AGENDA
SAN ELIJO JOINT POWERS AUTHORITY
TUESDAY, MAY 18, 2021 AT 8:30 AM

The next regular meeting of the San Elijo Joint Powers Authority (SEJPA) will be on Tuesday, May 18, 2021 at 8:30 a.m., PST.

Pursuant to the State of California Executive Order N-29-20 and the amended County Health Orders, members of the public will only be allowed to participate in meetings telephonically.

This regular meeting of the San Elijo Joint Powers Authority can be accessed using the phone number listed below:

Dial-In Phone Number: 669-900-9128 Meeting ID: 931 1814 0740

Public Comments may be submitted via email to hackneyv@sejpa.org by no later than 7:30 a.m. the day of the meeting, May 18, 2021. These comments will be read into the record during the oral communications. Please include your name, address, group affiliation, subject, and question or comment in your email.

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1. CALL TO ORDER
2. ROLL CALL
3. PLEDGE OF ALLEGIANCE
4. PUBLIC COMMENT (NON-ACTION ITEM)
5. AWARDS AND RECOGNITION
6. * **CONSENT CALENDAR**
7. * APPROVAL OF MINUTES FOR APRIL 20, 2021 MEETING
8. * APPROVAL FOR PAYMENT OF WARRANTS AND MONTHLY INVESTMENT REPORTS
9. * WASTEWATER TREATMENT REPORT
10. * RECYCLED WATER REPORT
11. * SAN ELIJO JOINT POWERS AUTHORITY FISCAL YEAR 2021-22 RECOMMENDED BUDGET UPDATE
12. * APPOINTMENT OF THE SAN ELIJO JOINT POWERS AUTHORITY AUDITOR
13. * ITEMS REMOVED FROM CONSENT CALENDAR

Items on the Consent Calendar are routine matters and there will be no discussion unless an item is removed from the Consent Calendar. Items removed by a "Request to Speak" form from the public will be handled immediately following adoption of the Consent Calendar. Items removed by a Board Member will be handled as directed by the Board.

REGULAR AGENDA

14. SAN ELIJO JOINT POWERS AUTHORITY RECYCLED WATER PROGRAM – PROPOSED WHOLESALE AGREEMENT AMENDMENT

    1. Authorize the General Manager to execute a Sixth Amendment to the Agreement for Sale of Reclaimed Water to the Santa Fe Irrigation District by the San Elijo Joint Powers Authority, subject to the General Manager's final negotiations with the District and General Counsel's final review; and

    2. Discuss and take action as appropriate.

    Staff Reference: General Manager

15. RECYCLED WATER COST OF SERVICE AND PROPOSED WHOLESALE RATES AND RESERVE POLICY

    1. Accept and file the Carollo Engineers Recycled Water Rate Study;

    2. Approve 3.9% annual Recycled Water Rate increase to Santa Fe Irrigation District (SFID), San Dieguito Water District (SDWD), Olivenhain Municipal Water District (OMWD), and the City of Del Mar beginning July 1, 2021, July 1, 2022, July 1, 2023, July 1, 2024, and again beginning July 1, 2025;

    3. Authorize the General Manager to decrease the annual rate increase if San Elijo Joint Powers Authority's recycled water reserve fund exceeds 75% of the Recycled Water Reserve Fund Policy requirement on or after July 1, 2024;

    4. Adopt the Resolution of the Board of Directors of the San Elijo Joint Powers Authority Establishing the Recycled Water Reserve Fund Policy; and

    5. Discuss and take action as appropriate.

    Staff Reference: Director of Finance and Administration

16. WATER CAMPUS IMPROVEMENT PROJECT UPDATE

    1. Authorize the General Manager to amend the professional services agreement with Atlas for additional geotechnical, testing, and inspection services in the amount of $54,801; and

    2. Discuss and take action as appropriate.

    Staff Reference: General Manager

17. CLIMATE CHANGE ACTION PLAN

    1. Accept and File the San Elijo Water Campus Climate Change Action Plan; and

    2. Discuss and take action as appropriate.

    Staff Reference: General Manager

18. GENERAL MANAGER'S REPORT

Informational report by the General Manager on items not requiring Board action.

19. GENERAL COUNSEL'S REPORT

Informational report by the General Counsel on items not requiring Board action.

20. BOARD MEMBER COMMENTS

This item is placed on the agenda to allow individual Board Members to briefly convey information to the Board or public, or to request staff to place a matter on a future agenda and/or report back on any matter. There is no discussion or action taken on comments by Board Members.

21. CLOSED SESSION

The Board will adjourn to Closed Session to discuss item(s) identified below. Closed Session is not open to the public; however, an opportunity will be provided at this time if members of the public would like to comment on any item listed below. (Three-minute limit.) A closed session may be held at any time during this meeting of the San Elijo Joint Powers Authority for the purposes of discussing potential or pending litigation or other appropriate matters pursuant to the "Ralph M. Brown Act".

22. ADJOURNMENT

The next regularly scheduled San Elijo Joint Powers Authority Board Meeting will be Tuesday, June 15, 2021 at 8:30 a.m.

NOTICE:

The San Elijo Joint Powers Authority's open and public meetings comply with the protections and prohibitions contained in Section 202 of the Americans With Disabilities Act of 1990 (42 U.S.C Section 12132), and the federal rules and regulations adopted in implementation thereof. Any person with a disability who requires a modification or accommodation, including auxiliary aids or services, in order to participate in a public meeting of the SEJPA Board of Directors may request such modification or accommodation from Michael T. Thornton, General Manager, (760) 753-6203 ext. 72.

The agenda package and materials related to an agenda item submitted after the packet's distribution to the Board is available for public review in the lobby of the SEJPA Administrative Office during normal business hours. Agendas and minutes are available at www.sejpa.org. The SEJPA Board meetings are held on the third Tuesday of each month, with no scheduled meetings in August.

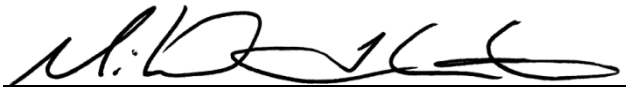
AFFIDAVIT OF POSTING

I, Michael T. Thornton, Secretary of the San Elijo Joint Powers Authority, hereby certify that I posted, or have caused to be posted, a copy of the foregoing agenda in the following locations:

San Elijo Water Campus, 2695 Manchester Avenue, Cardiff, California
City of Encinitas, 505 South Vulcan Avenue, Encinitas, California
City of Solana Beach, 635 South Highway 101, Solana Beach, California

The notice was posted at least 72 hours prior to the meeting, in accordance with Government Code Section 54954.2(a).

Date: May 13, 2021



Michael T. Thornton, P.E.
Secretary / General Manager

SAN ELIJO JOINT POWERS AUTHORITY
MINUTES OF THE BOARD MEETING
HELD ON APRIL 20, 2021
VIA VIDEO CONFERENCE

Kristi Becker, Chair — Kellie Hinze, Vice Chair

A meeting of the Board of Directors of San Elijo Joint Powers Authority (SEJPA) was held Tuesday, April 20, 2021, at 8:30 a.m., via a public web conference.

1. CALL TO ORDER

Chair Becker called the meeting to order at 8:30 a.m.

2. ROLL CALL

Directors Present:	Kristi Becker Kellie Hinze Catherine Blakespear David Zito
Directors Absent:	None
Others Present:	
General Manager	Michael Thornton
Director of Operations	Chris Trees
Director of Finance and Administration	Amy Chang
Administrative Coordinator	Vanessa Hackney
Senior Project Manager	Mike Konicke
SEJPA Counsel:	
Procopio, Cory, Hargreaves & Savitch	Tracie Stender
City of Encinitas:	
Assistant City Manager	Mark Delin
Senior Management Analyst	Bill Wilson
Assistant Director of Public Works Department	Isam Hireish
City of Solana Beach:	
City Manager	Greg Wade
Finance Director/City Treasurer	Ryan Smith
Director of Engineering/Public Works	Mohammad “Mo” Sammak

3. PLEDGE OF ALLEGIANCE

General Manager Thornton led the Pledge of Allegiance.

4. ORAL COMMUNICATION

None.

5. AWARDS AND RECOGNITION

CWEA (San Diego Section)

- Treatment Plant of the Year Award
- Safety Program of the Year Award
- Gimmicks and Gadgets Award – Jose Garcia

6. CONSENT CALENDAR

Moved by Vice Chair Hinze and seconded by Board Member Zito to approve the Consent Calendar.

Agenda Item No. 7	Approval of Minutes for the March 16, 2021 Meeting
Agenda Item No. 8	Approval for Payment of Warrants and Monthly Investment Report
Agenda Item No. 9	Wastewater Treatment Report
Agenda Item No. 10	Recycled Water Report
Agenda Item No. 11	Approve Ferric Chloride Purchase Agreement Extension

Motion carried with the following vote of approval:

AYES:	Becker, Hinze, Zito, Blakespear
NOES	None
ABSENT:	None
ABSTAIN:	None

13. SAN ELIJO JOINT POWERS AUTHORITY FISCAL YEAR 2021-22 RECOMMENDED BUDGET

General Manager Thornton stated that the Fiscal Year (FY) 2021-22 San Elijo Joint Powers Authority (SEJPA) Recommended Budget has been prepared in accordance with the SEJPA formation agreement and service agreements with other government entities. The budget estimates all expenditures necessary to provide wastewater treatment, waste disposal, water recycling, laboratory, ocean outfall, pump stations, and other services.

The recommended FY 2021-22 Budget consists of $8,003,113 operating costs, $1,509,278 debt service, and $2,235,000 capital projects for a total budget of $11,747,391. SEJPA receives revenues from seven primary sources, with the three largest sources being the City of Encinitas, the City of Solana Beach, and the Recycled Water Utility, which are expected to provide $3,873,291, $2,906,281, and $3,843,407, respectively.

The May 18, 2021 Board Agenda will include a budget discussion item for the Board to publicly discuss any changes or comments on the recommended budget. The final recommended budget will be brought to the June 15, 2021 meeting for Board approval.

Moved by Board Member Zito and seconded by Chair Becker to:

1. Review the Fiscal Year 2021-22 Recommended Budget;

2. Provide direction to staff regarding a transition from a one-year budget document to a two-year document; and

3. Discuss and take action as appropriate.

Motion carried with the following vote of approval:

AYES:	Becker, Hinze, Zito, Blakespear
NOES:	None
ABSENT:	None
ABSTAIN:	None

14. PHASE 2 STORMWATER CAPTURE AND REUSE – GRANT AWARD

General Manager Thornton stated that the San Elijo Joint Powers Authority (SEJPA) is interested in expanding its efforts to protect the environment and public health by capturing and reusing urban runoff and stormwater flows. Staff has developed concept plans for a phased project that can be constructed and operated independent of each other, but also designed to be complementary.

Phase 1 of the project is focused on diverting low flows that are on the order of 500,000 gallons per day or less. Phase 2 is intended to advance Phase 1 and create an additional local water supply through the construction of a stormwater infiltration basin for groundwater recharge and wells to extract stored groundwater for reuse.

Through a competitive selection process, the Phase 2 Stormwater Capture and Reuse project was selected by the State Water Resources Control Board (SWRCB) to receive $1.5 million in grant funding. This will complement SEJPA's $1.1 million grant award for Phase 1.

To proceed with the Phase 2 grant and develop the final grant agreement with the State, the SWRCB requires SEJPA to submit information in support of the grant pursuit, including a resolution. This resolution does not obligate SEJPA to accept the grant funds at this time. At a future SEJPA Board meeting, staff will present the final Phase 2 project scope and budget for Board approval prior to signing the grant agreement for financial assistance from the SWRCB.

Moved by Board Member Zito and seconded by Chair Becker to:

1. Approve Resolution 2021-03 of the Board of Directors of the San Elijo Joint Powers Authority to Authorize Entering into a Funding Agreement with the State Water Resources Control Board and Designating Michael T. Thornton, P.E. as Project Director for the Phase 2 Stormwater Capture and Reuse Project; and

2. Discuss and take action as appropriate.

Motion carried with the following vote of approval:

AYES: Becker, Hinze, Zito, Blakespear
NOES: None
ABSENT: None
ABSTAIN: None

15. DRAFT RECYCLED WATER COST OF SERVICE STUDY AND PROPOSED WHOLESALE RATE INCREASE AND RESERVE POLICY

General Manager Thornton stated, at the March 16, 2021 Board meeting, staff presented the recycled water cost-of-service and capital improvement program (CIP) workshop and received Board direction to incorporate a revised and formalized reserve policy and a 10-year capital improvement plan in the draft cost-of-service study and present the financial impact to the Board at the April 20, 2021 meeting.

Carollo completed its cost-of-study for the 5-year period from FYE 2022 to FYE 2026 and provided recommendations for improving the recycled water reserve policy to gain better alignment with policies of the water districts we service. The Study evaluated several scenarios to determine the optimal combination of affordable water rates, adequate reserve funding, and provisions for capital project funding. The scenario that ranked the highest is as follows:

- 3.9% annual rate increase commencing FYE 2022 to FYE 2026
- Finance approximately 50% of the anticipated $10.7 million capital program
- Update the reserve policy as outlined in Attachment 2

These recommendations will provide adequate revenue for capital expenditures from FYE 2021 to FYE 2030, provide financial resiliency to protect against unforeseen revenue fluctuations, and create growing reserve funds to further bolster the fiscal health of the program.

No action required. The presentation of the Draft Recycled Water Cost of Service Study and proposed wholesale rate increase and reserve policy is for information only.

16. GENERAL MANAGER'S REPORT

General Manager Thornton reported a meeting with Board Chair Becker as well as a meeting with Board Member Zito in preparation for the April Board Meeting.

17. GENERAL COUNSEL'S REPORT

Tracie Stender stated that Senate Bill 273, encouraging wastewater agencies to engage in managing stormwater and dry weather runoff looks likely to pass in the state legislature.

18. BOARD MEMBER COMMENTS

None.

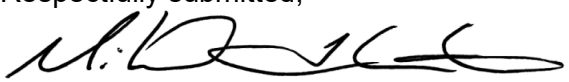
19. CLOSED SESSION

None.

20. ADJOURNMENT

The meeting adjourned at 10:07 a.m. The next Board of Directors meeting is scheduled to be held on Tuesday, May 18, 2021 at 8:30 a.m.

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

SAN ELIJO JOINT POWERS AUTHORITY
PAYMENT OF WARRANTS
21-05
For the Month of April 2021

Warrant #	Vendor Name	G/L Account	Warrant Description	Amount
39538	Affordable Drain Services	Services - Maintenance	Lift station and screen channels cleaning	$ 385.00
39539	American Water Works Assoc.	Dues & Memberships	Membership - M. Piper	294.00
39540	BK Valves & Equipment, Inc	Repair Parts Expense	Recycled water pump check valves	2,226.18
39541	Boot World, Inc.	Uniforms - Boots	Safety boots - F. Abeyta	190.81
39542	BrightView Landscapes	Services - Landscape	Apr	2,782.00
39543	California Water Technologies	Supplies - Chem - Ferric Chlo	Ferric chloride	6,101.23
39544	County of San Diego	Fees - Permits	Unified program facilities permit	484.00
39545	EDCO Waste & Recycling Service	Utilities - Trash	Mar	256.16
39546	City of Encinitas	Service - IT Support	Admin network - Apr	7,956.75
39547	City of Encinitas	Licenses	Zoom	39.98
39548	City of Encinitas	Licenses	DUO	30.00
39549	Encinitas Glass	Services - Maintenance	Furnish and install glass	774.53
39550	Eurofins Calscience, LLC	Services - Laboratory	Testing water samples	590.50
39551	Fisher Scientific	Supplies - Laboratory	Graduated cylinders	504.86
39552	Grainger, Inc.	Repair Parts Expense	Various repair parts and supplies	1,622.44
39553	GLS US	Postage/Shipping	Shipping fee for water samples	183.15
39554	GC Pivotal LLC	Utilities - Internet	T-1 Service - May	355.24
39555	Hardy Diagnostics	Supplies - Laboratory	Various supplies	2,238.42
39556	Harrington Industrial Plastics	Repair Parts Expense	Pins and steel filter	464.29
39557	Idexx Distribution,Inc.	Supplies - Laboratory	Various supplies	2,654.89
39558	Lawson Products Inc.	Supplies - Shop & Field	Various tools and repair parts	130.84
39559	Lee's Lock & Safe	Services - Maintenance	Master padlocks for plant and pump stations	238.88
39560	McMaster-Carr Supply Co.	Repair Parts Expense	Various repair parts and supplies	815.26
39561	Midas Shop	Vehicle Maintenance	Oil changes, vehicle maintenance	309.46
39562	Olin Corp - Chlor Alkali	Supplies - Chemicals	Sodium hypochlorite	3,787.85
39563	PCL Construction Services PCL	Services - Contractors	WCI Project	976,612.00
39564	Polydyne Inc.	Supplies - Chem - Polymer	Clarifloc WE-007	23,598.88
39565	ProBuild Company, LLC	Repair Parts Expense	Supplies and repair parts	803.58
39566	Santa Fe Irrigation District	Utilities - Water	Water and Recycled water	1,654.28
39567	SCAP	Dues & Memberships	Annual membership dues FY 2021/2022	8,570.00
39568	San Dieguito Water District	Utilities - Water	Water and Recycled water	1,222.25
39569	San Dieguito Water District	Utilities - Water	Water and Recycled water	1,382.09
39570	Sigma-Aldrich	Supplies - Laboratory	Turbidity calibration standard	114.87
39571	Southern California Fleet Ser.	Vehicle Maintenance	Preventive service - F750, Peterbilt 2020	2,183.81
39572	State Water Resources Control	Dues & Memberships	Certificate - J. Boyle	110.00
39573	Thatcher Company of California	Supplies - Chemicals	Citric acid	2,039.92
39574	Unifirst Corporation	Services - Uniforms	Uniform service	405.28
39575	Underground Service Alert/SC	Services - Alarm	Safe excavation board and Dig alert - Apr	225.94
39576	USA Bluebook	Supplies - Laboratory	Various supplies	1,778.86
39577	Vanessa Hackney	Accounts Receivable Control	Health and Wellness - V. Hackney	60.00
39578	Vantagepoint Transfer Agents	EE Deduction Benefits	ICMA - 457	6,896.30
39579	Vantagepoint Transfer Agents	ICMA Retirement	ICMA - 401a	4,119.44
39580	Volt Management Corp	Services - Temp	Internship program - 03/19/21 - 04/04/21	2,583.98
39581	VWR International, Inc.	Supplies - Laboratory	Various supplies	1,030.95
39582	WM Corporate Services, Inc.	Services - Grit & Screenings	10 yd rolloff - 03/01/21-03/31/21	7,906.75
39583	Allied Storage Containers	Equipment Rental/Lease	20' and 40' storage container	274.76
39584	AT & T	Utilities - Telephone	Alarm service - Apr	403.31
39585	James Barnett	Accounts Receivable Control	Health and wellness - J. Barnett	60.00
39586	Boot World, Inc.	Uniforms - Boots	Safety boots - T. Cook	189.06
39587	Brax Process and Pump Equip.	Repair Parts Expense	Digester recirculation pump	13,915.41
39588	Brenntag Pacific, Inc	Supplies - Chem - Odor	Sodium hydroxide	1,794.00
39589	Corodata	Rent	Record storage - Mar	101.29
39590	Denali Water Solutions LLC	Services - Biosolids Hauling	Mar	16,799.85
39591	DMV	Services - Other	Safety records - 01/01/21-03/31/21	4.00
39592	eMaint	Licenses	Maintenance software - 3 users	1,188.00
39593	ERA	Supplies - Laboratory	Various supplies	2,440.37
39594	Evoqua Water Technologies	Supplies - Chem - Odor	Bioxide	6,053.76
39595	Forte of San Diego	Services - Janitorial	May	1,000.00
39596	Fuscoe Engineering	Services - Professional	WCI Project	437.25
39597	gafcon	Services - Professional	Labor compliance for WRF LID project	681.00
39598	GHE Repair Service, Inc.	Services - Maintenance	Annual service of auto clave	570.00
39599	GLS US	Postage/Shipping	Shipping fee for water samples	38.39
39600	Hach Company	Repair Parts Expense	Motor, gear, automatic sampler	356.89
39601	Hardy Diagnostics	Supplies - Laboratory	Various supplies	692.66
39602	Housing &Community Development	Licenses	Licenses for Administration Building	7.00
39603	Helix Environmental Planning	Services - Professional	WCI Project	5,005.79
39604	Michael Henke	Dues & Memberships	CWEA renewal	96.00
39605	Hoch Consulting, APC	Services - Professional	Grant administration - Nov - Jan	7,250.00
39606	Kimley-Horn & Associates, Inc.	Services - Professional	WCI Project	3,335.82
39607	Liquid Environmental Solution	Services - Grease & Scum, Grit & Screenings	Grease and scum pumping, roll-off box delivery	1,804.88
39608	McMaster-Carr Supply Co.	Repair Parts Expense	Various repair parts and supplies	290.03
39609	MERTEC ENGINEERING	Repair Parts Expense	Ramsey safety pull switch for belt press	818.24
39610	MetLife - Group Benefits	Dental/Vision	Dental - May	2,335.54
39611	Napa Auto Parts	Repair Parts Expense	Batteries for Solana Beach Fire Station generator	326.30
39612	Oasis Palm Nursery, Inc.	Services - Landscape	Phoenix Canary Date Palms root treatment	925.00
39613	Olivenhain Municipal Water Dis	Rent, Services - Maintenance	Pipeline rental payment - Mar, Wiegand Zona Gale - 3rd Qtr 20/21	8,516.66
39614	Preferred Benefit Insurance	Dental/Vision	Vision - Apr	322.30
39615	ProBuild Company, LLC	Repair Parts Expense	Supplies and repair parts	860.96
39616	Roesling Nakamura Terada Archi	Services - Professional	WCI Project	15,189.75
39617	Rusty Wallis, Inc.	Services - Maintenance	Salt delivery	159.42
39618	SAF-T-Flo Water Services	Repair Parts Expense	Scrubber #1 - Ball valve	545.13
39619	Santa Fe Irrigation District	SFID Distribution Pipeline	Pipeline purchase - Mar	1,024.79
39620	San Dieguito Water District	Utilities - Water	Water and Recycling water	65.09
39621	Southern Contracting Comp.	Services - Maintenance	20 amp GFCI receptacle and conduit installation	3,282.00
39622	Southwest Valve & Equip.	Repair Parts Expense	Metal seat plug valve	4,286.16
39623	State Water Resources Control	Fees - Permits	Annual permit fee - Index #449165	641.00
39624	Terminix Processing Center	Services - Maintenance	Mar	441.00
39625	TNEMEC Company Inc.	Supplies - Shop & Field	Endura-shield, thinner, painting supplies	856.55
39626	Unifirst Corporation	Services - Uniforms	Uniform service	243.56

