all CIP projects, including ones discussed in the 3-year CIP Budget and Capital Improvement Project and Program Justifications, SJWC evaluates opportunities for engagement with DBEs through vendor selection and supply chain procurement processes, thereby supporting the CPUC's broader equity objectives and investment in disadvantaged communities.

In addition to the USDP, SJWC Office of Emergency Management (OEM) has forged solid Public-Private Partnerships with other water utilities and public government agencies to assist and support economic opportunities in vulnerable communities. Incident recovery plans developed before and during incidents will identify and consider ESJ to ensure prompt economic recovery of those ESJ-identified communities. SJWC will provide the necessary support to the communities it serves, which is aligned with Goal 8 below.

Improve Training and Staff Development

Goal 8: Improve training and staff development related to environmental and social justice issues within the CPUC's jurisdiction.

While SJWC believes this goal to be internal to the CPUC, SJWC is undertaking several efforts on this front to improve training and staff development related to ESJ issues.

Diversity, Equity, and Inclusion

SJWC's work toward a more inclusive and diverse workforce remains a priority at all levels of the organization both in formal procedure-based ways and in more informal culture-shifting ways.

The Diversity, Equity, and Inclusion Council, created in 2020, continued to share personal stories across the organization. This brought to life for others the diverse experiences employees throughout SJW Group bring with them each day. Council meetings are facilitated directly by Chief Executive Officer Eric

Thornburg. Throughout the year, over half of the SJW Group Board of Directors attended at least one Diversity, Equity, and Inclusion Council meeting to share and hear directly from employees.

Furthermore, in partnership with Bias Sync, all employees were offered implicit bias education, with 90% of employees engaging in the training. Other educational efforts included thorough and consistent outreach to employees on heritage months, cultural holidays, and the importance of a workplace culture that values diversity, equity, and inclusion. This includes, but is not limited to, the sharing of regular articles in nationwide and state-specific communications to keep a consistent and current dialogue on the importance of diversity, equity, and inclusion.

SJWC's hiring team examined their procedures for structural improvements, which included a review of all job descriptions for potential bias. Examples include removing the requirement of a college-level education when experience in lieu of education could be satisfactory, and physical requirements (i.e., lifting) for office-based jobs. Additionally, the group reviewed recruitment efforts to ensure opportunities are posted to a diverse array of job boards.

At the corporate level, SJW Group values diverse perspectives and will continue to seek board member representation from underrepresented individuals, defined as individuals who self-identify as Black, African American, Hispanic, Latino, Asian, Pacific Islander, Native American, Native Hawaiian or Alaska Native, or who self-identify as gay, lesbian, bisexual or transgender. SJW Group was recognized by 50/50 Women on Boards Gender Diversity Index 2021 as one of just 7% of Russell 3000 companies considered gender balanced.

Emergency Management

In 2023, SJWC OEM started the revision of its Emergency Response Plan and Emergency Management program to incorporate ESJ-related responsibilities for three key leadership positions:

- Incident Commander (IC): Ensure adequate resources are devoted to liaison staff to ensure ESJ issues receive appropriate attention.
- Public Information Officer (PIO): Ensure public information activities address multilingual and cultural issues and comply with accessibility policies. Conduct outreach to vulnerable populations during the emergency response in collaboration with the County Joint Information Center.
- Liaison Officer (LNO): Ensure ESJ considerations are addressed in a timely manner and briefed to the IC as necessary. Coordinate frequently regarding ESJ issues and outreach to vulnerable populations with the PIO.

In addition, SJWC plans to create an ESJ Response Facilitator position as part of the SJWC Incident Management Team (IMT). The ESJ Response Facilitator would ensure that ESJ is incorporated into response activities by coordinating with stakeholders to elicit their input into the response process and facilitating greater inter- and intra-agency or governmental coordination to protect vulnerable

populations. Having dedicated support staff with a specific focus on ESJ issues and populations will greatly enhance SJWC's ability to ensure that the needs and concerns of the most vulnerable populations are being adequately included.

Corporate Social Responsibility

Outside of the CPUC's ESJ Action Plan, SJWC maintains a long tradition of supporting our local community. SJWC is more than a business that has served the community since 1866. We are a team of water professionals who care about the environment and the community where we live, work, and serve. SJWC believes that there can be no "company" without "community," and we are proud of our long-standing support of the community's social health and economic vibrancy. Our employees are blessed with a wealth of talents and a volunteer spirit that allows us to improve the lives of our customers, neighbors and employees.