SAN ELIJO JOINT POWERS AUTHORITY
PAYMENT OF WARRANTS
21-05
For the Month of April 2021

Warrant #	Vendor Name	G/L Account	Warrant Description	Amount
39627	UPS	Postage/Shipping	Service fees	11.04
39628	USA Bluebook	Supplies - Laboratory	Various supplies	61.15
39629	Vantagepoint Transfer Agents	EE Deduction Benefits	ICMA - 457	6,888.42
39630	Vantagepoint Transfer Agents	ICMA Retirement	ICMA - 401a	4,122.00
39631	Verizon Wireless	Utilities - Telephone	03/11/21 - 04/10/21	410.13
39632	Verizon Wireless	Utilities - Telephone	Cell phone service - 03/08/21-04/07/21	1,085.27
39633	Vista Analytical Laboratory	Services - Laboratory	1st Qtr. PFAS sampling 2021	1,915.00
39634	Volt Management Corp	Services - Temp	Internship program - 03/19/21 - 04/04/21	1,481.74
39635	VWR International, Inc.	Supplies - Laboratory	Various supplies	701.28
39636	WageWorks	Payroll Processing Fees	Admin and compliance fee - Mar 2021	134.00
39637	WorkPartners Occupational	Services - Medical	New employee health screening	285.00
On-line 505	Aflac	EE Deduction Benefits	Aflac - Mar	417.84
On-line 506	Fuelman	Fuel	Mar	1,064.05
On-line 507	P.E.R.S.	Medical Insurance - Pers	Health - Apr	24,155.85
On-line 508	Public Employees- Retirement	Retirement Plan - PERS	Retirement - 03/20/21 - 04/02/21	16,271.71
On-line 509	San Diego Gas & Electric	Utilities - Gas & Electric	Gas and electric - 02/07/21 - 03/09/21	61,106.41
On-line 510	Sun Life Financial	Life Insurance/Disability	Life and disability insurance - Apr	1,857.44
On-line 511	Aflac	EE Deduction Benefits	Aflac - Apr	417.84
On-line 512	BankCard Center	Vehicle Maintenance, COVID19-Supplies-Equipment	Repair parts and supplies	7,824.76
On-line 513	Home Depot Credit Services	Supplies - Shop & Field	Repair parts and supplies	320.52
On-line 514	Public Employees- Retirement	Retirement Plan - PERS	Retirement - 04/03/21 - 04/16/21	16,242.25
On-line 515	ReadyRefresh	Supplies - Laboratory	Kitchen and lab supplies	650.18
On-line 516	Sun Life Financial	Life Insurance/Disability	Life and disability insurance - May	1,868.73
	San Elijo Payroll Account	Payroll	Payroll - 04/09/2021	81,446.13
	San Elijo Payroll Account	Payroll	Payroll - 04/23/2021	96,820.47
				$ 1,511,904.08

SAN ELIJO JOINT POWERS AUTHORITY

PAYMENT OF WARRANTS SUMMARY

For the Month of April 2021
As of April 30, 2021

PAYMENT OF WARRANTS		$ 1,511,904.08
Reference Number	21-05	

I hereby certify that the demands listed and covered by warrants are correct and just to the best of my knowledge, and that the money is available in the proper funds to pay these demands. The cash flows of the SEJPA, including the Member Agency commitment in their operating budgets to support the operations of the SEJPA, are expected to be adequate to meet the SEJPA's obligations over the next six months. I also certify that the SEJPA's investment portfolio complies with the SEJPA's investment policy.

Amy Chang
Director of Finance and Administration

STATEMENT OF FUNDS AVAILABLE FOR PAYMENT OF WARRANTS
AND INVESTMENT INFORMATION
As of April 30, 2021

FUNDS ON DEPOSIT WITH		AMOUNT
LOCAL AGENCY INVESTMENT FUND *(MARCH 2021 YIELD 0.357%)*		
UNRESTRICTED DEPOSITS	$	13,857,964.53
CALIFORNIA BANK AND TRUST *(APRIL 2021 YIELD 0.01%)*		
REGULAR CHECKING		2,756,552.70
PAYROLL CHECKING		5,000.00
UNION BANK - TRUSTEE (BOND FUNDS)		
BLACKROCK *(APRIL 2021 YIELD 0.02%)*		179.88
LAIF *(APRIL 2021 YIELD 0.357%)*		1,761,261.96
PARS - TRUSTEE (POST-EMPLOYMENT BENEFITS TRUST) *(MARCH 2021 YIELD .87%)*		330,055.58
TOTAL RESOURCES	$	18,711,014.65

*

AGENDA ITEM NO. 9

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

May 18, 2021

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: WASTEWATER TREATMENT REPORT

RECOMMENDATION

No action required. This memorandum is submitted for information only.

DISCUSSION

Monthly Treatment Plant Performance and Evaluation

Wastewater treatment for the San Elijo Joint Powers Authority (SEJPA) met all National Pollutant Discharge Elimination System (NPDES) ocean effluent limitation requirements for the month of March 2021. The primary indicators of treatment performance include the removal of Carbonaceous Biochemical Oxygen Demand (CBOD) and Total Suspended Solids (TSS). The SEJPA is required to remove a minimum of 85 percent of the CBOD and TSS from the wastewater. Treatment levels for **CBOD** and **TSS** were **98.0** and **97.6** percent removal, respectively, during the month of March.

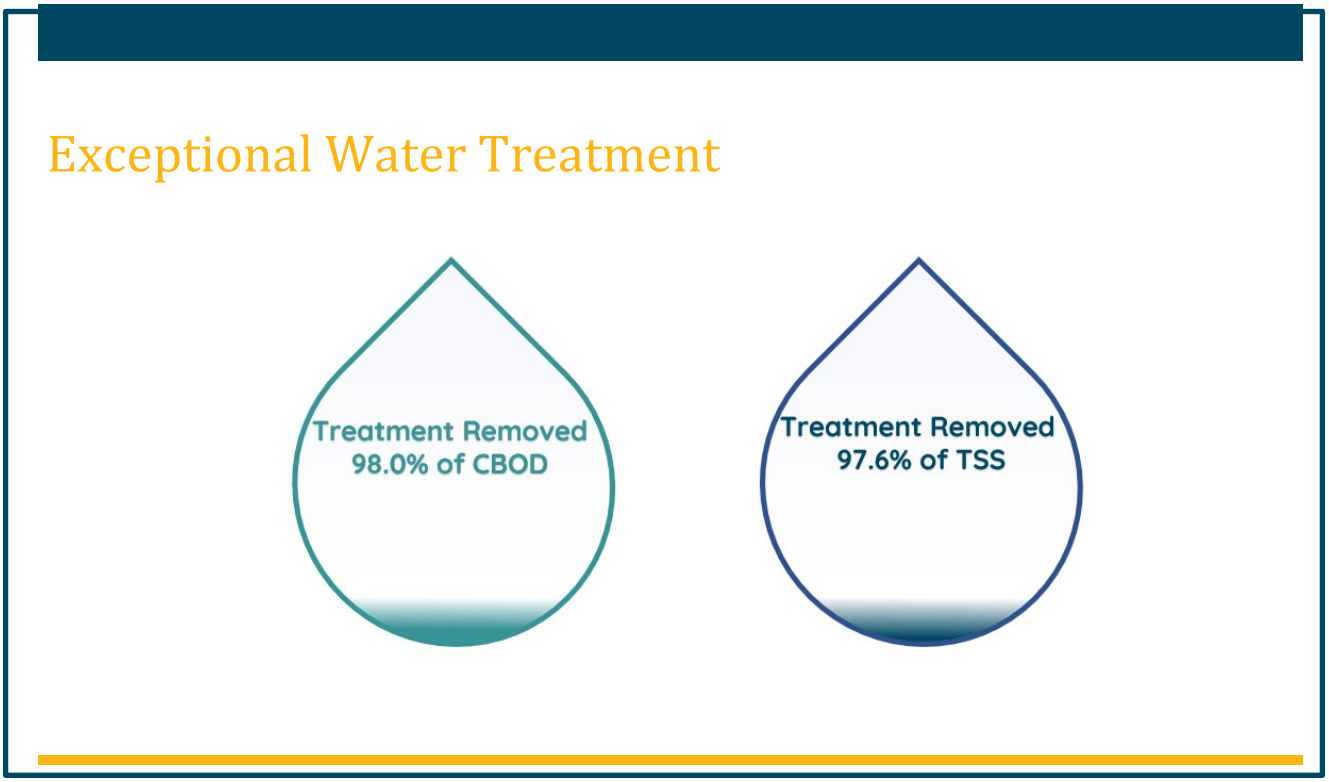
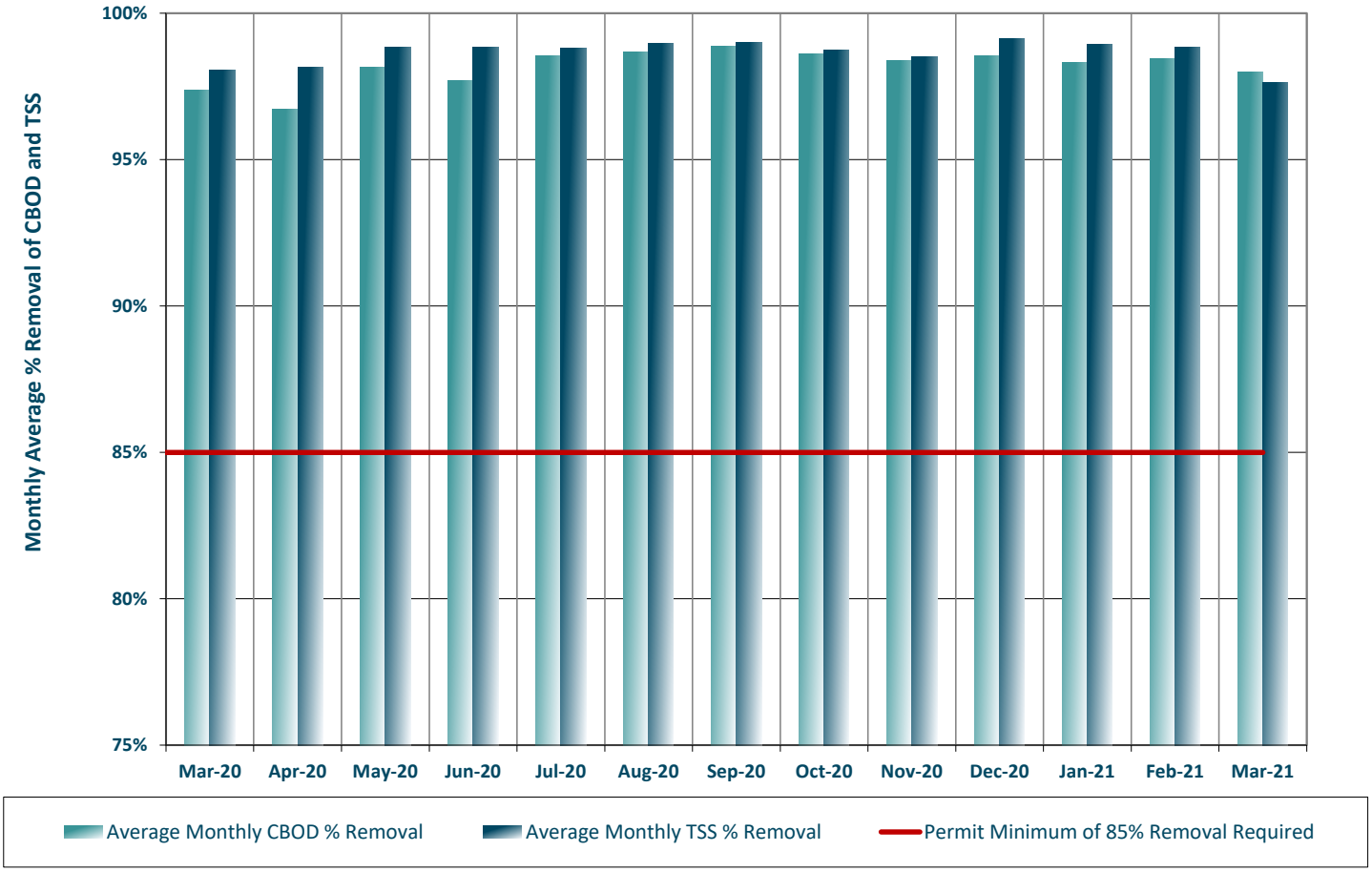


Figure 1 (below) shows historic treatment performance trends for the removal of CBOD and TSS over the last 13 months compared to the permit minimum removal requirement of 85%.

Figure 1: Wastewater Treatment Performance of the SEJPA % Removal of Carbonaceous Biochemical Oxygen Demand (CBOD) and Total Suspended Solids (TSS)



Figures 2 and 3 (below) show historic influent vs effluent CBOD and TSS concentration fluctuations in the strength of the wastewater being received and discharged by the SEJPA. Rain events often result in rainwater entering into the sewer system which can dilute both CBOD and TSS.

FIGURE 2: TREATED EFFLUENT FLOWS REMOVAL OF CBOD

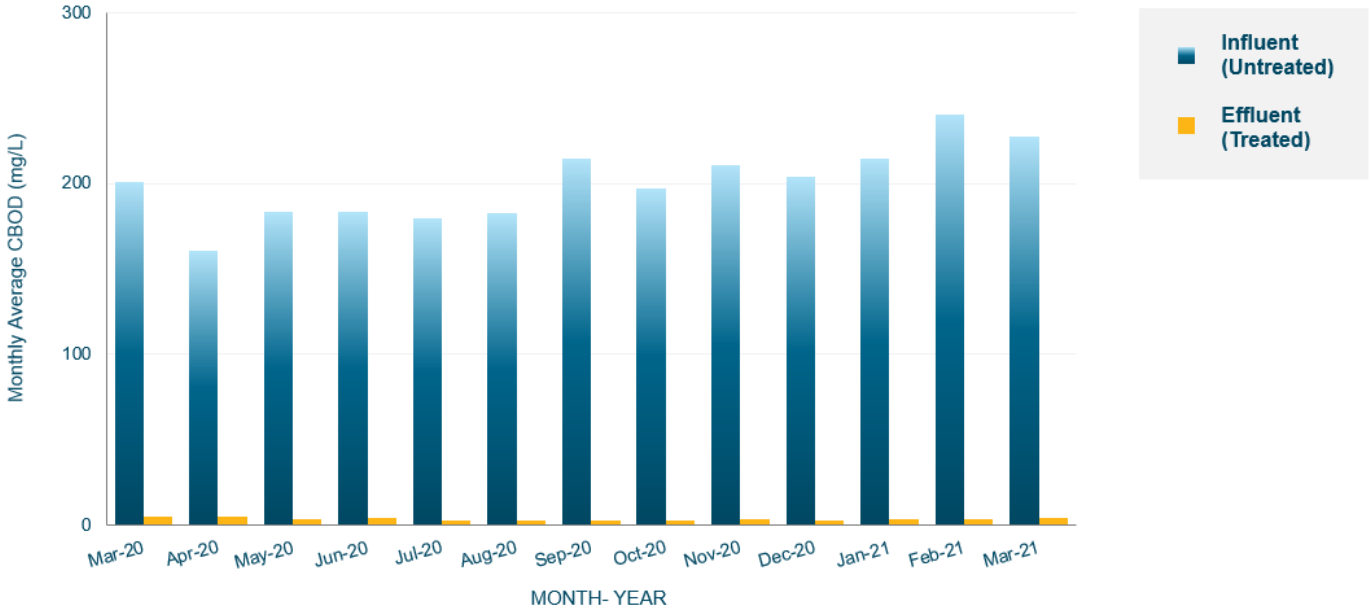
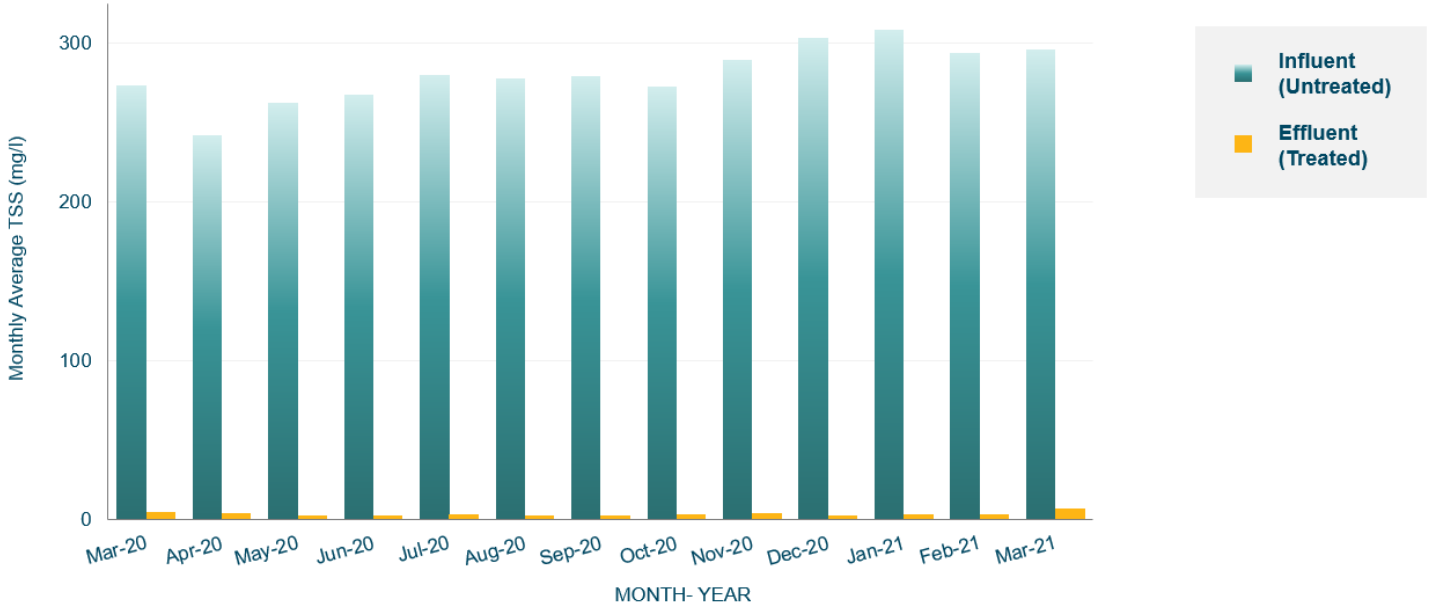


FIGURE 3: TREATED EFFLUENT FLOWS REMOVAL OF TSS



Member Agency Flows

Table 1 (below) presents the influent and effluent flows for the month of March. Average daily influent flows were recorded for each Member Agency. Total effluent flow was calculated for the San Elijo Water Campus.

TABLE 1 – INFLUENT AND EFFLUENT FLOWS IN MARCH

MARCH			
	Influent (mgd)	Recycled Water (mgd)	Effluent (mgd)*
Cardiff Sanitary Division	1.291	0.448	0.743
City of Solana Beach	0.968	0.336	0.632
Rancho Santa Fe SID	0.160	0.056	0.104
City of Del Mar	0.332	0.115	0.217
Total San Elijo Water Campus Flow	2.751	0.955	1.796

* Effluent is calculated by subtracting the recycled water production from the influent wastewater.

Table 2 (below) presents the historical average and unit influent rates per month for each of the Member Agencies during the past 3 years. It also presents the number of connected Equivalent Dwelling Units (EDUs) for each of the Member Agencies during this same time period.