San Jose Water supports a diverse array of causes and initiatives delivering education and youth enrichment opportunities, health and human services, and arts programs that enhance our everyday quality of life. We support organizations that embrace diversity and provide measurable outcomes for the communities where we do business.

Our comprehensive Corporate Social Responsibility Program includes:

- Shareholder funded support of non-profit organizations delivering the arts, human health services, and youth and education opportunities;
- An employee volunteer program;
- A [Supplier Diversity Program](#) seeking to incorporate women, minority, veteran, and LGBTQ-owned business enterprises in our supply chain;
- Our commitment on Environmental Stewardship as reflected in our [Corporate Sustainability Reports](#); and
- The [Employees Community Fund](#), a separate 501c3 organization which encourages employees to give back to their favorite causes.

Conclusion

SJWC embraces its responsibility to provide local communities with a reliable, affordable, and high-quality water source. Within SJWC's service area, over 42% of all customers fall within an ESJ community, amounting to over 76,000 services or approximately 427,000 people. As a water industry leader, SJWC is committed to being an ESJ leader by prioritizing diversity, equity, and inclusion in our core values, system operation and capital investments. Operating the system as an interconnected network offers the operational flexibility to reliably meet customer's water demands and local fire flow protection needs, even in the face of natural disasters, drought, power outages, and other system emergencies. Reframing the engineering approach through an equity lens promotes a holistic approach to SJWC's decision making and prioritization of system operation and improvements.

SAN JOSE WATER COMPANY

STATEMENT OF QUALIFICATIONS

Colby Sneed

My name is Colby Sneed and my business address is 1221A South Bascom Avenue, San Jose, California 95128.

I have worked at San Jose Water for 19 years and I am the Director of Operations and Treatment. In my current position, I am responsible for overseeing everything related to the production and transmission of potable water. This includes watershed management, source of supply selection, water treatment, pumping operations, water storage, SCADA, and control systems. Prior to becoming Director of Operations and Treatment, I held roles as the Manager of Operations and an Operations Supervisor.

I graduated with a Bachelor of Science Degree in Electrical Engineering from San Jose State University and a Master's in Business Administration from San Jose State University. I hold a D5 Water Distribution Operator certification and T3 Water Treatment Operator certification, both issued by the California State Water Resources Control Board.

I have not previously submitted testimony before the California Public Utilities Commission.

SAN JOSE WATER COMPANY

STATEMENT OF QUALIFICATIONS

Kurt Evert

My name is Kurt Elvert. My business address is 1221B South Bascom Ave., San Jose, California 95128.

I am the Manager of Field Service and Water Conservation for San Jose Water Company (SJW). In my current position, I am responsible for all aspects of the Field Customer Experience which includes: Field Service, Meter Reading, Conservation, and Meter Shop departments. I also oversee SJW's Recycled Water program. Additionally I am the acting Chair of California Water Association's (CWA) Conservation Subcommittee. I have held this position at SJW since 2019. Previously, I was the Water Conservation Supervisor (2014 – 2018). In that role I chaired Valley Water's Conservation Subcommittee and acted as the Administrator of the Bay Area Water Conservation Coordinators group. I joined SJW in 2014 as the Water Conservation Supervisor.

Prior to my employment at SJW, I was employed by Ewing Irrigation as a Residential and Commercial Sales Associate where I promoted and sold water efficient irrigation technology among other landscape products. I worked at Ewing for 18 months. Prior to Ewing Irrigation I managed the Northern California operations for a water conservation consulting firm Water Wise Consulting. I worked at Water Wise Consulting for 3 years. Prior to working at Water Wise Consulting I worked at Valley Water for 5.5 years in the Water Use Efficiency Unit, first as a student intern (18 months), then as a Water Conservation Specialist (4 years). I also worked for approximately 3 years during college as a Water Conservation Inspector for ConserVision Consulting, where I completed over 1,000 residential home conservation audits. I previously submitted testimony before the CPUC.

SAN JOSE WATER COMPANY
STATEMENT OF QUALIFICATION
David Fernandez, CEM, PMP

My name is David Fernandez. My business address is 1221A South Bascom Avenue, San Jose, California 95128.

I have been employed at San Jose Water Company (SJWC) since June 2022 and have been the Director of Emergency Management and Business Resiliency insert job title here since June 2022. In my current position, I am responsible for the strategy, planning, development, and execution of SJWC's emergency management and physical security programs, incident response and readiness, and business continuity. My role involves developing and maintaining all supporting programs, policies, and procedures, spanning emergency preparedness and response plans for natural disasters, contingency plans for potential interruption of critical organizational systems and functions, and response strategies for security incidents. Additionally, I coordinate various program development and training activities with departments, workgroups, key contractors, and partner first responder and mutual aid agencies at local, state, and federal levels.

I graduated from the National Graduate School of Quality Management with an M.S. in Quality Systems Management and a B.S. in International Business from San Jose State University. I am a FEMA's National Emergency Management Executive Academy graduate a Certified Emergency Manager from the International Association of Emergency Managers (IAEM). I hold Incident Management credentials from the U.S. Coast Guard as an ICS Incident Commander, Planning Section Chief, Liaison Officer, and Agency Representative. I am also a certified Project Management Professional (PMP).

I have not previously submitted testimony before the California Public Utilities Commission.

SAN JOSE WATER COMPANY

STATEMENT OF QUALIFICATION

BRIAN DUNBAR

My name is Brian William Dunbar. My business address is 1251 South Bascom Avenue, San Jose, California 95128.

I have been employed at San Jose Water Company (SJWC) since 9/25/2000 and have been the Director of Logistics and Purchasing since {insert date here}. In my current position I am responsible for overseeing the Logistics and Purchasing Department, Facilities Department, and Fleet Department. I started my career here at SJWC working as a DS worker repairing main and service leaks. After a year I transitioned to a DS and Operations supervisor. On weekends I oversaw the day to day running of the DS crews and responded to on call emergencies. The remainder of the time I worked in Operations overseeing the chlorinators, repair crews, operators, assisting with SCADA, and daily running of operations department and responding to emergencies. Over the next several years I assisted with implementation of the 1st work order management system here at SJWC, programing and implementation of the new SCADA system, and design and implementation of the new groundwater chlorination system. In 2013 I became the manager of

I graduated from San Jose State University with a BS in Environmental Studies in May of 1997 with a minor in Chemistry. I have a California Operators T3 and D4 certificate.

I have not previously submitted testimony before the California Public Utilities Commission.

SAN JOSE WATER COMPANY

STATEMENT OF QUALIFICATION

Curt Rayer

My name is Curt Rayer. My business address is 1221A South Bascom Avenue, San Jose, California 95128.

I have been employed at San Jose Water Company (SJWC) since February of 1995 and have been the Vice President of Operations since March of 2016. In my current position I am responsible for oversight, strategic development and compliance in utility operational areas including occupational health and safety, security, emergency preparedness, water distribution system maintenance and operations, water production and quality, water treatment and watersheds, backflow and cross-connection control, environmental compliance, materials procurement and stock room management, fleet and facilities management. Previous to my current role, I held increasingly responsible positions including Operations and Maintenance Supervisor, Superintendent of Operations, Manager of Operations, and Director of Operations.

I graduated from Menlo College with a Bachelor's of Science in Management in 2008 I received a Master of Public Administration from Golden Gate University in 2010. I am currently certified as both a Water Distribution D5 and Water Treatment T3 Operator through the California Department of Water Resources, Division of Drinking Water. I have also previously held certifications as both a Backflow Prevention Assembly Tester and Cross Connection Specialist through the California-Nevada Section of the America Water Works Association.

I have previously supplied written testimony to the California Public Utilities Commission.

David Mitchell

Education

MS, Agricultural and Natural Resource Economics, University of California, Berkeley, 1989

BS, Political Economy of Natural Resources, University of California, Berkeley, 1987

Years Experience

Thirty years of professional experience

Distinguishing Qualifications

- Founder and principal of economic consulting firm, M.Cubed
- Director of Research for the California Urban Water Conservation Council 1992-2007
- Thirty years of experience developing integrated water management plans for California's urban water suppliers
- Pioneered methods and analytical models now widely used to evaluate urban water conservation programs throughout California
- Lead economist for cost and finance studies of major environmental restoration initiatives, including the CALFED Bay-Delta Program, Bay Delta Conservation Plan, Lake Tahoe Environmental Improvement Program, and Santa Ana River HCP
- Extensive experience evaluating policies, programs, and natural phenomena impacting California's agricultural economy
- Adjunct Fellow Public Policy Institute of California

Relevant Experience

David Mitchell has been deeply involved in urban water conservation planning and evaluation since he became the California Urban Water Conservation Council's first Project Manager and Director of Research back in 1993. Serving for over 15 years in this capacity, he has had a direct hand in shaping many of the policies and technical resources now used to guide urban water conservation, including revisions to existing and creation of new urban water conservation Best Management Practices (BMPs), development of BMP implementation guidebooks, cost-effectiveness guidelines and planning models, conservation rate guidelines and revenue simulation models, and design and oversight of numerous water conservation program evaluation studies.