TABLE 2 - SAN ELIJO WATER RECLAMATION FACILITY MONTHLY REPORT - FLOWS AND EDUS

	AVERAGE DAILY INFLUENT FLOW RATE (MGD)					CONNECTED EDUs					AVERAGE UNIT INFLUENT FLOW RATE (GAL/EDU/DAY)				
MONTH	CSD	RSF CSD	SB	DM	TOTAL PLANT	CSD EDUS	RSF CSD EDUS	SB EDUS	DM	TOTAL EDUS	CSD	RSF	SB	DM	TOTAL PLANT
Jan-18	1.276	0.125	1.015	0.000	2.416	8,435	555	8,061	1,716	18,767	151	225	126	0	142
Feb-18	1.249	0.118	0.968	0.000	2.335	8,441	555	8,061	1,716	18,773	148	213	120	0	137
Mar-18	1.265	0.122	0.922	0.039	2.348	8,451	555	8,061	1,716	18,782	150	220	114	149	125
Apr-18	1.184	0.115	0.901	0.337	2.537	8,451	559	8,061	1,716	18,786	140	206	112	129	135
May-18	1.173	0.119	0.890	0.376	2.558	8,461	562	8,061	1,716	18,799	139	212	110	144	136
Jun-18	1.188	0.124	0.888	0.549	2.749	8,466	562	8,061	1,716	18,804	140	221	110	210	146
Jul-18	1.193	0.118	0.933	0.537	2.781	8,478	562	8,083	2,611	19,733	141	210	115	206	141
Aug-18	1.210	0.119	0.980	0.534	2.843	8,481	563	8,083	2,611	19,737	143	212	121	205	144
Sep-18	1.230	0.117	0.905	0.341	2.593	8,481	563	8,083	2,611	19,737	145	208	112	131	131
Oct-18	1.172	0.121	0.897	0.354	2.544	8,481	564	8,083	2,611	19,738	138	215	111	136	129
Nov-18	1.173	0.121	0.906	0.064	2.264	8,488	565	8,083	2,611	19,746	138	214	112	136	129
Dec-18	1.264	0.144	0.967	0.244	2.619	8,491	566	8,083	2,611	19,751	149	255	120	136	138
Jan-19	1.269	0.153	0.975	0.384	2.781	8,491	566	8,083	2,611	19,751	149	271	121	147	141
Feb-19	1.400	0.173	0.935	0.309	2.817	8,492	566	8,083	2,611	19,752	165	306	116	137	145
Mar-19	1.200	0.149	0.908	0.340	2.597	8,493	568	8,083	2,611	19,755	141	263	112	132	132
Apr-19	1.119	0.138	0.887	0.334	2.478	8,494	568	8,083	2,611	19,756	132	243	110	128	125
May-19	1.125	0.133	0.880	0.361	2.499	8,494	568	8,083	2,611	19,756	132	234	109	138	126
Jun-19	1.162	0.126	0.903	0.507	2.698	8,504	568	8,083	2,611	19,766	137	222	112	194	136
Jul-19	1.127	0.128	0.924	0.546	2.725	8,504	568	8,083	2,611	19,766	133	226	114	209	138
Aug-19	1.148	0.126	0.938	0.567	2.779	8,505	570	8,105	2,612	19,792	135	221	116	217	140
Sep-19	1.131	0.132	0.918	0.393	2.574	8,507	570	8,105	2,612	19,794	133	232	113	150	130
Oct-19	1.120	0.124	0.914	0.378	2.536	8,507	571	8,105	2,612	19,795	132	217	113	145	128
Nov-19	1.230	0.137	0.927	0.437	2.731	8,510	571	8,105	2,612	19,798	145	240	114	172	138
Dec-19	1.347	0.173	0.946	0.483	2.949	8,516	571	8,105	2,612	19,804	158	303	117	185	149
Jan-20	1.194	0.163	0.917	0.410	2.684	8,517	571	8,105	2,612	19,805	140	286	113	157	136
Feb-20	1.176	0.146	0.919	0.352	2.593	8,517	571	8,105	2,612	19,805	138	256	113	135	131
Mar-20	1.432	0.185	0.907	0.389	2.913	8,519	572	8,105	2,612	19,808	168	324	112	149	147
Apr-20	1.720	0.231	0.912	0.377	3.240	8,522	572	8,105	2,612	19,811	202	404	113	153	164
May-20	1.293	0.158	0.853	0.304	2.608	8,523	573	8,105	2,612	19,813	152	276	105	133	132
Jun-20	1.251	0.164	0.897	0.434	2.746	8,534	576	8,105	2,612	19,826	147	285	111	179	139
Jul-20	1.231	0.157	0.937	0.548	2.873	8,535	576	8,110	2,616	19,837	144	273	116	222	145
Aug-20	1.226	0.156	0.950	0.478	2.810	8,540	577	8,110	2,616	19,843	144	271	117	194	142
Sep-20	1.225	0.151	0.956	0.362	2.694	8,540	578	8,110	2,616	19,844	143	261	118	146	136
Oct-20	1.197	0.142	0.940	0.316	2.595	8,543	579	8,110	2,616	19,848	140	245	116	128	131
Nov-20	1.200	0.142	0.927	0.341	2.610	8,543	579	8,110	2,616	19,848	140	245	114	138	131
Dec-20	1.217	0.141	0.893	0.304	2.555	8,543	579	8,110	2,616	19,848	142	244	110	123	129
Jan-21	1.238	0.150	0.909	0.323	2.620	8,543	579	8,110	2,616	19,848	145	259	112	129	132
Feb-21	1.224	0.151	0.926	0.306	2.607	8,548	579	8,110	2,616	19,853	143	261	114	121	131
Mar-21	1.291	0.160	0.968	0.332	2.751	8,548	579	8,110	2,616	19,853	151	277	119	131	139

CSD: Cardiff Sanitary Division

RSF CSD: Ranch Santa Fe Community Service District

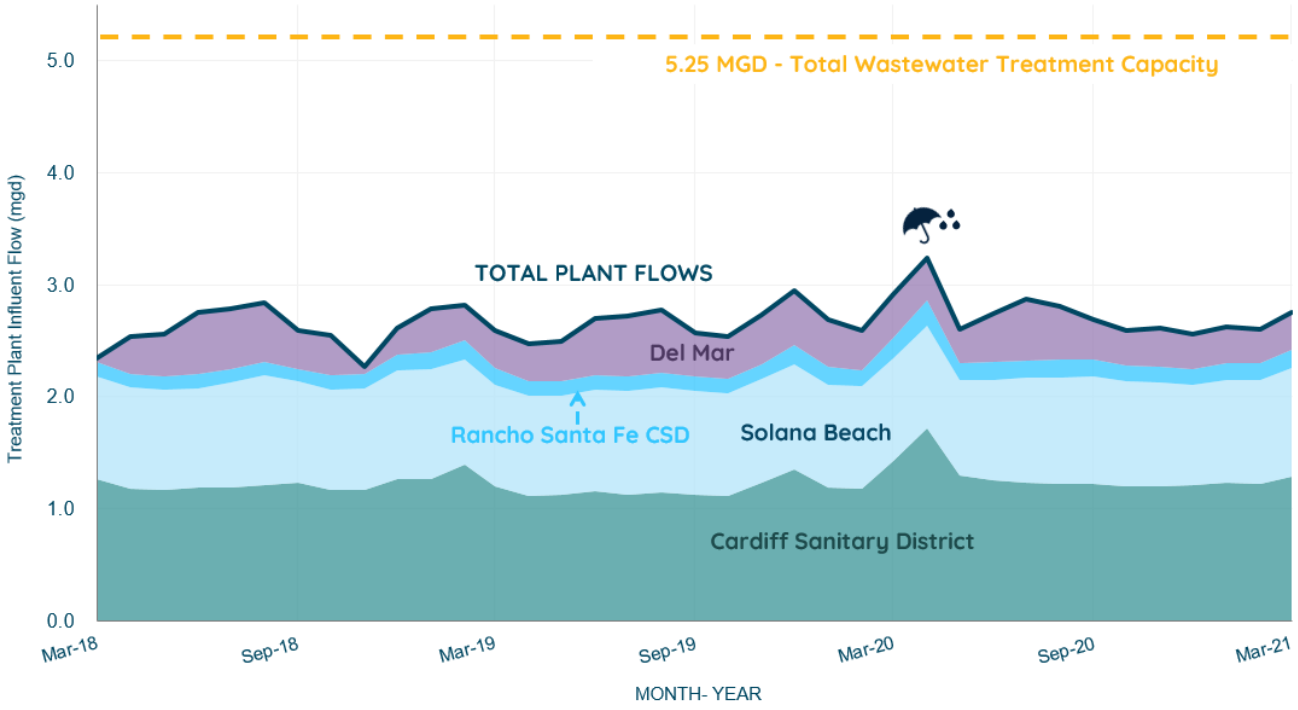
SB: Solana Beach

DM: City of Del Mar

EDU: Equivalent Dwelling Unit

Figure 4 (below) presents the 3-year historical average daily flows per month for each Member Agency. This is to provide a historical overview of the average flow treated for each agency. Also shown in Figure 4 is the total wastewater treatment capacity of the water campus, 5.25 mgd, of which each Member Agency has the right to 2.2 mgd, Rancho Santa Fe Community Service District leases 0.25 mgd, and the City of Del Mar leases 0.60 mgd.

FIGURE 4: SEJPA AVERAGE DAILY FLOWS OVER THE PAST 3 YEARS



City of Escondido Flows

The average and peak flow rate for the month of March 2021 from the City of Escondido's Hale Avenue Resource Recovery Facility, which discharges through the San Elijo Ocean Outfall, is reported below in Table 3.

TABLE 3 – CITY OF ESCONDIDO FLOWS

	Flow (mgd)
Escondido (Average flow rate)	10.6
Escondido (Peak flow rate)	18.6

Connected Equivalent Dwelling Units

The City of Solana Beach and the City of Del Mar updated the number of connected EDUs that is reported to the SEJPA in July 2020. The City of Encinitas and Rancho Santa Fe CSD report their connected EDUs every month. The number of EDUs connected for each of the Member Agencies and lease agencies is reported in Table 4 below.

TABLE 4 – CONNECTED EDUs BY AGENCY

	Connected (EDU)
Cardiff Sanitary Division	8,548
Rancho Santa Fe SID	579
City of Solana Beach	7,773
San Diego (to Solana Beach)	337
City of Del Mar	2,616
Total EDUs to System	19,853

Respectfully submitted,

Michael T. Thornton, P.E.
General Manager

*

AGENDA ITEM NO. 10

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

May 18, 2021

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: RECYCLED WATER REPORT

RECOMMENDATION

No action required. This memorandum is submitted for information only.

DISCUSSION

Recycled Water Production

For the month of March 2021, recycled water demand was 81.5 acre-feet (AF), which was met using 79.4 AF of recycled water and 2.1 AF supplementation with potable water. Potable water use was higher than normal due to construction work which shut down recycled water production.

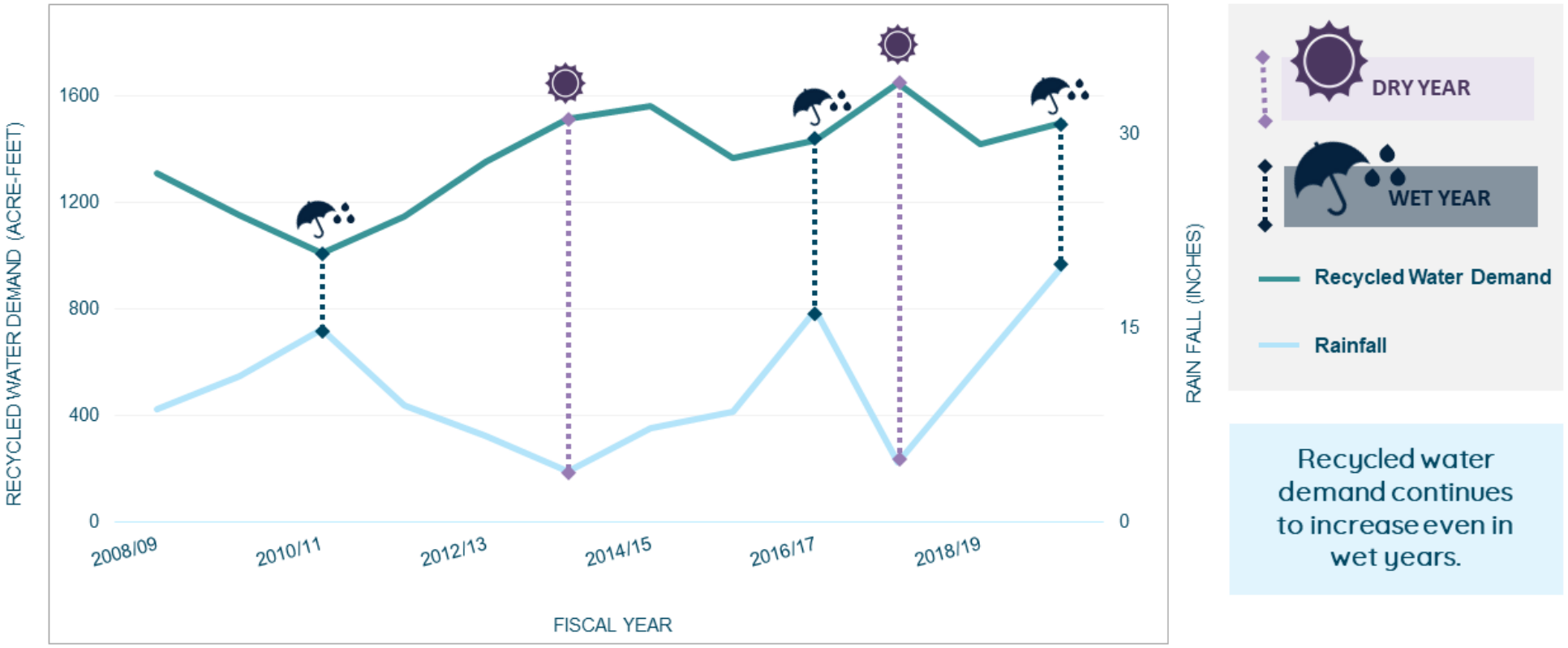
March demand was 9.8% above budget expectations of 74 AF due to the relatively warm, dry weather. The total water production for FY 2020-21 is 15.5% above budget for the first nine months.

Figure 1 (attached) provides a graphical view of annual recycled water demand spanning the last 10 fiscal years, with the overlay of annual rainfall. Since the recycled water program primarily serves outdoor irrigation, annual demand is reduced during wet periods and increases during times of drought. Figure 2 (attached) shows the monthly recycled water demand for each March for the last ten years to provide a year-over-year comparison. Figure 3 (attached) compares budget versus actual recycled water sales for FY 2020-21.

Respectfully submitted,

Michael T. Thornton, P.E.
General Manager

FIGURE 1: RECYCLED WATER DEMAND AND RAINFALL COMPARISON



Recycled water demand continues to increase even in wet years.

FIGURE 2: MARCH RECYCLED WATER DEMAND

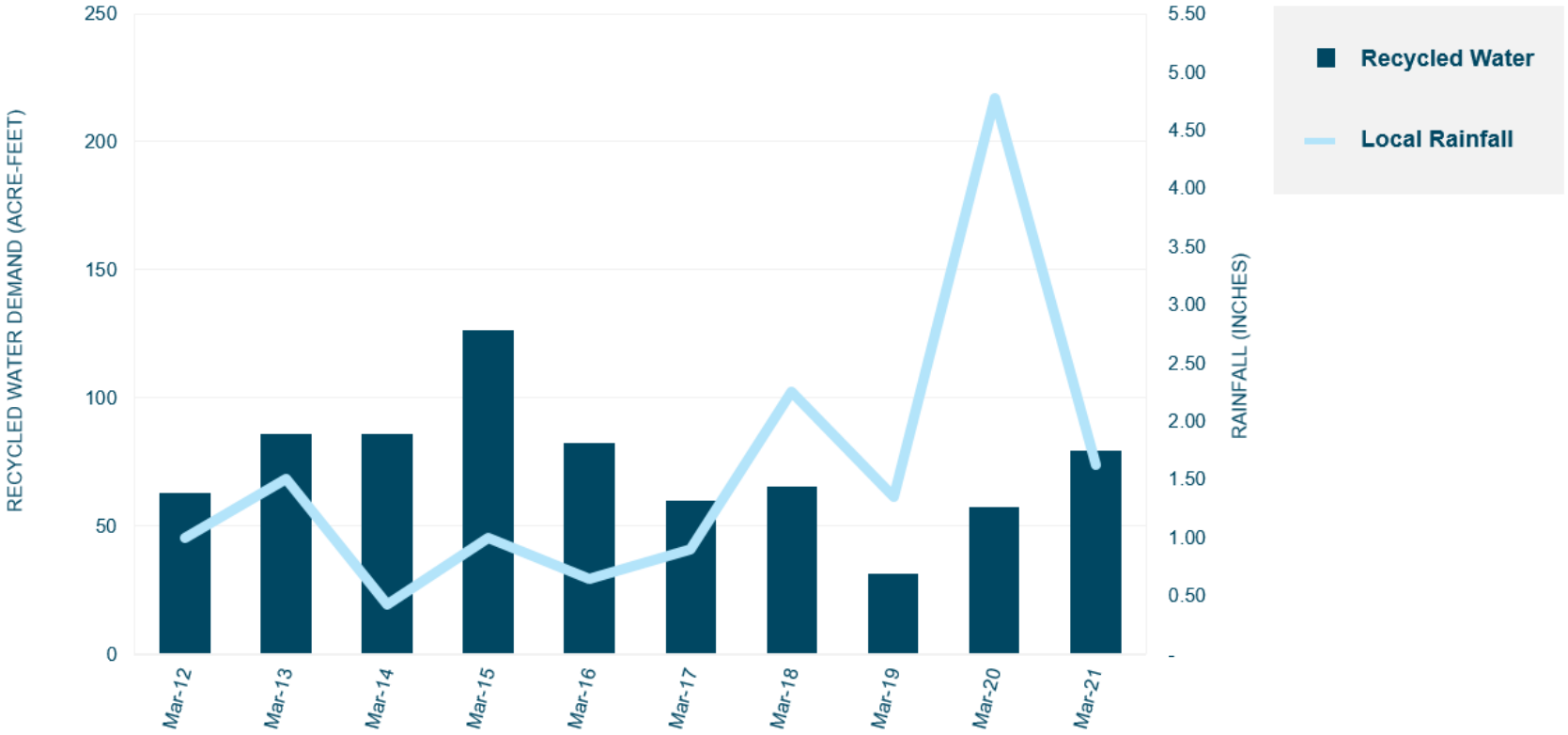
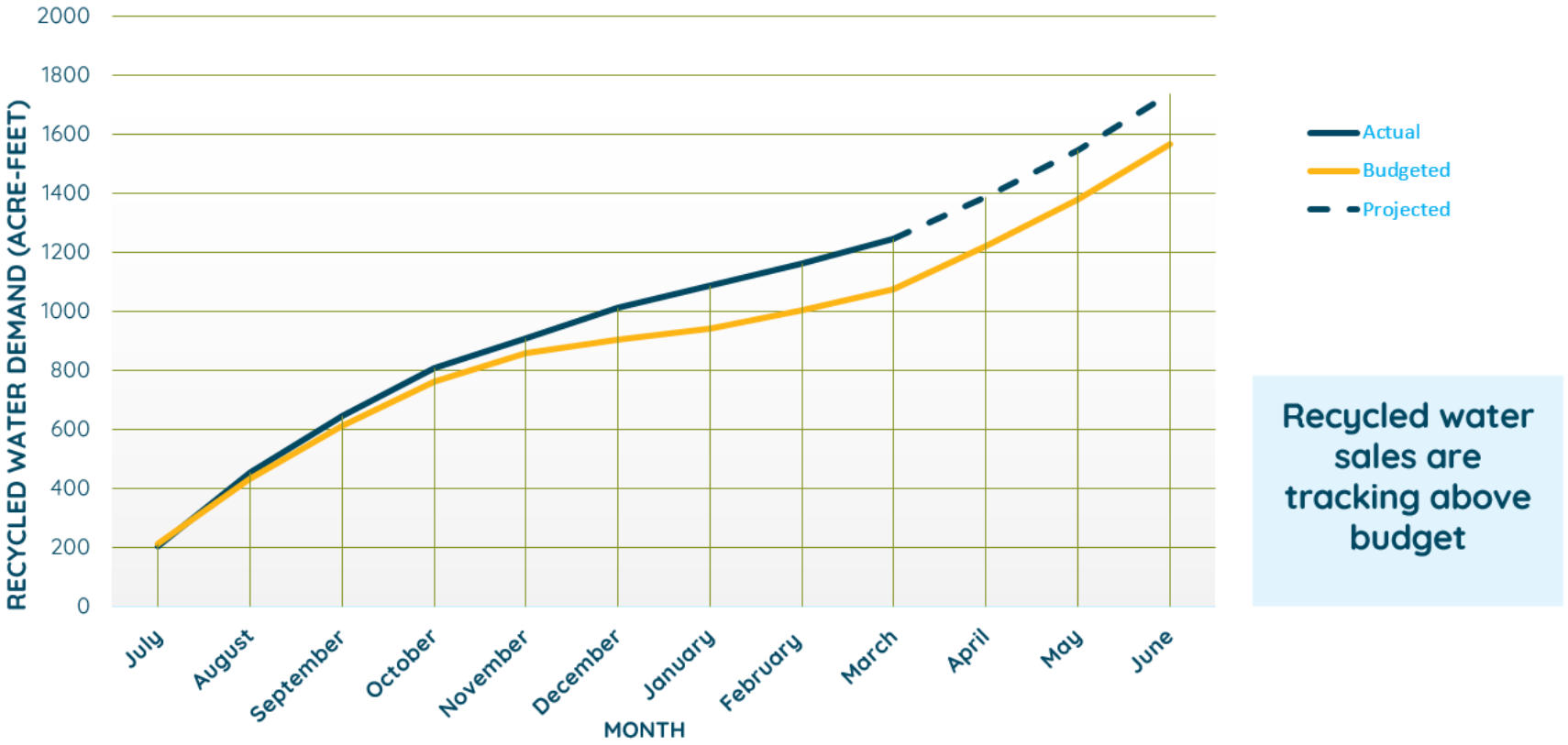


FIGURE 3: FY2020/21 CUMULATIVE DEMAND VS BUDGET



Recycled water sales are tracking above budget

*

AGENDA ITEM NO. 11

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

May 18, 2021

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: Director of Finance and Administration

SUBJECT: SAN ELIJO JOINT POWERS AUTHORITY FISCAL YEAR 2021-22 RECOMMENDED BUDGET UPDATE

RECOMMENDATION

It is recommended that the Board of Directors:

1. Discuss and take action as appropriate.

BACKGROUND

Each year, the San Elijo Joint Powers Authority (SEJPA) prepares a recommended budget for the upcoming fiscal year. The recommended budget is presented to the Board in April, and becomes a public document for comments and suggested changes by the Board, Member Agencies, other government agencies that receive services from the SEJPA, and the public.

DISCUSSION

In April 2021, staff presented the FY 2021-22 Recommended Budget to the Board of Directors for public review and comment. In addition, staff met with both Member Agencies staff as well as discussed the recommended budget with other government agencies that utilize SEJPA's services. To date, SEJPA has not received any proposed changes from the Member Agencies or other participating government agencies, as well as no public comments.

At the April 2021 Board meeting, staff also received Board direction for the allowance to move from a one-year budget to a two-year budget cycle. In researching this option further, legal counsel identified that the SEJPA Restatement Agreement will need to be modified to reflect this change. The SEJPA Restatement Agreement is currently being updated and the allowance for both one-year and two-year budget cycles will be included.

The budget will be presented to the Board of Directors for adoption at the June meeting along with the investment policy and appointment of SEJPA Treasurer for FY 2021-22.

It is therefore recommended that the Board of Directors:

1. Discuss and take action as appropriate.

Respectfully submitted,

Amy Chang
Director of Finance and Administration

*

AGENDA ITEM NO. 12

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

May 18, 2021

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: Director of Finance and Administration

SUBJECT: APPOINTMENT OF THE SAN ELIJO JOINT POWERS AUTHORITY AUDITOR

RECOMMENDATION

It is recommended that the Board of Directors:

1. Authorize the General Manager to appoint Leaf & Cole, LLP as the San Elijo Joint Powers Authority's (SEJPA) auditor beginning fiscal year ending June 30, 2021;

2. Authorize the General Manager to execute a three-year contract with Leaf & Cole, LLP not to exceed $58,496; and

3. Discuss and take action as appropriate.

BACKGROUND

State law requires that special districts have an annual, independent audit conducted by the county auditor or a certified public accountant. This information is filed with the State Controller's Office.

In November 2004, the SEJPA Board of Directors adopted Resolution No. 2005-01, a resolution of the Board of Directors Establishing a Policy for the Selection of Auditors. This policy requires periodic review, and possible rotation of the agency's financial audit firm. The intent of the policy was to ensure a high quality audit, and to provide an appropriate degree of auditor independence so that public trust of the agency's management and finances can be maintained.

SEJPA policy states that the "SEJPA Board of Directors shall review whether to rotate auditing firms at least every 5 years. As part of that review, the agency shall seek proposals from qualified auditing firms. The current auditing firm will not be disqualified, provided that it does not propose to assign an auditing partner with lead, review or coordinating responsibility to audit SEJPA's finances who has had such responsibility in any of the previous three or more fiscal years."

DISCUSSION

For the last five years, The Pun Group, LLP has provided audit services to the SEJPA, and that contract is now expired. The quality of work has been good, and the audit team has been professional, punctual, and efficient.

In accordance with SEJPA's purchasing policy, staff solicited request for proposals (RFP) for audit services through its online solicitation system, PlanetBids. The RFP required that the proposing firms provide a scope of work and fee for conducting the audit services for three years, with the SEJPA's option to renew the contract annually for an additional two years.

SEJPA received proposals from five qualified audit firms to provide the requested services. The proposals were submitted in two parts: 1) technical proposal, and 2) the fee proposal. Staff evaluated the technical proposals, which included the firm's experience, the proposed audit team, and the proposed approach for completing the work, to rank the top three firms to interview. Based on the interviews, submitted technical proposals, project approach, and fee proposals, staff is recommending Leaf & Cole, LLP.

The fee proposals submitted are as follows:

Firm	**3-Year Total**
The Pun Group, LLP	$54,091
Leaf & Cole, LLP	**$58,496**
Badawi & Associates	$58,580
DavisFarr	$59,645
Fedak & Brown	$69,300

It is recommended that Leaf & Cole, LLP be engaged to perform audit services for a period of three years beginning with the fiscal year ending June 30, 2021, with the option to extend the contract annually for the following two years.

FINANCIAL IMPACT

Funding for these services is available and will be budgeted in both the Wastewater and Recycled Water Funds.

It is therefore recommended that the Board of Directors:

1. Authorize the General Manager to appoint Leaf & Cole, LLP as SEJPA's auditor beginning fiscal year ending June 30, 2021;

2. Authorize the General Manager to execute a three-year contract with Leaf & Cole, LLP not to exceed $58,496; and

3. Discuss and take action as appropriate.

Respectfully submitted,

Amy Chang
Director of Finance and Administration

Attachment 1: Leaf & Cole, LLP Technical Proposal

Attachment 2: Leaf & Cole, LLP Cost Proposal

Proposal for:

San Elijo Joint Powers Authority

Prepared by:

Michael J. Zizzi, Audit Partner
mjzizzi@leaf-cole.com

Leaf & Cole, LLP
Certified Public Accountants
License No. PAR 984

2810 Camino Del Rio South, Suite 200
San Diego, CA 92108
(619) 294-7200

Leaf & Cole, LLP
Certified Public Accountants

LEAF & COLE, LLP
CERTIFIED PUBLIC ACCOUNTANTS
REQUEST FOR PROPOSALS
TABLE OF CONTENTS

Leaf & Cole, LLP
Certified Public Accountants
A Partnership of Professional Corporations

March 18, 2021

To the Board of Directors
San Elijo Joint Powers Authority

Thank you for giving us the opportunity to submit our proposal for the audit of San Elijo Joint Powers Authority. Our audit will be conducted in accordance with auditing standards generally accepted in the United States of America and the State Controller's minimum audit requirements. Leaf & Cole, LLP is committed to completing these services in a time frame that will meet your needs. We feel uniquely qualified to provide the services required by the San Elijo Joint Powers Authority for the following reasons:

- Leaf & Cole, LLP was founded in 1959 and has grown steadily over the years, with a staff of over 40 individuals, including 25 professionals and 8 partners.

- Our high ratio of partners to staff allows us to be extremely responsive to our clients while providing a quality product.

- The single most important factor in our firm's success over the past sixty-one years has been our uncompromising commitment to the highest standards of quality and professionalism. Providing quality service to our clients is our primary objective, and we have developed review procedures and communications that ensure the highest standards of performance.

- Our special district practice is charged with keeping our clients and our own professionals informed of significant developments in the industry.

- Leaf & Cole has provided services similar to those required by San Elijo Joint Powers Authority to other special districts in the Amador, Los Angeles, Orange, Riverside, Sacramento, San Bernardino, San Diego and San Luis Obispo counties. Including ten (10) years auditing the San Elijo Joint Powers Authority.

- We are proud of our commitment of staying abreast of emerging issues and providing our clients with timely reporting. Our experience in the industry is not limited to auditing financial statements. We provide to our clients single audit reports, agreed-upon procedures, parity calculations, Government Finance Officers Association award assistance and guidance and bond offering official statement preparation assistance.

2810 Camino Del Rio South, Suite 200, San Diego, California 92108-3820
619.294.7200, 619.294.7077 fax, www.leaf-cole.com, leafcole@leaf-cole.com

- Leaf & Cole, LLP has undergone its tenth peer review by the American Institute of Certified Public Accountants (AICPA). This is a program dedicated to ensuring that participating firms have quality control systems in place over their accounting and auditing practices. This program also includes a review of our special district clients. We were pleased to receive the highest rating available.

- Leaf & Cole, LLP is a member of the AICPA's Governmental Audit Quality Center (GAQC). To be eligible for membership, Leaf & Cole, LLP must agree to adhere to the Center's membership requirements. We believe that membership in the GAQC exhibits our commitment to the quality of our work.

Turnover of audit staff is one of the strongest objections voiced by Special Districts. At the date of this proposal, all staff scheduled have previous experience with similar districts, including key personnel assigned to this engagement. This should dramatically reduce the time required and burden placed upon your staff.

Leaf & Cole, LLP is proud of its history of service provided to the districts of Southern California, and has included references for you to call upon. We have not been subject to any Federal or State desk or field reviews, nor have we been subject to any disciplinary action in the 61 year history of the firm. We feel the items noted above render us unsurpassed in the quality of service provided to our clients.

Any questions concerning this proposal should be directed to Michael J. Zizzi, who will be happy to meet with your representatives to provide additional information.

Very truly yours,

LEAF & COLE, LLP

Michael J. Zizzi

PROFILE OF THE FIRM

INDEPENDENCE

Leaf & Cole, LLP is independent of the San Elijo Joint Powers Authority as defined by the standards established by the American Institute of Certified Public Accountants. Leaf & Cole, LLP has performed no services for the San Elijo Joint Powers Authority for the past five years, thus, Leaf & Cole, LLP is considered independent.

LICENSE TO PRACTICE IN CALIFORNIA

Leaf & Cole and all professional staff assigned to the San Elijo Joint Powers Authority audit are properly licensed to practice in the State of California. Following is a list of current licenses with the State Board of Accountancy of the firm and key personnel:

Leaf and Cole	PAR 984
Michael J. Zizzi	55110E
Jenny Kikuno	78435
John Ortaliza	Pending *
Neil Glass	Pending

*Licensed by Philippines Board of Accountancy. California License is pending completion of California Board of Accountancy examination.

FIRM QUALIFICATIONS AND EXPERIENCE

The San Elijo Joint Powers Authority should take note of the strategic commitment to special districts on the part of our firm's management. Special districts are one of the industries that our firm's partners have selected for major long-term investments. This means we dedicate top quality talent and substantial resources to ensure that we stay abreast of emerging industry issues so that we can better serve our clients. Our special district practice is charged with keeping our clients and our own professionals informed about significant developments in the special district industry, and about the impact of these developments on management and operations. We accomplish this through participation on boards as members and officers, as teachers/presenters at Education seminars and other means.

Our governmental audit staff consists of fourteen accountants, including four partners. Our experience in the industry and particularly with the special districts of California allows us to be quite certain of our staffing needs. Fieldwork will be completed by an audit partner and senior. Every accountant at Leaf & Cole, LLP has substantial special district experience. We believe that by assigning partners who will participate in the fieldwork of the engagement, our clients receive the highest quality of service.

Michael J. Zizzi attended the American Institute of Certified Public Accountant's national governmental and not-for-profit training program. Michael has also received the Certificate of Professional Development from the Government Finance Officers' Association of the United States and Canada. This program includes the reporting requirements for the Government Finance Officers' Association Certificate of Achievement Award. Michael also serves as the firm's designated audit quality partner with the AICPA's Governmental Audit Quality Center. Leaf & Cole believes this type of continued education provides our governmental clients with the best quality of service available. Michael has also served as an expert witness in defense of Special Districts.

Leaf & Cole, LLP successfully completed a tenth peer review. This peer review did include specific examination of our governmental auditing practice. A copy of our most recent peer review report has been included in this proposal.

Leaf & Cole, LLP has not been the object of any disciplinary action in the entire history of the firm.

AUDIT APPROACH AND COMMUNICATIONS

Leaf & Cole uses a risk-based audit approach. Our procedures will include gaining an understanding of internal controls, testing select identified controls, and performing substantive and analytical audit procedures. Our documentation is entirely electronic and we emphasize using client-prepared schedules to the maximum extent. This, combined with our practice of assisting clients to increase self-sufficiency, can be important factors in controlling fees. With the extensive involvement of our key audit personnel and our risk-based process, we are able to concentrate our audit work on important areas and make the audit process more productive.

PARTNER AND SUPERVISORY STAFF QUALIFICATIONS

Effective and efficient client service depends on the strength of the engagement team. We believe the key factors of that strength are the availability, responsiveness, experience and commitment of the team. Leaf & Cole is committed to providing an exceptional level of service to all of our clients. The team brings over 65 years of collective experience auditing Special Districts, including ten years with the San Elijo Joint Powers Authority. Neil Glass has also served as the contract accountant for the Encina Wastewater Authority for several years. This experience will greatly accelerate the learning curve and bring great efficiency to the audit process, thus easing the burden placed upon the District's staff.

The engagement team will consist of Michael J. Zizzi, audit partner, Jenny Kikuno, concurring reviewer and an audit senior. All members of the engagement team have extensive audit experience . Most firms will promise the use of management level personnel and commit to a lack of turnover of their teams, but we will be able to deliver on these promises for the term of our engagement by using partners to perform certain aspects of the fieldwork.

Our management level personnel will develop and implement the audit strategies related to your specific needs.

We have included resumes for each of the key individuals discussed in the following appendices.

	Appendices
Michael J. Zizzi	1-A
Jenny Kikuno	2-A
John Ortaliza	3-A
Neil S. Glass	4-A

SIMILAR ENGAGEMENTS WITH OTHER WATER DISTRICTS OR GOVERNMENT ENTITIES

Following is a detail of similar governmental engagements in the last five years:

- ***Templeton Community Services District***
  Natalie Klock - Finance Officer
  (805) 434-4900

  Scope of Work - Audited Financial Statements and State Controller's Report

  Date - June 30, 2001 to Present

  Engagement Partner - Michel J. Zizzi

  Lead Auditor - Neil Glass

- ***Valley Center Municipal Water District***
  Jim Pugh - Director of Finance
  (760) 749-1603 x223

  Scope of Work - Audited Financial Statements

  Date - June 30, 2003 - Present

  Engagement Partner - Michael J. Zizzi

  Lead Auditor - Neil Glass

- ***Lakeside Water District***
  Jeanne Swaringer - Administrative Services Supervisor
  (619) 443-3806

  Scope of Work - Audited Financial Statements

  Date - June 30, 2010 to Present

  Engagement Partner - Michael J. Zizzi

  Lead Auditor - Ryan Keaton

- ***Borrego Water District***
  Geoff Poole - General Manager
  (760) 767-5806

  Scope of Work - Audited Financial Statements

  Date - June 30, 2019 - Present

  Engagement Partner - Michael J. Zizzi

  Lead Auditor - Neil Glass

- ***De Luz Community Services District***
  Theresa Snyder - Finance Manager
  (951) 696-0060

  Scope of Work - Audited Financial Statements, including Single Audit and State Controller's Report

  Date - June 30, 2093 to Present

  Engagement Partner - Michel J. Zizzi

  Lead Auditor - Ryan Keaton

Scope of the Audit

The audit of the San Elijo Joint Powers Authority will be divided into separate and distinct phases. It is note worthy how the audit is structured to gain efficiency by auditing the components of the statement of net position simultaneously with the related revenues and expenses. In addition we will prepare the draft financial statements as part of the preliminary fieldwork in order to resolve any reporting issues early in the process and to identify any new reporting requirements that might affect our fieldwork. San Elijo Joint Powers Authority preliminary fieldwork, the first phase, will take place at a mutually agreed-upon time and will consist of the following areas:

a. Cash receipts and billing
b. Payroll
c. Capital assets
d. Draft financial statements

The fieldwork phase of an audit is the most comprehensive and time consuming portion of the audit. Leaf & Cole would begin fieldwork promptly upon completion of San Elijo Joint Powers Authority's June 30, 2021 financial statements. During this phase our work will include the following accounts:

a. Completion of preliminary fieldwork
b. Cash, restricted cash and investments including investment income and accrued interest receivable
c. Due from Governmental Agencies and the related charges for services
d. Prepaids and loans receivable
e. Capital assets and depreciation
f. Accounts payable and accrued expenses including retentions payable
g. Long-term debt, including accrued interest payable and interest expense
h. Net pension and OPEB liabilities and the related deferred inflows and outflows
i. Net position

Preparing the financial statements and issuing the report are the final product of an audit engagement. Although these steps are the last to be completed, as noted above, they are evolving throughout the entire audit engagement. The following is a summary of anticipated hours by audit phase.

	Senior	Partner	Secondary Partner	Total
Preliminary Fieldwork and Cut-off	24	8	-	32
Field Work	80	16	-	96
Financial Statement and Report	10	8	4	22
Total	114	32	4	150

Grant Bennett Associates
A PROFESSIONAL CORPORATION

Report on the Firm's System of Quality Control

February 27, 2018

To the Partners of Leaf & Cole, LLP and the Peer Review Committee of the California Society of Certified Public Accountants

We have reviewed the system of quality control for the accounting and auditing practice of Leaf & Cole, LLP (the firm) in effect for the year ended June 30, 2017. Our peer review was conducted in accordance with the Standards for Performing and Reporting on Peer Reviews established by the Peer Review Board of the American Institute of Certified Public Accountants (Standards).

A summary of the nature, objectives, scope, limitations of, and the procedures performed in a System Review as described in the Standards may be found at www.aicpa.org/prsummary. The summary also includes an explanation of how engagements identified as not performed or reported in conformity with applicable professional standards, if any, are evaluated by a peer reviewer to determine a peer review rating.

Firm's Responsibility
The firm is responsible for designing a system of quality control and complying with it to provide the firm with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. The firm is also responsible for evaluating actions to promptly remediate engagements deemed as not performed or reported in conformity with professional standards, when appropriate, and for remediating weaknesses in its system of quality control, if any.

Peer Reviewer's Responsibility
Our responsibility is to express an opinion on the design of the system of quality control and the firm's compliance therewith based on our review.

Required Selections and Considerations
Engagements selected for review included engagements performed under *Government Auditing Standards*, including a compliance audit under the Single Audit Act; and audits of employee benefit plans.

As a part of our peer review, we considered reviews by regulatory entities as communicated by the firm, if applicable, in determining the nature and extent of our procedures.

Opinion
In our opinion, the system of quality control for the accounting and auditing practice of Leaf & Cole, LLP in effect for the year ended June 30, 2017, has been suitably designed and complied with to provide the firm with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. Firms can receive a rating of *pass*, *pass with deficiency(ies)* or *fail*. Leaf & Cole, LLP has received a peer review rating of *pass*.

Grant Bennett Associates

GRANT BENNETT ASSOCIATES
A PROFESSIONAL CORPORATION
Certified Public Accountants

GBA CPA
www.gbacpa.com

1375 Exposition Boulevard, Suite 230
Sacramento, CA 95815
916/922-5109 FAX 916/641-5200

P.O. Box 223096
Princeville, HI 96722
888/769-7323

APPENDICES

Michael J. Zizzi
Audit Partner

Education:

- California Polytechnic University San Luis Obispo, Bachelor of Science in Accounting, 1986

Professional Certifications & Affiliations:

- American Institute of Certified Public Accountants, Licensed 1990
- California Society of Certified Public Accountants
- Designated Audit Quality Partner - American Institute of Certified Public Accountants - Governmental Audit Quality Center
- Former Treasurer of World-Champion Parkview Little League
- President and Past Treasurer of San Diego Country Club

Work Experience:

- Leaf & Cole, LLP (32 years)
- KPMG, Peat Marwick (3 years)

Professional Experience:

- Specializes in audits of special districts such as water, housing and fire authorities and nonprofit organizations, including compliance with Uniform Guidance (formerly OMB Circular A-133).
- Also has done extensive work for federally assisted real estate projects and small business auditing, accounting and consulting.
- Responsible for the firm's quality control and peer review functions.
- Instructor for the Special District Board Management Institute which provides professional education for board members and managers of California Special Districts.
- Coordinates the calculating of rebateable arbitrage earnings for clients with bond offerings subject to the appropriate regulations.
- Assists special districts in the gathering and preparation of data in bond offering documents.

Continuing Education:

- Exceeds 120 hours during the last three years including extensive concentration in the statements issued by the Governmental Accounting Standards Board (GASB), Analysis of U.S. General Accounting Office Government Auditing Standards (Yellow Book) and Statements of Auditing Standards issued by the American Institute of Certified Public Accountants.

Jenny Kikuno
Audit Partner

Education:

- San Diego State University, Bachelor of Science in Accounting, 1995

Professional Certifications & Affiliations:

- American Institute of Certified Public Accountants, Licensed 1999
- California Society of Certified Public Accountants
- Burn Institute – Audit Committee Member
- Poway Valley Gymnastics Booster Club - Treasurer
- Former Treasurer and Director of the Combined Health Agencies of San Diego

Work Experience:

- Leaf & Cole, LLP (23 years)

Professional Experience:

- Supervision and preparation of audited financial statements for not-for-profit organizations, affordable housing projects, low-income housing tax credits and single audits conducted in compliance with OMB's Uniform Guidance
- Supervision and preparation of tax returns, with a concentration in partnerships and not-for-profit engagements
- Planning and coordination of curriculum on not-for-profit accounting and auditing and Uniform Guidance topics for the firm's in-house continuing professional education curriculum

Continuing Education:

- Exceeds 120 hours during the past two years, with specific concerns relating to not-for-profits, affordance housing and Single Audits in accordance with OMB's Uniform Guidance

John Romer M. Ortaliza
Audit Senior

Education:

- Maharishi University of Management – Fairfield, Iowa, Master of Business Administration, 2017-2019
- University of the East – Manila, Philippines, Bachelor of Science in Accountancy, 2000-2005

Professional Certifications & Affiliations:

- Philippine Institute of Certified Public Accountants – Manila, Philippines, Licensed 2005
- Association of Certified Fraud Examiners - Austin, Texas, Licensed 2015
- XBRL International Inc., XBRL Foundation Certified, 2017
- Sarbanes Oxley Compliance Professionals Association, Member
- American Institute of Certified Public Accountants, Member
- Institute of Internal Auditors, Member

Work Experience:

- Leaf & Cole LLP (3 years)
- Grant Thornton Chartered Accountants – Nassau, Bahamas (6 years)
- Ernst & Young Philippines – Makati City, Philippines (5 years)

Professional Experience:

- Supervision and audit of financial statements for medium and small audit engagements in industries such as banking, finance, investment houses, funds, manufacturing, hospitals, special districts and not-for-profit organizations.

Continuing Education:

- Continuing education for MBA – currently taking CMA 2 - Financial Decision Making
- Association of Certified Fraud Examiners CPE requirements compliant
- In-house trainings relating to auditing and taxation

Neil Glass
Audit Senior

Education:

- Long Island University, C.W. Post Campus Masters of Science in Accounting, 1989
- University of Rhode Island, Bachelor of Science in Marketing, 1984

Work Experience:

- Leaf & Cole, LLP (28 years)
- Jack Dobosh, CPA (3 years)

Professional Experience:

- Includes preparation of audited financial statements for governmental and nonprofit entities, including compliance requirements under OMB's Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.

- Provides accounting services to clients by preparing compilations, reviews, and various business tax returns.

Continuing Education:
Exceeds 120 hours during the last three years including concentration in the statements issued by the Governmental Accounting Standards Board and Analysis of U.S. General Accounting Office Governmental Auditing Standards (Yellow Book).

Special District Experience

Special District Experience:

- Amador Water Agency
- Arcade Water District
- San Elijo Joint Powers Authority
- Carmichael Water District
- Community Service District No. 88-3 of the Rancho California Water District
- De Luz Community Services District
- Descanso Water District
- Encina Wastewater Authority
- Fairbanks Ranch Community Services District
- Joshua Basin Water District
- Lake Cuyamaca Recreation and Park District
- Lakeside Water District
- Newhall County Water District
- Otay Water District
- Pico Water District
- Rainbow Municipal Water District
- Rancho California Water District
- San Elijo Joint Powers Authority
- Santa Fe Irrigation District
- South Coast Water District
- Southeast San Diego Redevelopment Agency
- Templeton Community Services District
- Trabuco Canyon Water District
- Vallecitos Water District
- Valley Center Fire Protection District
- Valley Center Municipal Water District
- Vista Irrigation District
- Yorba Linda Water District

Attachment 2

DOLLAR COST BID

PROPOSAL FOR

SAN ELIJO JOINT POWERS AUTHORITY

FOR PROFESSIONAL AUDITING SERVICES FOR THE

FISCAL YEARS ENDING JUNE 30, 2021 THROUGH 2023

PREPARED BY

LEAF & COLE, LLP

CERTIFIED PUBLIC ACCOUNTANTS

CONTACT PARTNER

MICHAEL J. ZIZZI
2810 CAMINO DEL RIO SOUTH, SUITE 200
SAN DIEGO, CALIFORNIA 92108
(619) 294-7200

MARCH 18, 2021

Leaf & Cole, LLP
Certified Public Accountants

Leaf & Cole, LLP
Certified Public Accountants
A Partnership of Professional Corporations

March 18, 2021

To the Board of Directors
San Elijo Joint Powers Authority

Leaf & Cole's fees are based on the estimated time spent on the engagement and the billing rates of the individuals assigned. We have strong credentials in the special district industry. Based on our experience with other special districts, our total all-inclusive maximum price for the 2021 engagement is $18,925 with the 2022 and 2023 engagements set at $19,493 and $20,078, respectively. Rates in future years will be adjusted for changes in the Consumer Price Index, currently estimated at 3%.