He has assisted the California Department of Water Resources with its conservation projections used in the California State Water Plan Updates, advised the CALFED Water Use Efficiency Program, provided technical support for the implementation of the 2009 and 2018 water conservation laws and regulations, and prepared the fiscal and economic impact analyses of the state's emergency regulations for urban water conservation implemented during the 2012-2016 drought.

Over the past several years, much of Mr. Mitchell's work has centered on the development of Excel-based models for quantifying water savings and economic performance of water conservation programs and regulations. Representative examples of his work are described below.

Representative Experience

San Jose Water Company Sales Forecasts

San Jose Water Company (2017 and 2020)

Prepared econometric-based sales forecasts for San Jose Water Company's 2017 and 2020 General Rate Cases.

California Water Service Sales Forecasts

California Water Service (2014-2021)

Prepared econometric-based sales forecasts for 24 service districts for California Water Service's 2015, 2018, and 2021 General Rate Cases.

California American Water Sales Forecast

California American Water Company (2019)

Prepared econometric-based sales forecasts for ten service districts for California American's 2019 General Rate Case.

California Water Service Long-term Demand Model

California Water Service (2019)

Developed long-term demand forecast and planning models for Cal Water's service districts and distribution systems. The models operate on an annual time-step over a 30-year planning horizon. Forecasts are disaggregated by district sub-system and customer class and generates alternative forecasts for wet, dry-year, and multi-dry year planning scenarios. Service growth forecasts either can be linked to regional planning agency population, housing, and employment growth forecasts or based on historical rates of service growth. Custom service growth forecasts can also be generated. Forecasts are dynamically adjusted for expected effects of planned conservation, water use efficiency codes and regulations, changes in the relative cost of water service, and changes in household income.

Alliance for Water Efficiency Sales Forecasting and Rate Model

Alliance for Water Efficiency (2008-present)

Developed Excel-based sales forecasting and rate design model that implements stochastic forecasting and Monte Carlo simulation as part of the Financing Sustainable Water initiative. The model enables analysis of consumption variability due to weather, drought/shortage, or other external shock; response in demand due to changes in rate design; development of drought-contingent rates; and assessment of financial risk and revenue sufficiency.

Alliance for Water Efficiency Water Conservation Tracking Tool

Alliance for Water Efficiency (2008-present)

The Water Conservation Tracking Tool, developed and maintained by M.Cubed, is an Excel-based model that can evaluate the water savings, costs, and benefits of conservation programs for a specific water utility or regional grouping of utilities. Using information entered into the Tool from the utility's system, it provides a standardized methodology for water savings and benefit-cost accounting. The model includes a library of pre-defined conservation activities from which users can build conservation programs. In addition to its economic analysis routines, the model includes an energy and GHG emissions impact module that tracks changes in energy use and GHG emissions associated with water conservation. The Tracking Tool is customizable to specific state water efficiency standards and codes.

Municipal Water Conservation Planning Tool

Texas Water Development Board (2018)

The Municipal Water Conservation Planning Tool was developed to assist Texas water utilities with their water conservation planning and reporting, and regional water planning groups with development of their municipal conservation water management strategies. It provides an accounting framework for projecting future conservation program costs and water savings as well as estimating the water savings from previous implementation of conservation measures. The model includes demographic and water demand data for 462 Texas municipal water utilities as well as a library of 512 pre-defined conservation measures that these water utilities can use to develop their conservation plans.

California Water Service Urban Water Management Plans

California Water Service (2016 and 2021)

Prepared urban water management plans for 25 water districts owned or operated by California Water Service. M.Cubed managed an interdisciplinary team and was responsible for all aspects of plan development, public outreach, and submittal. All 25 plans were developed and submitted to DWR on time and within budget. Each plan was deemed by DWR to have fully addressed California Water Code requirements for urban water management planning.

SAN JOSE WATER COMPANY

STATEMENT OF QUALIFICATIONS

JAKE WALSH

My name is Jake Walsh, and my business address is 1265 South Bascom Ave., San Jose, California 95128.