Michael J. Zizzi is entitled to represent Leaf & Cole, LLP, empowered to submit the proposal and authorized to sign the contract with San Elijo Joint Powers Authority.

Very truly yours,

LEAF & COLE, LLP

Michael J. Zizzi

2810 Camino Del Rio South, Suite 200, San Diego, California 92108-3820
619.294.7200, 619.294.7077 fax, www.leaf-cole.com, leafcole@leaf-cole.com

BIDDING PROPOSAL

Our fees are based on the time spent on the engagement and the billing rates of the individuals assigned. The following is a summary of the tasks to be performed and our proposed fee:

Annual audited financial statements for the San Elijo Joint Powers Authority	$ 18,925
Travel	N/C
Preparation of Annual Management Letter	N/C
Preparation of appropriate communication letter	N/C
Presentation of audited financial statements	N/C
	$ 18,925

This fee is an all-inclusive maximum price and contains all direct and indirect costs including all out-of-pocket expenses.

	Hours	Hourly Rate	Total
Partner	32	$ 280	$ 8,960
Concurring Reviewer	4	280	1,120
Senior Accountant	114	170	19,380
Less: Professional discount			(10,535)
Subtotal			$ 18,925

Although fees are important, they should not, in our view, be the determining factor in the selection of an accounting firm for San Elijo Joint Powers Authority. The choice of independent accountants and business advisors should always be made primarily on the basis of qualifications, capabilities, and commitment. Please note, not only the hours committed, but from whom those hours are provided and the years of experience in the industry.

We will spare no effort now or in subsequent years to find common ground for providing an exceptional level of service to San Elijo Joint Powers Authority, at a reasonable cost.

AGENDA ITEM NO. 14

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

May 18, 2021

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: SAN ELIJO JOINT POWERS AUTHORITY RECYCLED WATER PROGRAM - PROPOSED WHOLESALE AGREEMENT AMENDMENT

RECOMMENDATION

It is recommended that the Board of Directors:

1. Authorize the General Manager to execute a Sixth Amendment to the Agreement for Sale of Reclaimed Water to the Santa Fe Irrigation District by the San Elijo Joint Powers Authority, subject to the General Manager's final negotiations with the District and General Counsel's final review; and

2. Discuss and take action as appropriate.

BACKGROUND

The San Elijo Joint Powers Authority (SEJPA) operates a recycled water utility that sells recycled water to four water purveyors; Santa Fe Irrigation District (SFID), San Dieguito Water District (SDWD), Olivenhain Municipal Water District (OMWD) and the City of Del Mar; and also has an interruptible service agreement directly with the Encinitas Ranch Golf Authority. The purveyors then sell the recycled water to end customers. SEJPA owns the majority of the recycled water infrastructure system including treatment, storage, and pipelines. The water districts generally own only the recycled water meter that measures the customer's usage and provide customer billing and other needed administrative services. SEJPA works collaboratively with the water purveyors to provide seamless utility and customer service, as well as to meet regulatory quality control and oversight requirements.

SEJPA has individual wholesale water agreements with each water purveyor that includes pricing structure, water quality, and minimum purchase volume.

Since the execution of the original wholesale agreement with SFID approximately 24 years ago, SFID and SEJPA have worked together to amend the agreement for contractual items such as meter fees, price per acre-foot, and the minimum quantity of water to be purchased. The current agreement amendment is set to expire on June 30, 2021.

DISCUSSION

Staff has met with representatives from SFID to prepare the Sixth Amendment to the Agreement for Sale of Reclaimed Water to the Santa Fe Irrigation District by the San Elijo Joint Powers Authority (Attachment 1). The amendment was developed collaboratively, with focus on improving the value that the recycled water utility provides to SFID, SEJPA, and the communities they serve. Currently, SFID and SEJPA staff are working to expand the use of recycled water for landscape irrigation to conserve potable water supplies and previously have partnered on studies that examine the option of purifying the water for potable reuse. The proposed Sixth Amendment was prepared with this partnership approach for future collaboration.

This proposed amendment with SFID continues a model of consistency as it further aligns terms and conditions with the more recent recycled water amendments of OMWD, SDWD, and Del Mar. The agreement period will end on June 30, 2031 with price increases of no less than 2% and no more than 5% based on a cost-of-service methodology. It is substantially similar to the fifth agreement amendment with the most material change being the reduction of the guaranteed minimum annual purchase volume from 450 AFY to 375 AFY. Changing the minimum annual purchase volume to approximately 75% of the average usage is consistent with OMWD, SDWD, and Del Mar recycled water agreements. The inclusion of a minimum annual purchase volume provides financial security to the recycled water utility and lessens the need for fixed utility fees and higher financial reserve levels. However, the minimum annual purchase volume also needs to be set at a reasonable level to account for natural fluctuations in the purchasing behaviors of the end customers. Recent amendments with the other water purveyors served by the recycled water utility have the minimum annual purchase volume at approximately 75% of their average usage.

SFID is scheduled to present the proposed agreement to their Board of Directors for consideration on May 20, 2021.

FINANCIAL IMPACT

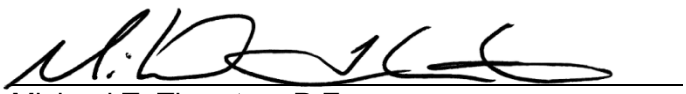
Approval of this amendment will be consistent with other agreements and correspond with the proposed Cost of Service Study.

It is therefore recommended that the Board of Directors:

1. Authorize the General Manager to execute a Sixth Amendment to the Agreement for Sale of Reclaimed Water to the Santa Fe Irrigation District by the San Elijo Joint Powers Authority, subject to the General Manager's final negotiations with the District and General Counsel's final review; and

2. Discuss and take action as appropriate.

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

Attachment 1: Sixth Amendment to the Agreement for Sale of Reclaimed Water to the Santa Fe Irrigation District by the San Elijo Joint Powers Authority

SIXTH AMENDMENT TO THE AGREEMENT FOR SALE OF RECLAIMED WATER TO THE SANTA FE IRRIGATION DISTRICT BY THE SAN ELIJO JOINT POWERS AUTHORITY

This Sixth Amendment to the Agreement for Sale of Reclaimed Water, hereinafter referred to as the "Sixth Amendment," is made and entered into this 18 day of May 2021, by and between the San Elijo Joint Powers Authority, a joint powers authority, hereinafter referred to as the "San Elijo JPA," and the Santa Fe Irrigation District, a California irrigation district, hereinafter referred to as the "Reclaimed Water Purveyor."

RECITALS

WHEREAS, the San Elijo JPA and the Reclaimed Water Purveyor voluntarily entered into an agreement dated October 10, 1996, first amendment dated August 14, 2000, for the sale of reclaimed water by the San Elijo JPA to the Reclaimed Water Purveyor, hereinafter referred to as the "Purveyor Agreement"; and

WHEREAS, a Second Amendment of the Purveyor Agreement was executed on November 22, 2010 in order to modify the pricing structure for a two-year period; and

WHEREAS, a Third Amendment of the Purveyor Agreement was executed on October 23, 2012 in order to modify the pricing structure for a one-year period; and

WHEREAS, a Fourth Amendment of the Purveyor Agreement was executed on January 1, 2014 in order to modify the pricing structure for a three-year period; and

WHEREAS, a Fifth Amendment of the Purveyor Agreement was executed on October 1, 2016, in order to modify the pricing structure, set minimum quantity commitments until June 30, 2021; and

WHEREAS, Section 19 of the Purveyor Agreement provides that after the initial 20-year term of the Purveyor Agreement (from October 10, 1996 to October 10, 2016), the term of the Purveyor Agreement shall continue in force from year to year unless terminated by either of the parties as specified therein; and

WHEREAS, Section 11 of the Purveyor Agreement provides that the cost of reclaimed water to the Reclaimed Water Purveyor in subsequent years may be adjusted by agreement of both parties no later than February 1st each year; and

WHEREAS, the majority of the San Elijo JPA Reclaimed Water Program infrastructure debt will be retired in FY 2020-21 and this will be considered a triggering event whereby the parties may re-evaluate both price and quantity of water delivered under this contract by mutually agreeable amendment. The re-evaluation of the price of water delivered under this Agreement shall be based on a cost-of-service analysis; and

WHEREAS, the parties are interested in voluntarily amending the terms of the Purveyor Agreement to adjust the cost of reclaimed water to the Reclaimed Water Purveyor pursuant to

Section 11 of the Purveyor Agreement, continue pricing based on cost of service principles, and set minimum quantity commitments for reclaimed water delivery until June 30, 2031.

NOW, THEREFORE, in consideration of these recitals and the mutual covenants contained herein, and notwithstanding anything to the contrary in the Purveyor Agreement, the San Elijo JPA and Reclaimed Water Purveyor agree as follows:

1. The provisions of this Sixth Amendment shall apply to the sale of reclaimed water by the San Elijo JPA to the Reclaimed Water Purveyor commencing July 1, 2021, through June 30, 2031 ("Sixth Amendment Term"). Upon expiration of the Sixth Amendment Term, this Sixth Amendment and the provisions of the Purveyor Agreement not in conflict herewith shall continue in force unless and until the Purveyor Agreement is terminated or further amended as provided therein, or is replaced by mutual written agreement.

2. For the Sixth Amendment Term, the pricing provisions of Section 11 of the Purveyor Agreement are suspended and San Elijo JPA and the Reclaimed Water Purveyor agree that the cost of reclaimed water charged by the San Elijo JPA to Reclaimed Water Purveyor shall increase as follows:

    a) From July 1, 2021 through June 30, 2026, the rate charged by San Elijo JPA to the Reclaimed Water Purveyor for reclaimed water shall escalate on July 1 of each year at a rate no less than 2% annually and no greater than 5% annually as prescribed through a mutually acceptable cost-of-service based methodology.

    b) In the event that the parties do not reach an agreement on the applicable rate by July 1, a rate increase of three percent (3%) shall go into effect through June 30 of the following year provided that either party may initiate binding arbitration to determine if a different increase between two percent (2%) and five percent (5%) is necessary for the price to reflect, but not exceed, the reasonable estimated costs of providing reclaimed water for the applicable July 1 to June 30 time period, and/or terminate the agreement upon one (1) years' written notice to the other party. In the event either party initiates arbitration, the Parties shall bear their own costs and fees incurred related to such arbitration.

3. For the Sixth Amendment Term, the following additional provisions of the Purveyor Agreement are modified as set forth below:

    a) Reclaimed Water Purveyor agrees to purchase from the San Elijo JPA no less than three hundred seventy-five (375) acre-feet ("AF"). In the event Reclaimed Water Purveyor fails to accept the minimum 375 AF per year, Reclaimed Water Purveyor agrees to pay for the difference between the AF accepted by the Reclaimed Water Purveyor during the fiscal year and the minimum 375 AF at the applicable reclaimed water rate stated in this Sixth Amendment.

    b) San Elijo JPA shall make available and deliver a minimum reclaimed water supply of 500 acre-feet per year ("Supply Minimum") to Reclaimed Water Purveyor, which may be requested in whole or in part, at Reclaimed Water Purveyor's option.

c) The Reclaimed Water Purveyor and the San Elijo JPA agree that the Administrative Costs, as defined in Section 5, shall continue to be waived. In lieu of payment by the San Elijo JPA, the Reclaimed Water Purveyor shall collect its administrative costs through the application of a meter fee to the end customer.

d) The supplemental water pricing provisions of Section 9 of the Purveyor Agreement are superseded and San Elijo JPA and the Reclaimed Water Purveyor agree the price of domestic potable water used for Supplemental Water as defined in Section 9 of the Purveyor Agreement shall be equal to the wholesale price of reclaimed water as set by this Sixth Amendment. The Reclaimed Water Purveyor shall Invoice the San Elijo JPA for Supplemental Water, including applicable meter fees associated with the Supplemental Water supply meter.

Except as expressly provided herein, the remaining terms and conditions of the Purveyor Agreement shall remain in full force and effect. This Sixth Amendment shall not affect the term of the Purveyor Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Sixth Amendment to be executed and be effective on the date first mentioned above.

SAN ELIJO JOINT POWERS AUTHORITY	**SANTA FE IRRIGATION DISTRICT**
By: _____	By: _____
Name: Michael T. Thornton, P.E.	Name: Albert C. Lau, P.E.
Its: General Manager	Its: General Manager

AGENDA ITEM NO. 15

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

May 18, 2021

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: Director of Finance and Administration

SUBJECT: RECYCLED WATER COST OF SERVICE AND PROPOSED WHOLESALE RATES AND RESERVE POLICY

RECOMMENDATION

It is recommended that the Board of Directors:

1. Accept and file the Carollo Engineers Recycled Water Rate Study;

2. Approve 3.9% annual Recycled Water Rate increase to Santa Fe Irrigation District (SFID), San Dieguito Water District (SDWD), Olivenhain Municipal Water District (OMWD), and the City of Del Mar beginning July 1, 2021, July 1, 2022, July 1, 2023, July 1, 2024, and again beginning July 1, 2025;

3. Authorize the General Manager to decrease the annual rate increase if San Elijo Joint Powers Authority's recycled water reserve fund exceeds 75% of the Recycled Water Reserve Fund Policy requirement on or after July 1, 2024;

4. Adopt the Resolution of the Board of Directors of the San Elijo Joint Powers Authority Establishing the Recycled Water Reserve Fund Policy; and

5. Discuss and take action as appropriate.

BACKGROUND

San Elijo Joint Powers Authority (SEJPA) owns and operates a utility that wholesales recycled water to four water purveyors; Santa Fe Irrigation District (SFID), San Dieguito Water District (SDWD), Olivenhain Municipal Water District (OMWD), and the City of Del Mar; and also has an interruptible service agreement directly with the Encinitas Ranch Golf Authority (ERGA). The agreement between SEJPA and the water purveyors provides the allowance for annual price increases as prescribed through a cost-of-service methodology.

In 2020, SEJPA retained Carollo Engineers (Carollo) to conduct the 2021 Recycled Water Rate Study (Study). The purpose of this Study is to assess SEJPA's current recycled water wholesale

rates, financial metrics, and recycled water demands and provide rate recommendations for FYE 2022 through 2026. The Study provides the basis for the cost of recycled water service, which was developed through a detailed review of current and estimated future expenses (operational, capital, debt, and reserve requirements) of the Recycled Water Program. The report then analyzed the program's current and estimated future revenues (water sales, grants, and incentives) to determine adequacy of revenues to meet expenses.

At the March 2021 SEJPA Board meeting, staff presented the recycled water cost-of-service and capital improvement program (CIP) workshop and received Board direction to incorporate a revised and formalized reserve policy and a 10-year capital improvement plan in the draft cost-of-service study.

At the April 2021 SEJPA Board meeting, staff presented the Study (Attachment 1) prepared by Carollo and discussed the recommended 3.9% annual rate increases for the non-interruptible customers through FYE 2026 coupled with financing approximately half of the expected CIP expense ($5.5 million) which provided the optimal financial plan. Staff informed the Board that this item was being presented for public discussion in April 2021 and that it would be returned in May 2021 for consideration to accept and file the report and take action on setting future recycled water rates. Staff also presented the Recycled Water Reserve Policy (Attachment 2) and the 10-year capital improvement concept plan.

DISCUSSION

Staff has discussed the Study and associated rate increase with the water purveyors served by the recycled water utility. The water purveyors' staff expressed appreciation for the inclusion in the process and understand the approach and basis for the recommended 3.9% annual rate increase for FY 2021-22, FY 2022-23, FY 2023-24, FY 2024-25, and FY 2025-26, and the $5.5 million debt financing, with the consideration to reduce the rate increase if the reserve fund level exceeds 75% of the reserve policy requirements on or after July 1, 2024.

FINANCIAL IMPACT

Based on budgeted and projected water sales, the proposed 3.9% rate increases coupled with PAYGO and $5.5 million debt financing will result in adequate funding for the recycled water utility for the 5-year period, FYE 2022 through FYE 2026. The basis for this rate increase is supported by the cost-of-service evaluation conducted by Carollo (Attachment 1) to fund operating expenses, debt, and capital projects while developing reserve funds consistent with industry best practices (Attachment 2), coupled with minimum purchase volumes necessary to protect from and respond to unforeseen circumstances that impact revenues or costs.

It is therefore recommended that the Board of Directors:

1. Accept and file the Carollo Engineers Recycled Water Rate Study;

2. Approve 3.9% annual Recycled Water Rate increase to Santa Fe Irrigation District (SFID), San Dieguito Water District (SDWD), Olivenhain Municipal Water District (OMWD), and the City of Del Mar beginning July 1, 2021, July 1, 2022, July 1, 2023, July 1, 2024, and again beginning July 1, 2025;

3. Authorize the General Manager to decrease annual rate increase if San Elijo Joint Powers Authority's recycled water reserve fund exceeds 75% of the Recycled Water Reserve Fund Policy requirement on or after July 1, 2024;

4. Adopt the Resolution of the Board of Directors of the San Elijo Joint Powers Authority Establishing the Recycled Water Reserve Fund Policy; and

5. Discuss and take action as appropriate.

Respectfully submitted,

Amy Chang
Director of Finance and Administration

Attachment 1: Carollo Engineers 2021 Recycled Water Rate Study

Attachment 2: Resolution of the Board of Directors of the San Elijo Joint Powers Authority Establishing the Recycled Water Reserve Fund Policy

Attachment 1

2021 RECYCLED WATER RATE STUDY

San Elijo Joint Powers Authority

April 2021

carollo

Contents

Tables

Figures

Section 1

INTRODUCTION

1.1 Background

1.1.1 About San Elijo Joint Powers Authority

The San Elijo Joint Powers Authority (SEJPA or Authority) owns and operates a recycled water utility within San Diego County, California with deliveries beginning in 2000. At that time, SEJPA initiated recycled water service to Santa Fe irrigation District (SFID), the San Dieguito Water District (SDWD), and the City of Del Mar. Starting in 2011, SEJPA began providing interruptible recycled water service to the Encinitas Ranch Golf Authority (ERGA) as part of an agreement with SDWD and ERGA. Recycled water service to Olivenhain Municipal Water District (OMWD) began in 2012. Service is provided to the purveyors and to ERGA through contract agreements with SEJPA that includes specifications for water quality, annual consumption volume, pricing, and other terms and conditions.

SEJPA's recycled water system includes tertiary treatment, transmission, storage, distribution, and advanced water purification (AWP) facilities. The recycled water utility can produce more than three million gallons per day (gpd). SEJPA's recycled water program creates a locally produced and drought resistant water supply for irrigation and industrial uses, thereby improving water reliability regionally. The San Diego region currently relies on imported water for the majority of its water supply. In addition, recycled water generally has a lower energy footprint than imported water or ocean desalination, which aligns with both local and state climate action goals.

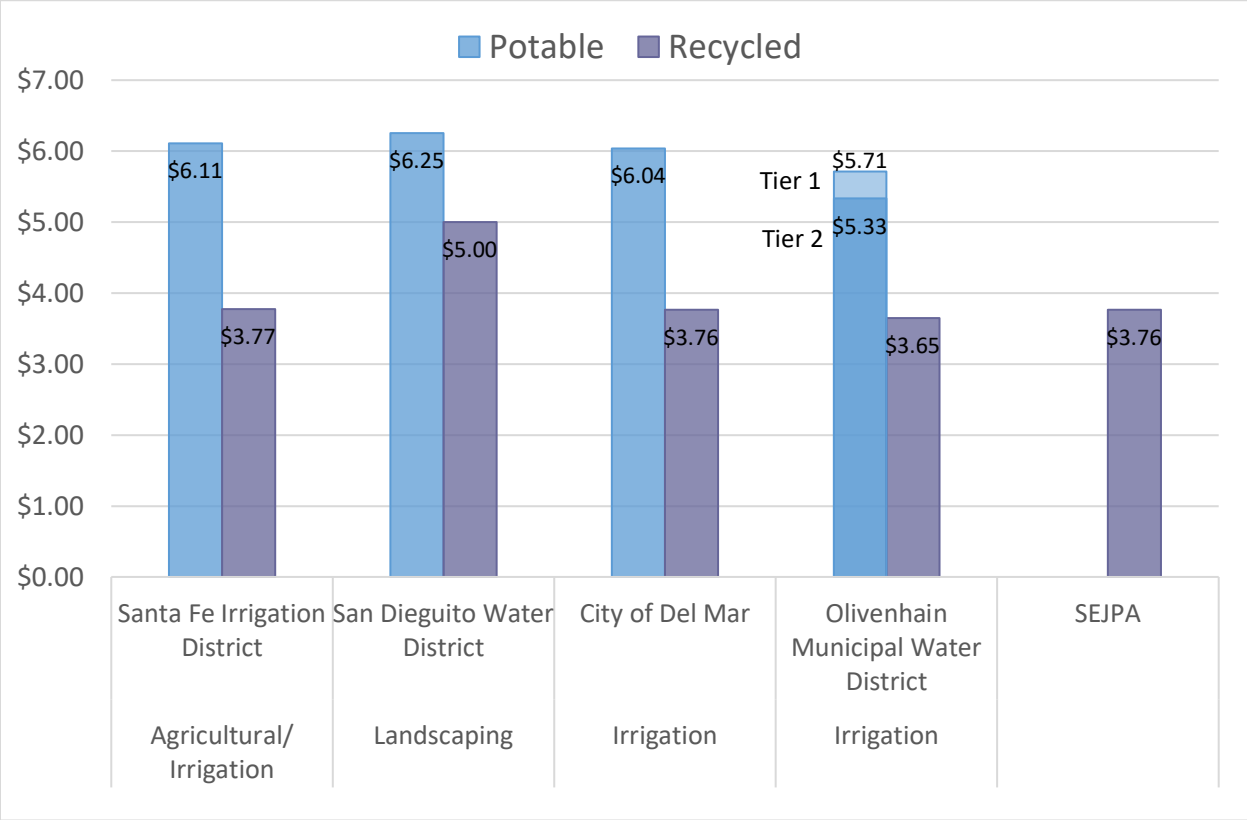
SEJPA actively collaborates with the water purveyors to expand the use of recycled water by facilitating customer conversions and connections, expanding distribution and storage infrastructure, and incentivizing infrastructure expansion by the purveyors through pipeline lease and purchase agreements.