I have been a member of the San Jose Water Company team for over 18 years, currently holding the position of Assistant Chief Engineer, Planning. Responsibilities include leading efforts in planning, asset management, leak detection, and capital budgeting. A key component of my job is managing the annual Capital Improvement Program (CIP) budget to ensure that our assets are optimized in a way that balances cost, level of service, and risk.

Furthermore, I am responsible for the implementation of our robust Enterprise Asset Management (EAM) system, HxGN EAM, which plays a crucial role in our operations. My duties also include validating SJWC's annual water loss audits and formulating strategic water supply plans such as the Urban Water Management Plan and Water Supply Assessments. I also oversee a variety of special capital improvement projects from inception to completion, including the implementation of solar and energy storage systems, fleet electrification, and the replacement of large commercial and industrial compound water meters with more advanced ultrasonic meters.

I graduated with a Bachelor of Science Degree in Civil Engineering from San Jose State University and a Master's in Public Administration from the University of San Francisco. Professionally, I am a licensed Civil Engineer in California, a certified Project Management Professional, and a certified Water Audit Validator with the CA-NV Section of the American Water Works Association.

I have also prepared documentation and testimony for four General Rate Case applications and the Advanced Metering Infrastructure application with the California Public Utilities Commission. The capital budget and enterprise asset management plan submitted as Exhibit G were prepared under my direction.

SAN JOSE WATER COMPANY

STATEMENT OF QUALIFICATION

JOHN TANG

My name is John Tang. My business address is 110 West Taylor Street, San Jose, California 95110.

I have been employed at San Jose Water Company (SJWC) since June of 2004 and have been the Vice President of Regulatory Affairs and Government Relations since April of 2017. In my current position I am responsible for determining regulatory policies and developing regulatory strategies, directing and administering applications and filings with the California Public Utilities Commission (CPUC), and working with SJWC staff to ensure understanding of, and compliance with, CPUC rules and regulations. Previous to my current role, I held increasingly responsible positions in the areas of Government Relations, Community Relations, and Corporate Communications.

Prior to my time at SJWC, I was employed by FMC Corporation as a Remediation Engineer. In this role, I was responsible for managing the remediation of contaminated industrial facilities throughout the United States and Canada. The responsibilities included selecting, deploying, and managing multi-disciplined teams of specialists (legal, public relations, scientists, engineers, and accountants) to execute all phases of work, maintaining financial plans and cost controls, and representing the company with external stakeholders.

I graduated from San Jose State University with Bachelor's and Master's of Science degrees in Civil Engineering in 1994 and 1996, respectively. I received a Master of Business Administration from Columbia University in 2003. I am a licensed Professional Engineer in the State of California.

I have previously testified before the California Public Utilities Commission.

SAN JOSE WATER COMPANY
STATEMENT OF QUALIFICATION

NANCI TRAN

My name is Nanci Tran, and my business address is 110 West Taylor Street, San Jose, CA 95110. I'm am the Manager of Regulatory Affairs for San Jose Water Company. In my current position I am responsible for general rate case filings, rates, as well as tariffs and other compliance filings with the California Public Utilities Commission. I have provided rebuttal testimony on balancing and memorandum account on behalf of SJWC in the GRC Application A.21-01-003.

Before joining San Jose Water Company, I was employed as a Regulatory Affairs Specialist in Golden State Water Company. During my 15 year tenure at Golden State, I have prepared testimonies and rebuttal testimonies in various general rate cases (GRC). I have prepared testimonies on GRC sales forecast, rate design, Water Rate Adjustment Mechanism, mechanics of rate base, supply expense forecast, labor expense forecast and general office expenses.

SAN JOSE WATER COMPANY

STATEMENT OF QUALIFICATION

MOHAMMED G. (RALLY) ZERHOUNI

My name is Mohammed G. (Rally) Zerhouni. My business address is 110 West Taylor Street, San Jose, California 95110.

I have been employed at San Jose Water Company (SJWC, or Company) since January 2023. I serve SJWC as the Senior Vice President of Finance & Principal Accounting Officer. In my current position, I have the responsibility and oversight over the controllership organization, accounting and reporting of the Company's financial information in accordance with generally accepted accounting principles in the United States of America, the tax function, financial planning & analysis, and the internal control over financial reporting function.

Prior to joining SJWC, I held various leadership roles at Veolia (formerly SUEZ) leading up to the Chief Financial Officer of Veolia North America Regulated Water Utility Operations from December 2018 to January 2023. During my employment at Veolia, I was responsible for the Accounting & Finance of all regulated water utilities with operations in six states: New York, New Jersey, Idaho, Pennsylvania, Delaware, and Rhode Island.

Prior to my employment with Veolia, I spent fourteen years with PricewaterhouseCoopers LLP auditing and advising regulated utilities, publicly traded companies, and private companies in various accounting and reporting matters, including regulatory accounting matters. I also taught as an Adjunct Faculty for several years accounting courses at Franklin University.

I received a Bachelor's Degree in Accounting and a Master of Business Administration from Franklin University. I am a Certified Public Accountant and a member of the American Institute of Certified Public Accountants.

This is my first time testifying before the California Public Utilities Commission. I have previously testified before other state commissions such as the Idaho Public Utilities Commission and the New Jersey Board of Public Utilities.

SAN JOSE WATER COMPANY

STATEMENT OF QUALIFICATION

Ritu Mehta

My name is Ritu Mehta. My business address is 110 W Taylor St., San Jose, California 95110.

I have been employed at San Jose Water Company (SJWC) since 2012 and have been the Tax Director since 2015. In my current position I am responsible for managing income tax compliance and accounting.

I graduated from Michigan State University where I pursued Masters in Accountancy. I am Certified Public Accountant (CPA) in the State of California. Prior to joining San Jose Water Company, I worked at an accounting firm Mohler, Nixon and Williams which has since merged into Moss Adams .I also worked with Borders Group, Inc. (retail bookstore chain) for six years where I handled the income tax return filings.

I have not previously submitted testimony before the California Public Utilities Commission.

**SAN JOSE WATER COMPANY
STATEMENT OF QUALIFICATIONS**

STEPHANIE OROSCO

My name is Stephanie Orosco. My business address is 1265 South Bascom Avenue, San Jose, California 95128.

I am the VP of Human Resources for San Jose Water Company since April 2018 and CHRO for SJW Group as of October 2022. In my current position I am responsible for all human resources management programs in the areas of recruitment, employee selection, job analysis and classification, compensation, employee benefits, personnel records, Human Resources information systems, workers' compensation, training, and labor relations. I am a member of the negotiation committee for the Company during collective bargaining negotiations. Previously I was the Human Resources Director, where I was responsible for all of the activities listed above and supported the Vice President of Human Resources on matters pertaining to employee engagement, the Company's retirement program and employee relations. I joined San Jose Water Company in December of 2008.

I was employed by National Semiconductor from 2005 to 2008 as the Human Resources Business Partner for the Worldwide Sales organization. I was responsible for partnering at all organizational levels to define and implement HR strategies aligned with organizational objectives, managing staffing and performance improvement issues, overseeing leadership and management team development, compensation and incentive plans administration and facilitating global coordination efforts to improve customer response times and satisfaction for the Americas, Europe and Japan.

Prior to my employment at National Semiconductor, I worked for Applied Materials, IMPAC Medical Systems, Cambria Consulting and Cisco Systems serving in various Human Resources roles.

I am a graduate of Saint Mary's College with a Bachelor of Science Degree in Business Administration (Management).

I have served as co-chair as well as an Executive Committee member of Baywork for eight years.

I served as a board member for San Jose Conservation Corps and Charter School from 2011 to 2017.

I have previously submitted testimony before the California Public Utilities Commission.

SAN JOSE WATER COMPANY

STATEMENT OF QUALIFICATION

SUZANNE DELORENZO

My name is Suzanne DeLorenzo. My business address is 1221A South Bascom Avenue, San Jose, California 95128.

I have been employed at San Jose Water Company (SJWC) since March 21, 2022 and I am the Director of Water Quality. In my current position I am responsible for personnel and equipment involved in activities related to water quality monitoring and distribution system water quality including flushing and cross-connection control, and regulatory compliance. Prior to San Jose Water I was the Water Quality and Laboratory Supervisor at Passaic Valley Water Commission in Little Falls, NJ from 2020-2022 and the Water Quality and Conservation Manager at Clackamas River Water in Clackamas, OR from 2011-2020.

I graduated from Oregon Health & Science University with a PhD in Environmental Science and Engineering. I also have MS in Biomedical Science from the University of Medicine and Dentistry of New Jersey and a BS in Biology from Monmouth University.

I have not previously submitted testimony before the California Public Utilities Commission.