When the recycled water utility launched in 2000, water pricing was established as 85-percent of the applicable potable water rate as set by the water purveyors, which provided a 15-percent discount to the customer as incentive to use recycled water. In 2014, the recycled water agreements between SEJPA and the water purveyors were amended to remove the "indexing" of recycled water rates to potable water rates. In lieu of indexing, future recycled water rates would be established using cost of service principles. This change in recycled water pricing produced additional savings to water purveyors and ultimately the customers. For example, SFID in 2021 retails recycled water at $3.77 per HCF or 62-percent of the Irrigation/Commercial Agriculture water rate, producing a 38-percent discount to recycled water customers.

OMWD's rate for recycled water is $3.65 per HCF; SDWD's rate for recycled water varies from $4.34 to $5.09 per HCF based on use type; and Del Mar's rate is $3.76 per HCF. Each water purveyor has its own methodology for recovering costs for the provision of recycled water service and all rate are at least 20-percent less than the corresponding potable water category. Looking forward, each water purveyor has developed its own potable water cost of service forecast with future water rates generally increasing between 2.6-percent and 6.5-percent with SFID forgoing its planned 2021 rate increase of 3% due to local economic conditions. On the regional level, San Diego County Water Authority is planning its 2021 rate increase at 4.8-percent. Figure 1

compares the water purveyors' current potable water irrigation or landscape rate and recycled water rate to SEJPA's current rate.

Figure 1 Water Purveyors Current Potable and Recycled Water Rates per HCF



1.1.2 Study Purpose

SEJPA retained Carollo Engineers (Carollo) to conduct this 2021 Recycled Water Rate Study (Study). The purpose of this Study is to assess SEJPA's current recycled water wholesale rates, financial metrics, and recycled water demands and provide rate recommendations starting with FYE 2022 through FYE 2026.

Having been in operation for just over 20 years, SEJPA's recycled water program is in the process of maturing into an established utility. While the customer base continues to grow slowly, which adds a level of certainty to expected demands, demand fluctuation and revenue volatility can be impacted by weather. Further, some system components are beginning to near the end of their expected useful life and will require rehabilitation or replacement in the near term to ensure the system's reliability. Lastly, the incentives that SEJPA receives from the Metropolitan Water District of Southern California (MWD) and from the San Diego County Water Authority (SDCWA) will sunset after FYE 2026, decreasing annual revenues by approximately $700,000. Given these factors, it is important that the rate plan provides fiscal stability by providing sufficient reserves to protect from demand fluctuations, and generate the necessary revenues to continue investing in the system through capital projects.

1.1.3 Forward-Looking Statement

The calculations and forecasts of this analysis are based on a reasonable projection of existing service costs, recycled water demands, and system operations with information available, and on existing legal

requirements. These projections are based upon operational and financial data provided by SEJPA. SEJPA may need to revisit the financial plan and rate setting analysis if significant changes occur in the assumed inputs for this analysis, such as unexpected changes to SEJPA's recycled water agreements, changes occurring in specific California law governing water agencies, or further regulatory actions by the Governor of California or the California State Water Resources Control Board (SWRCB) in regard to water.

1.2 Overview of Rate-Setting Process

Carollo's rate-setting methodology is consistent with industry guidelines established by the M1 Manual, which is published by the American Water Works Association (AWWA), a national industry trade group that makes recommendations on generally accepted practices in the water industry. An overview of this approach is outlined in Figure 2.

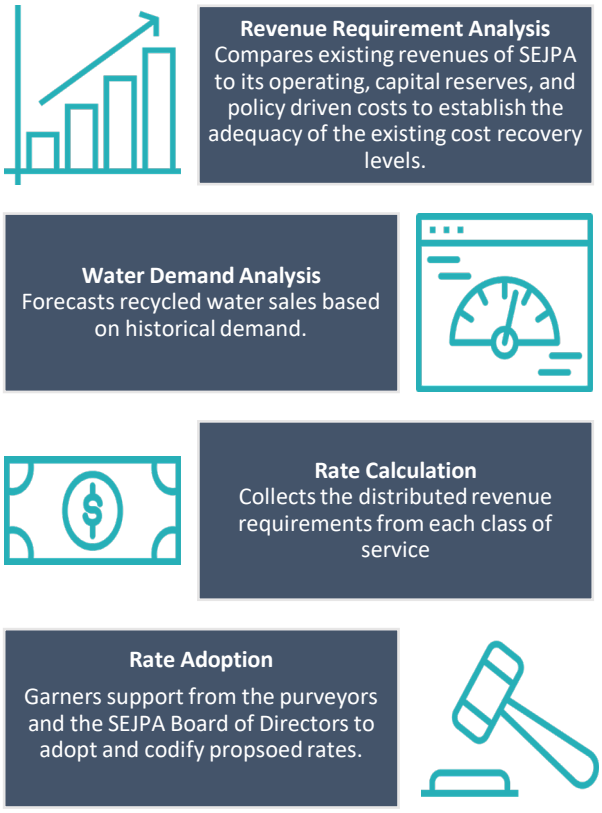


Figure 2 Conceptual Overview of the Rate-Setting Process

1.2.1 Revenue Requirement Analysis

The revenue requirement analysis compares the forecasted revenues of SEJPA (under existing rates and forecasted recycled water demands) to its forecasted operating and capital costs. This step tests the adequacy of the existing rates to recover SEJPA's forecasted costs. If there are shortfalls, increases to rate revenue are recommended until the tests are passed.

1.2.2 Recycled Water Demand Analysis

Forecasting recycled water sales is a critical component in the rate setting process. As part of the budget process, SEJPA forecasts the expected recycled water demand based on historical demand, weather, and other variables. Future demands are based on historic sales and escalated for projected growth. Two scenarios were developed that forecasted future water sales creating high and low demand projection. These forecasted recycled water demands are then compared against forecasted revenue requirements and various rates scenarios are developed to recover costs, fund capital projects, and meet reserve fund goals.

1.2.3 Rate Calculation

The rate calculation provides the final nexus between the revenue requirements and final rates that purveyors are charged. This process connects planned expenditures to the designed rates by establishing rates to match the estimated revenue generation with expenditures and to account for adequate program reserves.

1.2.4 Rate Adoption

As a wholesaler providing service under contract agreements, SEJPA is not subject to the procedural requirements for rate adoption under California Proposition 218, as well as its strict rate setting requirements. Nonetheless, it is important that the recycled water rates are set in a manner that reflects the true revenue requirements of providing recycled water service and proportionally recover those costs to the purveyors

based on their usage of the system. SEJPA also proactively engages with the purveyors during the rate setting process to garner support for the rates prior to presenting them to the Board of Directors for consideration and adoption.

1.3 Existing Rate Structure

SEJPA's agreements with SFID, SDWD, OMWD, and the City of Del Mar include minimum annual purchase volumes. SEJPA's interruptible service agreement with ERGA includes a minimum annual delivery volume. All of these minimum volume agreements allow the Authority to establish a minimum annual revenue stream for the program, which helps support the Authority's AA+ financial rating as well as to help reduce future rate volatility that can result from dramatic swings in annual water purchases from the program participants.

Table 1 Minimum Purchase Volumes

Purveyor	Minimum Purchase Volume (AFY), as of FYE 2021
Santa Fe Irrigation District	450
San Dieguito Water District	300
City of Del Mar	85
Encinitas Ranch Golf Authority	200
Olivenhain Municipal Water District	185
Total Minimum Purchase Volume, All Purveyors	**1,220 AFY**

Rate volatility is also limited by terms and condition within the existing purveyor agreements, which have a floor and ceiling provision that limits rate increases between 2 and 5 percent annually. Following the Authority's previous 2018 Recycled Water Rate Study, SEJPA implemented annual 3.8-percent rate increases from FYE 2018 through FYE 2021. Each recycled water purveyor, which the exception of ERGA, has a non-interruptible service agreement with SEJPA and each is charged the same recycled water rate on a $/AF basis as shown in Table 2 below. ERGA receives a pre-determined 4-percent annual increase as set forth in the agreement with the Authority, as this is an interruptible service agreement.

Table 2 Existing Recycled Water Rate

	FYE 2018	FYE 2019	FYE 2020	FYE 2021
Approved Rate Increase	3.8%	3.8%	3.8%	3.8%
Recycled Water Rate ($/AF)	**$1,466**	**$1,522**	**$1,580**	**$1,640**

Section 2

ASSUMPTIONS

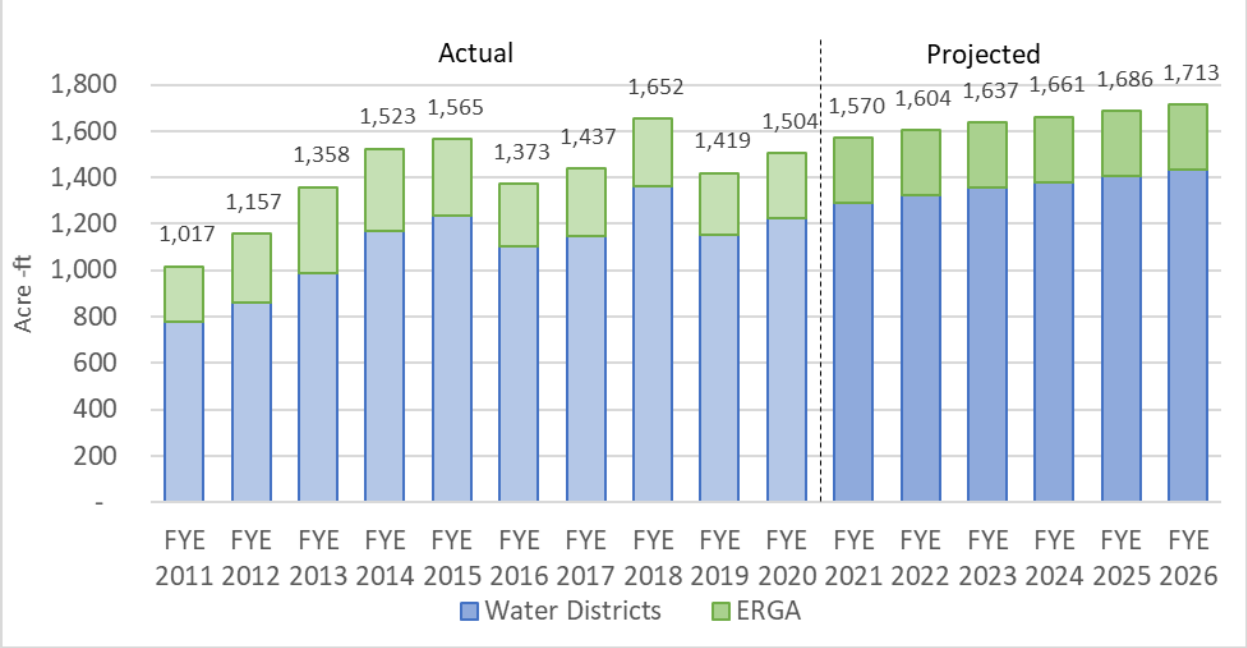
The Authority's recycled water revenues and expenses analyzed in this Study are forecasted based on actual and budgeted revenues, expenses, and demands by customer. Actual and budgeted revenues and expense data were provided by SEJPA in the form of audited financial statements and budget documents. Recycled water demands and cost escalation factors were forecasted based on discussion with Authority staff, industry data, and historical trends.

2.1 Recycled Water Demand

Recycled water sold by SEJPA via the purveyors is used almost exclusively for outdoor irrigation, with a minor demand component for industrial uses such as cooling towers and wash-water. Annual demands are influenced heavily by weather variation year-over-year. As shown in Figure 3, recycled water demands have fluctuated historically, with a general upward trend. Demands decreased in FYE 2016 during the last major drought as the State and local agencies mandated conservation measures. Although conservation was not mandated for recycled water, the message to conserve appeared to be received by both potable and recycled water customers as consumption was noticeably reduced. Demands then rebounded through FYE 2018 before decreasing again in FYE 2019 due to above average rainfall.

The Authority, its Member Agencies (City of Encinitas and Solana Beach), and the water purveyors have supported the continued investment and growth of recycled water use within their area of influence. Projects completed in the last five years include Village Park, Encinitas Ranch, and Via de la Valle expansion projects. It should be noted that the connection of new customers to these projects has been slower than originally forecasted.

Figure 3 Historical and Projected Recycled Water Demands



When looking forward, this Study considered annualized demand growth at 1.8% in the near team (next five years) and 0.5% thereafter. SEJPA has made investments to expand and improve the recycled water utility, often in partnership with the water purveyors or with the Cities of Encinitas and Solana Beach. The forecasted increase in recycled water demands reflects the expectation that new customers will continue to connect to the system via the recently constructed pipelines in the cities of Solana Beach and Encinitas, coupled with infill connections and retrofits to SEJPA's existing distribution system, as well as with the return of Caltrans landscape irrigation within the I-5 corridor.

The recycled water revenues analyzed in this Study are forecasted based on the expected demands from each purveyor. Table 3 summarizes the actual and forecasted recycled water demands by purveyor. Projected increases in demand for each customer are based on the expected new connections to the recycled water system within each customer's service area.

Table 3 Actual and Forecasted Recycled Water Demands (AF)

Customer	Actual FYE 2020	Budget FYE 2021	Forecasted FYE 2022	Forecasted FYE 2023	Forecasted FYE 2024	Forecasted FYE 2025	Forecasted FYE 2026
SFID	522	550	555	558	561	564	566
SDWD	366	385	397	409	411	413	415
City of Del Mar	108	114	114	114	114	114	114
ERGA	279	280	280	280	280	280	280
OMWD	229	241	258	276	295	316	338
Total Customer Usage[1]	**1,504**	**1,570**	**1,604**	**1,637**	**1,661**	**1,686**	**1,713**
(Less): ERGA	(279)	(280)	(280)	(280)	(280)	(280)	(280)
Total Usage for Rate Calculation	**1,225**	**1,290**	**1,324**	**1,357**	**1,381**	**1,406**	**1,433**

Notes:
(1) Projected usage includes supplemental potable water use, projected to be 6 AF per year in FYE 2021 through FYE 2025 and 7 AF in FYE 2026.
(2) Totals may not tie due to rounding.

2.2 Operating Revenues

SEJPA collects approximately 75-percent of its revenues through recycled water sales. SEJPA's other operating revenues include grants and annual incentives provided by MWD and SDCWA, which provides an incentive for up to 1,600 AFY in total annual sales. MWD provides $250/AF, and SDCWA provides $200/AF. The incentive program will sunset in September 2025.

Table 4 shows operating revenues from FYE 2021 budget to FYE 2026 projections. Each revenue item was calculated based on the projected recycled water demands. ERGA revenue was escalated at 4-percent per year, based on the existing agreement with the Authority.

Table 4 Projected Revenues with Current Rates

Revenue Item	Budget FYE 2021	Projection FYE 2022	Projection FYE 2023	Projection FYE 2024	Projection FYE 2025	Projection FYE 2026
Santa Fe Irrigation District	$902	$911	$915	$920	$924	$929
San Dieguito Water District	632	651	670	673	677	680
City of Del Mar	187	187	187	187	187	187
Olivenhain Municipal Water District	395	423	453	484	518	554
Total Water District Revenues	**$2,116**	**$2,171**	**$2,225**	**$2,265**	**$2,306**	**$2,351**
MWD/SDCWA Incentives(1)	707	720	720	720	720	311
IRWM Grant - Capital	50	-	250	500	400	600
IRWM Grant - Interfund Debt	-	600	-	-	-	-
Encinitas Ranch Golf Authority	291	303	315	328	341	354
Total Other Revenues	**$1,048**	**$1,623**	**$1,285**	**$1,548**	**$1,461**	**$1,265**
Total Revenues	**$3,163**	**$3,794**	**$3,510**	**$3,812**	**$3,767**	**$3,616**

Notes:
(1) FYE 2026 MWD/SDCWA subsidy revenue reflects a partial year of funding, as the program sunsets in September 2025.
(2) All monetary values in thousands of dollars.
(3) Totals may not tie due to rounding.

2.3 Operating Expenses

Operating expenses are costs that SEJPA incurs on an ongoing basis to provide recycled water service to its customers. These costs include items such as personnel expenses, supplies and services, utilities, rent, retrofit expenses, and capital outlay. Costs for most operating line items are projected using SEJPA's FYE 2021 budget as a basis and applying annual escalation factors. Retrofit expenses are projected at $100,000 in FYE 2021 and $50,000 per year thereafter. Capital outlay is expected to remain flat at $50,000 per year.

2.3.1 Cost Escalators

The assumed cost escalation factors for operating and maintenance (O&M) expenses are summarized Table 5 below. Cost escalators are held relatively constant through FYE 2023. Starting in FYE 2024, many of the escalators are increased by 0.5%. In FYE 2025, all escalators are increasing by 0.5% to account for greater uncertainty in projections as time progresses.

Table 5 O&M Cost Escalation Factors

Cost Escalator	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Operations	2.0%	2.0%	2.5%	3.0%	3.0%
Labor	2.5%	2.5%	2.5%	3.0%	3.0%
Energy	3.0%	3.0%	3.5%	4.0%	4.0%
Chemicals	3.0%	3.0%	3.5%	4.0%	4.0%
Water Cost	2.5%	3.0%	3.5%	4.0%	4.5%
Construction/Capital	2.0%	2.0%	2.0%	2.5%	3.0%

2.3.2 Projected Operating Expenses

Projected operating expenses are summarized in Table 6. As shown, total operating expenses are expected to increase from approximately $1.86 million in FYE 2021 to approximately $2.10 million in FYE 2026, an annualized increase of 2.5-percent. This increase is driven solely by expected cost inflation as SEJPA does not anticipate any changes to recycled water operations that would impact costs over the Study timeframe.

Table 6 Projected Operating Expenses

Expense Category/Item	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Personnel Costs	$642	$658	$675	$691	$712	$733
Supplies and Services	610	624	638	655	676	698
Rent	108	116	124	133	142	152
Retrofit Expenses	100	50	50	50	50	50
Utilities	353	363	374	387	402	418
Capital Outlay	50	50	50	50	50	50
Total Operating Expenses	**$1,864**	**$1,861**	**$1,910**	**$1,966**	**$2,033**	**$2,102**

Notes:
(1) All monetary values in thousands of dollars.
(2) Totals may not tie due to rounding.

2.4 Existing Debt Service

The Authority has two outstanding debt service obligations, three pipeline cost reimbursement commitments, and one interfund loan with the Authority's wastewater program. Debt service associated with each of the existing debt service obligations is presented below in Table 7.

2.4.1 Outside Debt Obligations

Existing debt service includes a 2012 Municipal Finance Corporation Loan, which funded the Authority's AWP facility, and a State Revolving Fund (SRF) Loan, which funded the Authority's original recycled water system infrastructure. The SRF loan will be fully repaid in FYE 2021. The Authority's 2012 Municipal Finance Corporation Loan has the potential to be refinanced at a lower interest rate in FYE 2022.

2.4.2 Pipeline Cost Reimbursements

SEJPA has promoted the expansion of recycled water service within the purveyors' service areas by offsetting the costs of local recycled water transmission and distribution systems through pipeline reimbursement agreements. Existing pipeline cost reimbursement obligations include agreements with SFID, OMWD, and Solana Beach.

SFID Pipeline Transfer and Cost Reimbursement

The SFID Pipeline Transfer and Cost Reimbursement is designed to reimburse SFID for pipeline infrastructure that was constructed to expand its recycled water service. Based on the agreement, SEJPA pays SFID $450 per AF delivered via the subject pipeline, as well as interest payments on the outstanding principal balance. As of the end of FYE 2021, the outstanding principal is anticipated to be $422,971. For this analysis, future payments are projected assuming that 28.7 AF are delivered via the pipeline each year. Interest payments are calculated assuming a 2-percent interest rate.

Solana Beach Pipeline Transfer and Cost Reimbursement

The Solana Beach Pipeline Transfer and Cost Reimbursement Agreement is designed to reimburse the City of Solana Beach for pipeline infrastructure that was constructed to expand its recycled water service. Based on the agreement, SEJPA pays Solana Beach $450 per AF delivered via the subject pipeline and payments will continue until the full construction cost of the pipeline is reimbursed to Solana Beach. At the end of FYE 2021, the outstanding balance is anticipated to be $554,752 with the planned receipt of $600,000 in IRWM grant revenues. The payment for this pipeline in FYE 2021 (which is the first payment) is calculated based on deliveries made via the pipeline from FYE 2017 though FYE 2021, for a projected total of 82 AF. Payments for subsequent years are based on the actual deliveries via the pipeline, which is projected to be 22 AF in FYE 2022, with annual deliveries expected to increase as new customers connect to the pipeline (2 AF annually until the ultimate pipeline demand of 40 AFY is reached in FYE 2031).

OMWD Pipeline Cost Reimbursement

SEJPA and OMWD entered the OMWD Pipeline Cost Reimbursement to provide a means for SEJPA to compensate OMWD for the use of the OMWD's local distribution infrastructure, which it self-funded. Based on the agreement, SEJPA pays OMWD $450 per AF delivered to OMWD customers. The projected payments are based on the forecasted demands shown above in Table 3. Based on the specific agreement with OMWD, these payments are included in the "Rent" line item of Table 6 and are not considered as debt service.

2.4.3 Interfund Loan

The interfund loan payments are included to repay the Authority's wastewater Capital Projects fund (Fund 50) for the Encinitas Ranch capital improvement project that it funded on behalf of the Recycled Water fund (Fund 20). The total amount of $1.7 million is to be refunded to Fund 50 over FYE 2022 and FYE 2023. The $1,050,000 payment in FYE 2022 will be partially offset by $600,000 in IRWM grant revenues (shown above in Table 4).

Table 7 Existing Debt Service

Debt Item	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
AWP Loan	$148	$148	$148	$148	$148	$148
SRF Loan	835	-	-	-	-	-
SFID Pipeline Transfer & Cost Reimbursement	17	17	21	20	20	20
Solana Beach Pipeline Transfer & Cost Reimbursement	37	10	11	12	13	14
Interfund Loan	-	1,050	660	-	-	-
Total Debt Service	**$1,037**	**$1,225**	**$840**	**$180**	**$181**	**$182**

Notes:
(1) All monetary values in thousands of dollars.
(2) Totals may not tie due to rounding.

2.5 Capital Expenditures

SEJPA provided Carollo with its planned recycled water capital improvement plan (CIP) for the rate-setting period. The CIP includes a total of $10.7 million (2021 dollars) in capital expenditures for FYE 2021 through FYE 2030, with $7.2 million occurring within the Study period, FYE 2022 through FYE 2026.

Analyzed future costs were derived from the budgetary estimates that were provided in FYE 2021 dollars. Costs in future years were escalated between 2-percent and 3-percent annually between FYE 2022 and FYE 2025, then escalated at 3-percent thereafter to account for expected inflation in construction costs. With

the escalation factor applied, the analysis includes $11.9 million in capital expenditures from FYE 2021 to FYE 2030.

The CIP includes projects that are necessary to replace or rehabilitate aging infrastructure, as well as to enhance the reliability of the recycled water utility and allow for expanded service as forecasted in this Study.

- The recycled water treatment improvements will allow SEJPA to maintain and improve treatment production, recycle stormwater, and fulfill expected demands while continuing to meet water quality targets.
- The recycled water conveyance and storage project involves increasing system storage by up to 3 million gallons (MG); building infrastructure to more efficiently transfer water between storage tanks, reservoirs, and ponds; and to replace or rehabilitate an aging existing steel water storage tank.
- The recycled water distribution pumping reliability project will replace aging pumping infrastructure and add system improvements to ensure service reliability.
- Distribution system valves and miscellaneous appurtenances replacement program will provide funding for ongoing repair and replacement of discreet assets associated with the recycled water distribution system.

The projected annual planned CIP, in escalated dollars, is summarized in Table 8.

Table 8 Planned Capital Improvement Plan

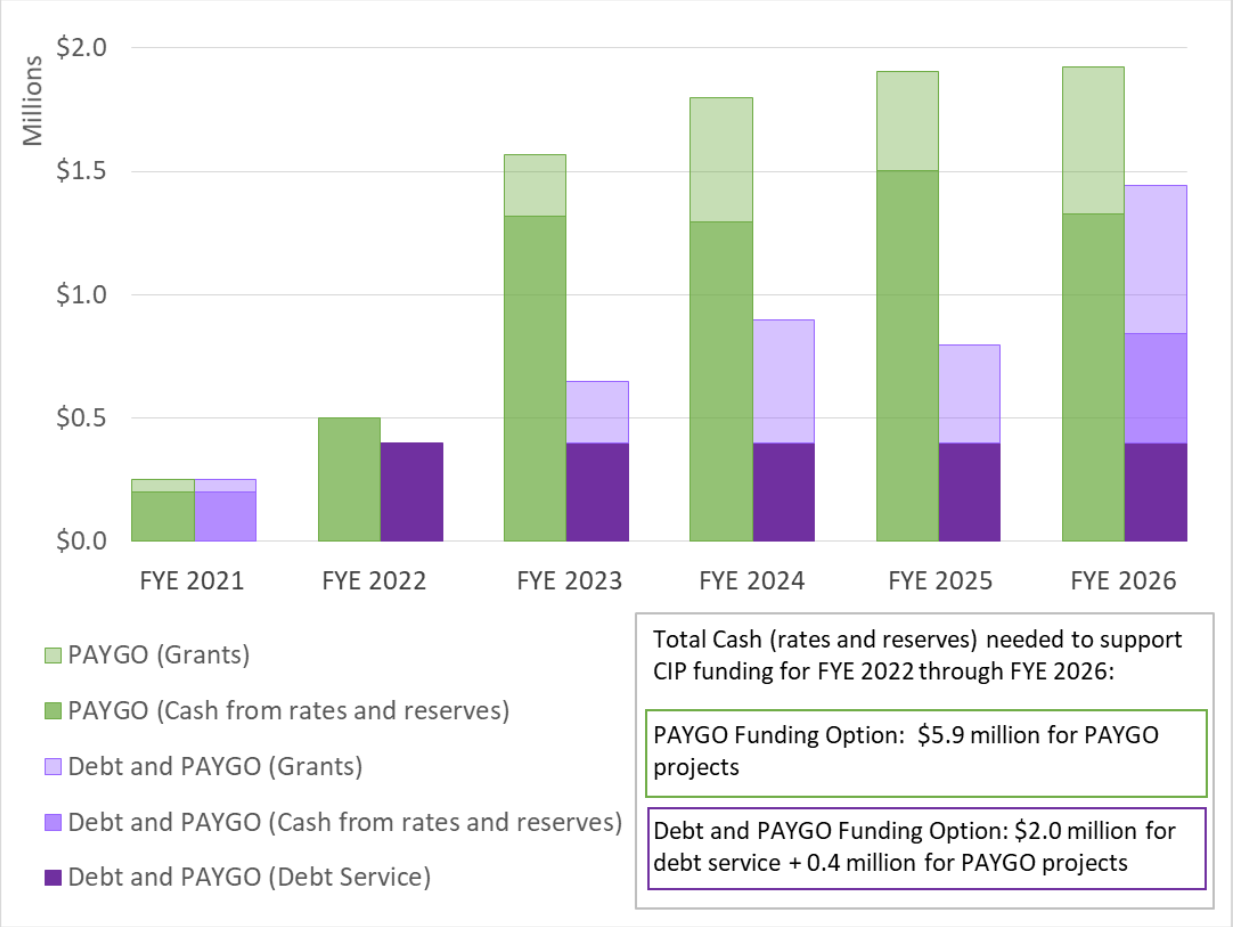
CIP Project	FYE 2021	FYE 2022[1]	FYE 2023	FYE 2024	FYE 2025	FYE 2026
RW Conveyance Projects	$-	$-	$-	$-	$-	$878
RW Storage Projects	-	245	216	226	1,193	990
RW Treatment Projects	-	255	1,353	1,571	710	56
Valve/Misc. Appurtenance Replacement	250	-	-	-	-	-
Total Planned CIP	**$250**	**$500**	**$1,569**	**$1,797**	**$1,904**	**$1,925**

Notes:
(1) Escalated from FYE 2021 dollars.
(2) All monetary values in thousands of dollars.
(3) Totals may not tie due to rounding.

The planned CIP from FYE 2021 through FYE 2030 is $11.9 million (escalated dollars), with $7.7 million (escalated dollars) in CIP expenses over the Study period. The Study considered two options to fund CIP. The first option is to use pay-as-you-go (PAYGO) cash funding, reserves, and grant funds. The second option considered is to use debt financing coupled with PAYGO cash funding, reserves, and grant funds. In both options, the grant funding assumption used is $1.75 million, which represents current grant awards to SEJPA for recycle water projects. The second option assumes that debt financing in the amount of $5.5 million would be available to fund projects starting in FYE 2022.

Figure 4 compares the annual capital funding needs for each option, PAYGO or Debt and PAYGO. The darker portion of the columns represent the amount of cash from rates or reserves that would be needed in each year to support the capital program. The lighter portions show the estimated amount of grant revenues to be applied to offset capital funding needs. The annual amounts for the Debt and PAYGO option include any cash funded projects as well as the debt service on the assumed bond or loan. As shown, the use of debt would require less cash over the study period, which could relieve pressure on rates and reserves.

Figure 4 CIP Funding Scenarios



2.6 Reserve Fund Targets

SEJPA's Recycled Water Program is a developing utility with a modest formal reserve policy associated with SRF debt service. To compliment this SRF debt reserve, the Board and Authority staff have completed previous financial planning with the goal of maintaining sufficient funds on hand to protect from and respond to unforeseen circumstances, along with building toward a replacement reserve target to fund ongoing and future rehabilitation and replacement of the recycled water system. Specifically, the Authority's prior financial planning efforts targeted a minimum reserve balance equal to 90 days of operating expenses, 1-year of debt service, and a repair and replacement reserve. The maximum reserve target has been the recycled water system's accumulated capital depreciation. Based on these assumptions, the minimum reserve target for FYE 2022 would be approximately $2.8 million, and the maximum target would be $9.7 million.

As a component of this Study, the Authority has developed updated reserve targets and assumptions. The developed reserve strategy more closely mirrors the policies of the individual water purveyors, with modifications and refinements to reflect the Authority's unique needs. The overall reserve target includes three main components: an operating reserve, a rate stabilization reserve, and a capital improvement and replacement reserve. Each component of the operational reserve provides its own unique set of funding and expense criteria and as such, each has varying target balances based on that defined criteria. The reserve components and associated targets are described in Table 9 and Table 10, respectively.

Table 9 Reserve Components

Reserve Fund Component	Function
Operating	Provides funds to ensure continuity of operations during short-term fluctuations in cash flows due to demand volatility, unanticipated costs, or other factors.
Rate Stabilization	Provides funding to: (1) Avoid unacceptable rate increases in combination with a cost-of-service study (2) Accommodate a temporary reduction in revenues or increase in expenses (3) Maintain compliance with any indebtedness obligations
Capital Improvement and Replacement	Provides funds for: (1) Unplanned or accelerated capital projects (2) Smooth budgetary and rate impacts of capital expenses (3) Fund replacement of equipment with short service life (4) Fund asset management activities

Table 10 Reserve Component Targets

Reserve Fund Component	Minimum Target	Maximum Target
Operating Reserve	60 days of operating expenses	120 days of operating expenses
Rate Stabilization Reserve	One year of debt service payments *Plus* 25-percent of the current fiscal year's budgeted sales revenue	One year of debt service payments *Plus* 100-percent of the current fiscal year's budgeted sales revenue
Capital Improvement and Replacement Reserve	100-percent current year cash CIP, 50% second year cash CIP, and 25% third year cash CIP	100-percent of current, second, and third year cash CIP

Table 11 shows the minimum and maximum reserve targets for FYE 2022. Because the component targets are tied to specific costs within the projections, the component and overall targets will vary each fiscal year depending upon the value of those specific costs. The targets presented in Table 11 are based on the operating cost projected above, no additional debt financing, and the CIP with the planned project implementation timing. If additional debt were to be issued, the reserve target would be adjusted accordingly based on the associated annual debt service.

Table 11 FYE 2022 Reserve Targets

Reserve Fund	Minimum Target	Maximum Target
Operating Reserve	$298	$595
Rate Stabilization Reserve - Debt Service	*$572*	*$572*
Rate Stabilization Reserve - Budgeted Revenues[1]	*$564*	*$2,256*
Subtotal: Rate Stabilization Reserve	$1,136	$2,828
Capital Improvement and Replacement Reserve	$1,733	$3,865
Total Reserve Target	**$3,167**	**$7,288**

Notes:
(1) Based on rate revenues assuming that a 3.9-percent rate increase is implemented fir FYE 2022.
(2) All monetary values in thousands of dollars.
(3) Totals may not tie due to rounding.

Section 3

REVENUE REQUIREMENTS AND RATES

The revenue requirement analysis is a test of a utility's fiscal health, scrutinizing the adequacy of current revenues against funding needs. This test sets the basis for rate planning and reviews the viability of the utility's revenues against operating and capital expenses, debt service, and reserve targets. Where cash flows and balances are insufficient, the revenue requirement analysis recommends the needed additional cash flows to meet all funding goals.

Carollo collected actual and budgeted revenues and expenditures, reserve fund balances and policies, planned capital improvement plan expenditures, existing and future annual debt service, and other relevant financial data to forecast funding needs. Once this forecast is established, three tests are performed to define the annual revenues requirements.

1. The **Cash Flow Sufficiency Test** looks for a net positive cash flow at the end of each fiscal year. This test looks at whether revenues exceed expenses. When they do not, this test recommends additional revenue.
2. The **Debt Service Coverage Test** assesses the ability of the utility to cover debt service payments. Utility bond issuances regularly include a stipulation that the agency maintain enough cash flows to cover the planned debt service plus an additional percent of that debt service. SEJPA's targeted ratio from its bond issuances is 1.5x. The higher multiple can provide credit rating agencies with additional evidence of SEJPA's strong financial health and support SEJPA's current AA+ rating to reduce long-term borrowing costs. If net revenues fall below this ratio, this test recommends additional revenue.
3. The **Reserve Sufficiency Test** assesses the ability of the utility to meet the minimum reserve target through the Study period. If projected year end reserve balances fall below the minimum target, this test recommends additional revenue.

Carollo looks at all three tests over the study period to identify years where revenue adjustments are necessary. Carollo also considers the impact of the projected financial plan on SEJPA's reserve balances and looks at operating, capital, and other funds' performance against Authority policy minimums.

3.1 Baseline Revenue Requirements – 2-percent Rate Increase

The cash flow sufficiency test evaluates revenues received by SEJPA to see that they are projected to cover both operating and non-operating expenses. If recycled water rates increase at the lowest level allowed by the agreement with the water purveyors (2-percent annually), inflation increases on program expenses erode program reserves impacting the ability to fund future capital projects and to meet minimum recommend reserve levels. As summarized in Table 12, increasing rates at 2-percent annually during the 5 year rate period of this Study produces insufficient revenues.

Table 12 Cash Flow Sufficiency Test with 2-percent Annual Rate Increases

Revenue/Expense Item[1]	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Rate Revenues under Annual 2% Rate Increases	$2,116	$2,215	$2,315	$2,403	$2,497	$2,595
Incentives	707	720	720	720	720	311
Grants	50	600	250	500	400	600
Encinitas Ranch Golf Authority	291	303	315	328	341	354
Total Revenues	**$3,163**	**$3,837**	**$3,600**	**$3,951**	**$3,957**	**$3,860**
Total Operating Expenses	**$1,864**	**$1,861**	**$1,910**	**$1,966**	**$2,033**	**$2,102**
Debt Service	$1,037	$175	$180	$180	$181	$182
Interfund Loan	0	1,050	660	0	0	0
Total Debt Service	**$1,037**	**$1,225**	**$840**	**$180**	**$181**	**$182**
Capital Expenses	$250	$500	$1,569	$1,797	$1,904	$1,925
Total Revenue Requirements	**$3,150**	**$3,586**	**$4,319**	**$3,943**	**$4,117**	**$4,208**
Cash Flow Surplus/Deficit	**$13**	**$252**	**($719)**	**$7**	**($160)**	**($348)**
Beginning Fund Balance[3]	$2,794	$2,807	$3,059	$2,339	$2,347	$2,187
Contribution to (Use of) Reserves	13	252	(719)	7	(160)	(348)
Ending Fund Balance	**$2,807**	**$3,059**	**$2,339**	**$2,347**	**$2,187**	**$1,839**
Minimum Reserve Target	*$2,756*	*$2,760*	*$4,007*	*$4,326*	*$4,285*	*$3,885*
Maximum Reserve Target	*$6,067*	*$6,850*	*$8,375*	*$8,838*	*$8,312*	*$7,392*

Notes:
(1) All monetary values are in thousands of dollars.
(2) Totals may not tie due to rounding.
(3) Includes funds from SRF loan reserve.

3.2 Baseline Debt Coverage Test – 2-percent Rate Increase

Assuming annual inflationary increases of 2-percent, SEJPA is projected to meet the targeted debt service coverage ratio (DSCR) of 1.5 times debt service in FYE 2022 and through the five-year rate setting period. Table 13 summarizes the debt service coverage test.

Table 13 Debt Coverage Test with 2-percent Annual Rate Increases

Revenue/Expense Item	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Operating Revenues [1]	**$3,113**	**$3,237**	**$3,350**	**$3,451**	**$3,557**	**$3,260**
Operating Expenses exc. Capital Outlay	1,814	1,811	1,860	1,916	1,983	2,052
Revenues Available for Debt Service	**$1,300**	**$1,426**	**$1,489**	**$1,534**	**$1,574**	**$1,208**
Debt Service[2]	**$1,037**	**$175**	**$180**	**$180**	**$181**	**$182**
DSCR[3]	**1.25x**	**8.15x**	**8.29x**	**8.51x**	**8.70x**	**6.65x**

Notes:
(1) Excluding grants.
(2) Excluding interfund loans.
(3) DSCR equal to "Revenues Available for Debt Service" divided by "Debt Service".
(4) All monetary values are in thousands of dollars.
(5) Totals may not tie due to rounding.

3.3 Modeled Financial Scenarios

Carollo evaluated multiple financial scenarios to compare various rate increases, capital funding plans, and debt financing options for the Authority.

1. 2.0-percent rate Increase with PAYGO Funding[1]
2. 3.9-percent rate Increase with PAYGO Funding
3. 5.0-percent rate Increase with PAYGO Funding
4. 3.9-percent rate Increase with Debt & PAYGO Funding

3.3.1 3.9-percent Rate Increases with PAYGO Funding

Table 14 summarizes the financial forecast with annual 3.9-percent increases and planned annual CIP expenses. While this level of increase would be sufficient to cover expenses and meet debt service coverage requirements, the timing of the CIP would lead to reserves being spent down over the next five years. The projected operational fund balance would remain below the minimum reserve target in all years of the study period, providing diminutive shelter from unforeseen increases in costs or decreases in revenues.

Table 14 Financial Forecast – 3.9-percent Rate Increases with PAYGO Funding

Revenue/Expense Item(1)	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Rate Increase	**3.9%**	**3.9%**	**3.9%**	**3.9%**	**3.9%**
Rate Revenues (Existing Rates)	$2,171	$2,225	$2,265	$2,306	$2,351
Revenue From Rate Increases	85	177	275	381	496
Other Revenues	1,623	1,285	1,548	1,461	1,265
Total Revenues	**$3,879**	**$3,687**	**$4,087**	**$4,148**	**$4,111**
Total Operating Expenses	1,861	1,910	1,966	2,033	2,102
Debt Service	175	180	180	181	182
Interfund Loan	1,050	660	0	0	0
Rate Funded Capital (PAYGO)	500	1,569	1,797	1,904	1,925
Total Revenue Requirements	**$3,586**	**$4,319**	**$3,943**	**$4,117**	**$4,208**
DSCR, after rate increase	**8.39x**	**8.77x**	**9.27x**	**9.76x**	**8.04x**
Cash Flow Surplus/Deficit	$293	($632)	$144	$31	($97)
Ending Fund Balance	**$3,100**	**$2,468**	**$2,612**	**$2,643**	**$2,546**
Minimum Reserve Target	*$2,770*	*$4,029*	*$4,360*	*$4,333*	*$3,948*
Maximum Reserve Target	*$6,892*	*$8,462*	*$8,975*	*$8,503*	*$7,643*

Notes:
(1) All monetary values are in thousands of dollars.
(2) Totals may not tie due to rounding.

Table 15 shows the calculated rates for the forecast presented above in Table 14. Rates are calculated by dividing the revenue required from rates by the total projected usage. The rate revenue requirement for each year is equal to the total expenses, plus or minus any contribution to or use of reserves, less other revenues.

[1] Summarized above in Section 3.1

Table 15 Calculated Rates – 3.9-percent Rate Increases with PAYGO Funding

Item [1]	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Total Expenses ($1,000s)	$3,586	$4,319	$3,943	$4,117	$4,208
Contribution To (Use Of) Reserves ($1,000s)	293	(632)	144	31	(97)
Less: Other Revenues ($1,000s)	(1,623)	(1,285)	(1,548)	(1,461)	(1,265)
Total Rate Revenue Requirement ($1,000s)	**$2,256**	**$2,402**	**$2,540**	**$2,688**	**$2,846**
Usage Subject to Rates (AF)	1,324	1,357	1,381	1,406	1,433
Calculated Rate ($/AF)[1]	**$1,704**	**$1,770**	**$1,839**	**$1,911**	**$1,986**

Notes:
(1) Calculated rate equal to "Total Rate Revenue Requirement" divided by "Usage Subject to Rates".
(2) Totals may not tie due to rounding.

3.3.2 5.0-percent Rate Increases with PAYGO Funding

The 5.0-percent rate increase is the highest allowed by agreement with the water purveyors and provides the upper bookend to the considered rate increases. Table 16 summarizes the financial forecast with annual 5.0-percent increases and planned annual CIP expenses. While this level of increase would be sufficient to cover expenses and meet debt service coverage requirements, the timing of the CIP would lead to reserves being spent down in FYE 2022 and FYE 2023 before beginning to rebound slowly. The projected fund balance would remain below the minimum target in all years of the Study period, providing little shelter from unforeseen increases in costs or decreases in revenues.

Table 16 Financial Forecast – 5.0-percent Rate Increases with PAYGO Funding

Revenue/Expense Item[1]	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Rate Increase	**5.0%**	**5.0%**	**5.0%**	**5.0%**	**5.0%**
Rate Revenues (Existing Rates)	$2,171	$2,225	$2,265	$2,306	$2,351
Revenue From Rate Increases	109	228	357	497	649
Other Revenues	1,623	1,285	1,548	1,461	1,265
Total Revenues	**$3,903**	**$3,738**	**$4,169**	**$4,264**	**$4,265**
Total Operating Expenses	1,861	1,910	1,966	2,033	2,102
Debt Service	175	180	180	181	182
Interfund Loan	1,050	660	0	0	0
Rate Funded Capital (PAYGO)	500	1,569	1,797	1,904	1,925
Total Revenue Requirements	**$3,586**	**$4,319**	**$3,943**	**$4,117**	**$4,208**
DSCR, after rate increase	**8.52x**	**9.06x**	**9.72x**	**10.40x**	**8.88x**
Cash Flow Surplus/Deficit	$317	($581)	$226	$147	$57
Ending Fund Balance	**$3,124**	**$2,543**	**$2,769**	**$2,915**	**$2,972**
Minimum Reserve Target	*$2,776*	*$4,042*	*$4,380*	*$4,362*	*$3,986*
Maximum Reserve Target	*$6,916*	*$8,513*	*$9,057*	*$8,619*	*$7,797*

Notes:
(1) All monetary values in thousands of dollars.
(2) Totals may not tie due to rounding.

Table 17 shows the determination of rates for the forecast presented in Table 16. Rates are calculated by dividing the revenue required from rates by the projected usage of the water districts. The revenue required

from rates for each year is equal to the total expenses, plus or minus any contribution to or use of reserves, less other revenues

Table 17 Calculated Rates – 5.0% Rate Increases with PAYGO Funding

Item [1]	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Total Expenses ($1,000s)	$3,586	$4,319	$3,943	$4,117	$4,208
Contribution To (Use Of) Reserves ($1,000s)	317	(581)	226	147	57
Less: Other Revenues ($1,000s)	(1,623)	(1,285)	(1,548)	(1,461)	(1,265)
Total Rate Revenue Requirement ($1,000s)	**$2,280**	**$2,453**	**$2,621**	**$2,803**	**$3,000**
Usage Subject to Rates (AF)	1,324	1,357	1,381	1,406	1,433
Calculated Rate ($/AF)[1]	**$1,722**	**$1,808**	**$1,899**	**$1,993**	**$2,093**

Notes:
(1) Calculated rate equal to "Total Rate Revenue Requirement" divided by "Usage Subject to Rates".
(2) Totals may not tie due to rounding.

3.3.3 3.9-percent Rate Increases with Debt Funding

As an alternative option to using PAYGO funding for all CIP expenses, the CIP could be implemented as planned and partially funded using debt financing. The evaluated debt and PAYGO funding scenario includes 3.9-percent annual revenue increases. Such revenue increases are projected to keep SEJPA's revenues in line with cost inflation while supporting a debt financing required to fund the majority of near-term capital improvement expenditures. Combining this debt financing with inflationary revenue increases would avoid future rate hikes above inflation and would allow for reserve balances to reach the minimum target over the next four years.

Table 18 shows the assumptions used to estimate the annual debt service associated with the $5.5 million debt issuance. The assumed issuance cost and interest rate are intended to be conservative assumptions and as such, the actual debt service that SEJPA would pay could be lower if it elects to issue debt. Conversely, if market condition change leading to higher interest rates, the level of the debt service payment could rise.

Table 18 Debt Issuance Assumptions

Assumption	Value
Year of Issuance	FYE 2022
Project Funds Required	**$5,500,000**
Issuance Costs	137,500
Total Amount Financed	**$5,673,500**
Interest Rate	3.50%
Period (years)	20
Annual Debt Service	**$397,000**

Table 19 summarizes the financial forecast with 3.9-percent annual rate increases and the use of debt funding for $5.5 million of the projected CIP expenses.

Table 19 Financial Forecast – 3.9-percent Rate Increases with Debt & PAYGO Funding

Revenue/Expense Item[1]	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Rate Increase	**3.9%**	**3.9%**	**3.9%**	**3.9%**	**3.9%**
Debt Issuance	**$5,500**				
Rate Revenues (Existing Rates)	$2,171	$2,225	$2,265	$2,306	$2,351
Revenue From Rate Increases	85	177	275	381	496
Other Revenues	1,623	1,285	1,548	1,461	1,265
Total Revenues	**$3,879**	**$3,687**	**$4,087**	**$4,148**	**$4,111**
Total Operating Expenses	1,861	1,910	1,966	2,033	2,102
Existing Debt Service	175	180	180	181	182
New Debt Service	397	397	397	397	397
Subtotal: Debt Service	**572**	**576**	**577**	**578**	**578**
Interfund Loan	1,050	660	0	0	0
Rate Funded Capital (PAYGO)	0	250	500	400	1,044
Total Expenses	**$3,483**	**$3,397**	**$3,043**	**$3,010**	**$3,724**
DSCR, after rate increase	**2.57x**	**2.74x**	**2.90x**	**3.06x**	**2.52x**
Cash Flow Surplus/Deficit	$396	$290	$1,044	$1,138	$387
Ending Fund Balance	**$3,203**	**$3,493**	**$4,537**	**$5,675**	**$6,063**
Minimum Reserve Target	*$3,167*	*$4,426*	*$4,757*	*$4,730*	*$4,344*
Maximum Reserve Target	*$7,288*	*$8,859*	*$9,372*	*$8,900*	*$8,040*

Notes:
(1) All monetary values in thousands of dollars.
(2) Totals may not tie due to rounding.

Table 20 shows the determination of rates for the forecast presented in Table 19. Rates are calculated by dividing the revenue required form rates by the projected usage of the water districts. The revenue required from rates for each year is equal to the total expenses, plus or minus any contribution to or use of reserves, less other revenues.

Table 20 Financial Forecast – 3.9-percent Rate Increases with Debt & PAYGO Funding

Item	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Total Expenses ($1,000s)	$3,483	$3,397	$3,043	$3,010	$3,724
Contribution To (Use Of) Reserves ($1,000s)	396	290	1,044	1,138	387
Less: Other Revenues ($1,000s)	(1,623)	(1,285)	(1,548)	(1,461)	(1,265)
Total Rate Revenue Requirement ($1,000s)	**$2,256**	**$2,402**	**$2,540**	**$2,688**	**$2,846**
Usage Subject to Rates (AF)	1,324	1,357	1,381	1,406	1,433
Calculated Rate ($/AF)	**$1,704**	**$1,770**	**$1,839**	**$1,911**	**$1,986**

Notes:
(1) Calculated rate equal to "Total Rate Revenue Requirement" divided by "Usage Subject to Rates"..
(2) Totals may not tie due to rounding.

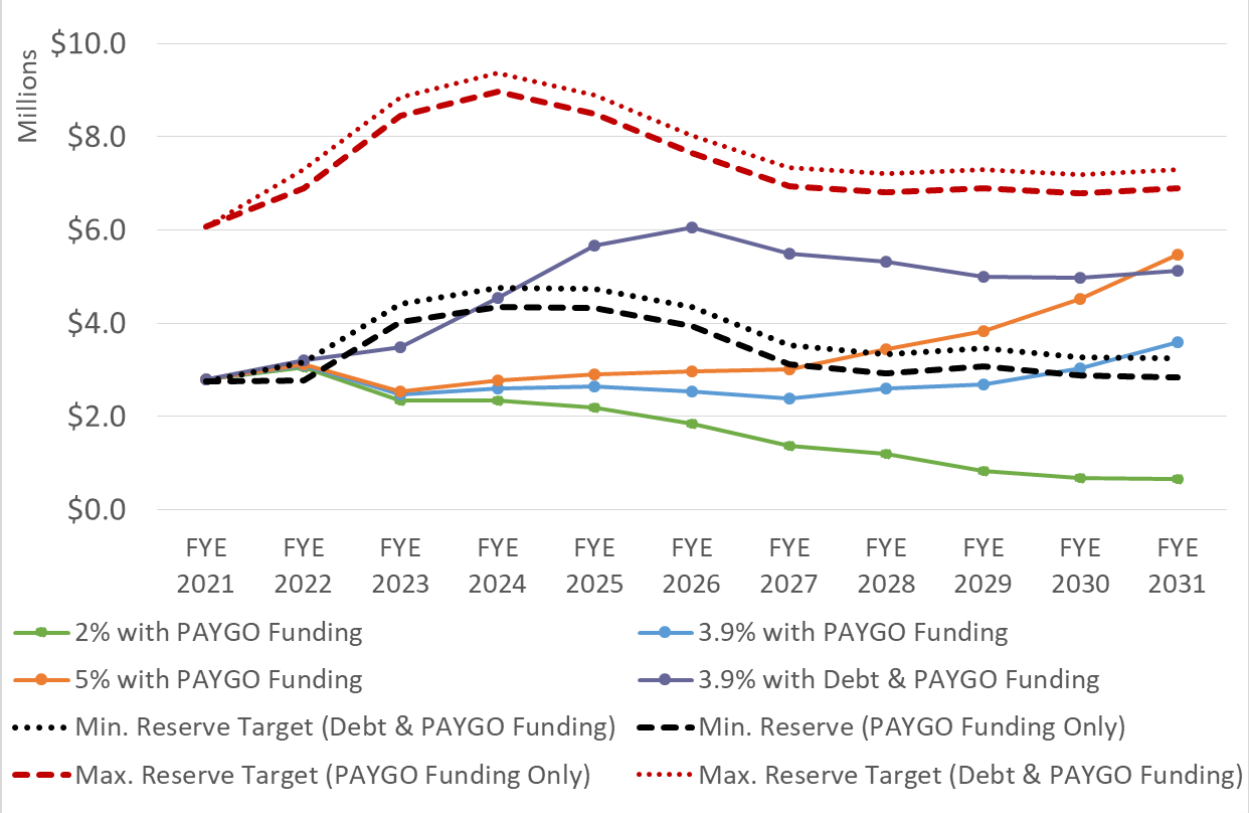
3.4 Revenue Requirements Comparison

The following subsections compare the results of the revenue requirements and rate analyses for the analyzed rate increase and capital funding strategies. Though the study is focused on developing rates for the five-year period of FYE 2022 through FYE 2026, the strategies are compared through FY 2031 to provide additional context. This longer-term comparison helps to ensure that financial decisions made now do not have adverse effects on the long-term trajectory of the recycled water fund. Because each of the strategies can provide funding for the full CIP and generates sufficient revenues for debt coverage, the comparison is focused on projected reserve fund balances and rates.

3.4.1 Reserve Fund Projection Comparison

Figure 5 shows the projected reserves for each of the analyzed rate increase and capital funding strategies as well as the minimum and maximum reserve targets.

Figure 5 Projected Reserve Fund Balance Comparison



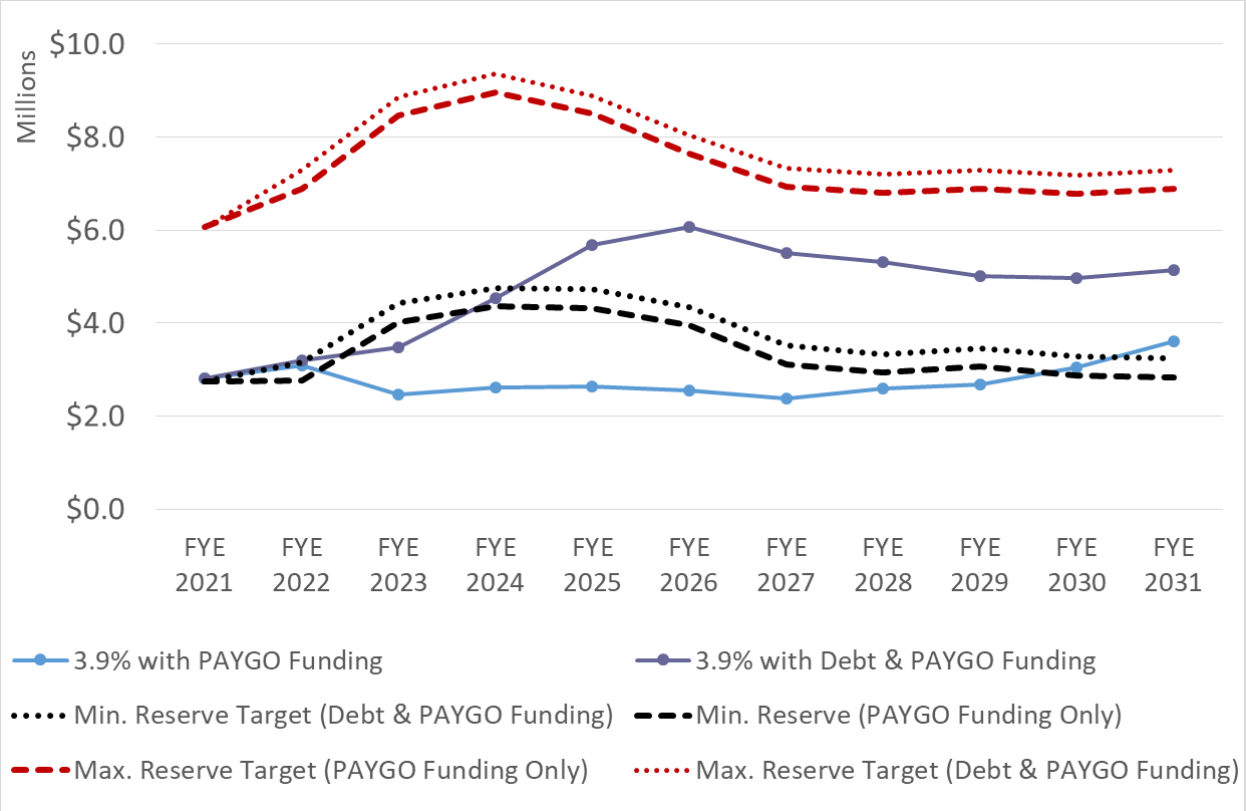
As shown in the figure, the projected fund balance shows greater sensitivity to the strategy for CIP funding than to the level of rate increases over the Study period. Each of the PAYGO only funding scenarios would see reserves drawn down, and remaining below the minimum target through the study period.

Over the longer term, the rate increase scenarios would show greater deviation in the projected reserve levels that they could support due to compounding. By FYE 2031, the projected reserve would range from approximately $654,000 if 2.0-percent increases are implemented, and $5.5 million if 5-percent increases are implemented. With 5.0-percent annual increases and PAYGO only funding, reserves would not reach the minimum target until FYE 2028, with 3.9-percent annual increases and PAYGO only funding, reserves would

not reach the minimum target until FYE 2030. With 2.0-percent annual increases, reserves would continue to decrease each year through FYE 2031.

If debt is used to fund a portion of the CIP costs, reserves could be increased to the meet the minimum target by FYE 2025 and be held above the target thereafter with 3.9-percent annual increases. The additional funds would be available for further CIP projects as needed or be held in reserve for future capital replacement projects. Figure 6 shows the projected fund balance for scenarios with 3.9-percent increases compared to the operational and capital reserve targets.

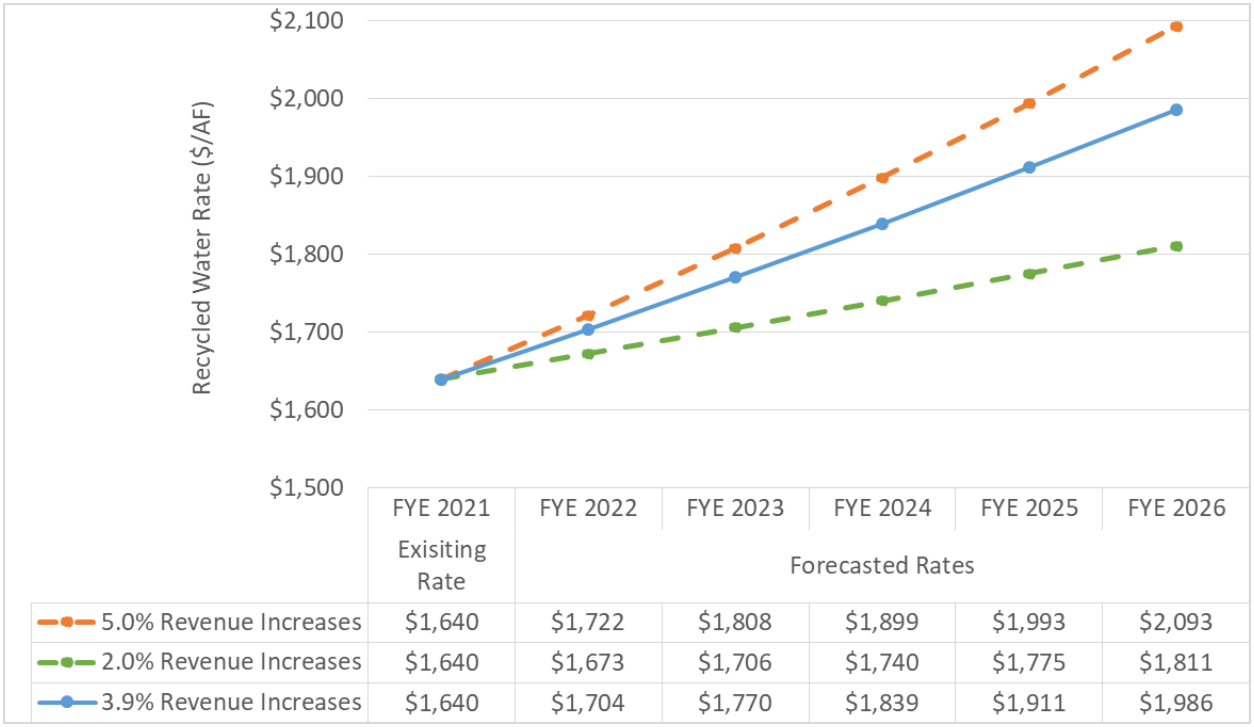
Figure 6 Projected Reserves with 3.9-percent Revenue Increases



3.4.2 Projected Rates Comparison

Figure 7 shows the projected rates under each rate increase strategy. By the end of the five-year study period in FY 2026, rates would reach $1,811 for the 2-percent, $1,986 for the 3.9-percent revenue increase strategy, or $2,093 for the 5-percent rate increase strategy.

Figure 7 Projected Rates Comparison



	FYE 2021	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
	Exisiting Rate	Forecasted Rates				
5.0% Revenue Increases	$1,640	$1,722	$1,808	$1,899	$1,993	$2,093
2.0% Revenue Increases	$1,640	$1,673	$1,706	$1,740	$1,775	$1,811
3.9% Revenue Increases	$1,640	$1,704	$1,770	$1,839	$1,911	$1,986

3.4.3 Sensitivity Analysis

A sensitivity analysis was performed to test the impact of a demand reduction event, similar to those that have occurred in recent years, on the finances of the recycled water fund. The demand reduction analysis is based on the financial forecast with 3.9-percent annual revenue increases and includes a reduction in demands of 15-percent in FYE 2022 and FYE 2023 and 7.5-percent in FYE 2024, from the baseline demand projections shown in Table 3. The continuation of such a reduction for two years followed by a third year with a lesser reduction (as analyzed) would represent a significant but not unprecedented demand reduction event. For example, actual demand decreases of 12.1-percent and 14.3-percent occurred in FYE 2016 and 2019 respectively.

Figure 8 compares the projected sales with the demand reduction event to the baseline projection. The demand reduction projection would result in an overall sales decrease of 611 AF from the baseline projection over the course of the demand reduction event.

Figure 8 Projected Demands for Sensitivity Analysis

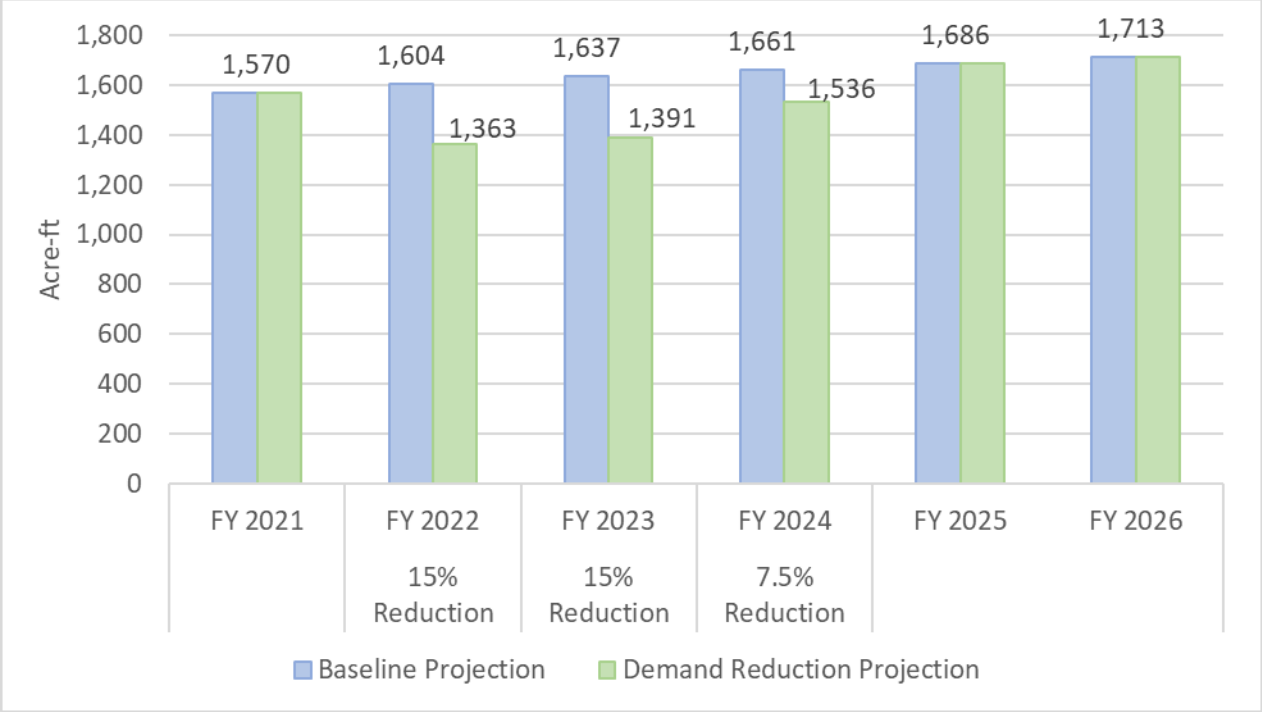


Table 21 shows the revenue impact of the demand reduction under 3.9-percent annual revenue increases. The tested reduction in demands would impact revenues generated from sales to the water districts and to ERGA as well as the amount of MWD and SDCWA subsidy revenues that SEJPA would receive. Overall, the reduced demands would result a revenue reduction of over $1.2 million as compared to the baseline projections.

Table 21 Revenue Impact of Reduced Demands

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE2026
Baseline Demands					
Sales Revenue[2]	$2,559	$2,717	$2,867	$3,028	$3,200
MWD and SDCWA Incentives	720	720	720	720	311
Baseline Demand Driven Revenues	**$3,279**	**$3,437**	**$3,587**	**$3,748**	**$3,511**
Reduced Demands					
Sales Revenue[2]	$2,175	$2,309	$2,652	$3,028	$3,200
MWD and SDCWA Incentives	614	626	691	720	311
Reduced Demand Driven Revenues	**$2,788**	**$2,935**	**$3,344**	**$3,748**	**$3,511**
Revenue Reduction	**($490)**	**($501)**	**($244)**	**$0**	**$0**
Total Revenue Impact (FYE 2022 through FYE 2024)			**($1,236)**		

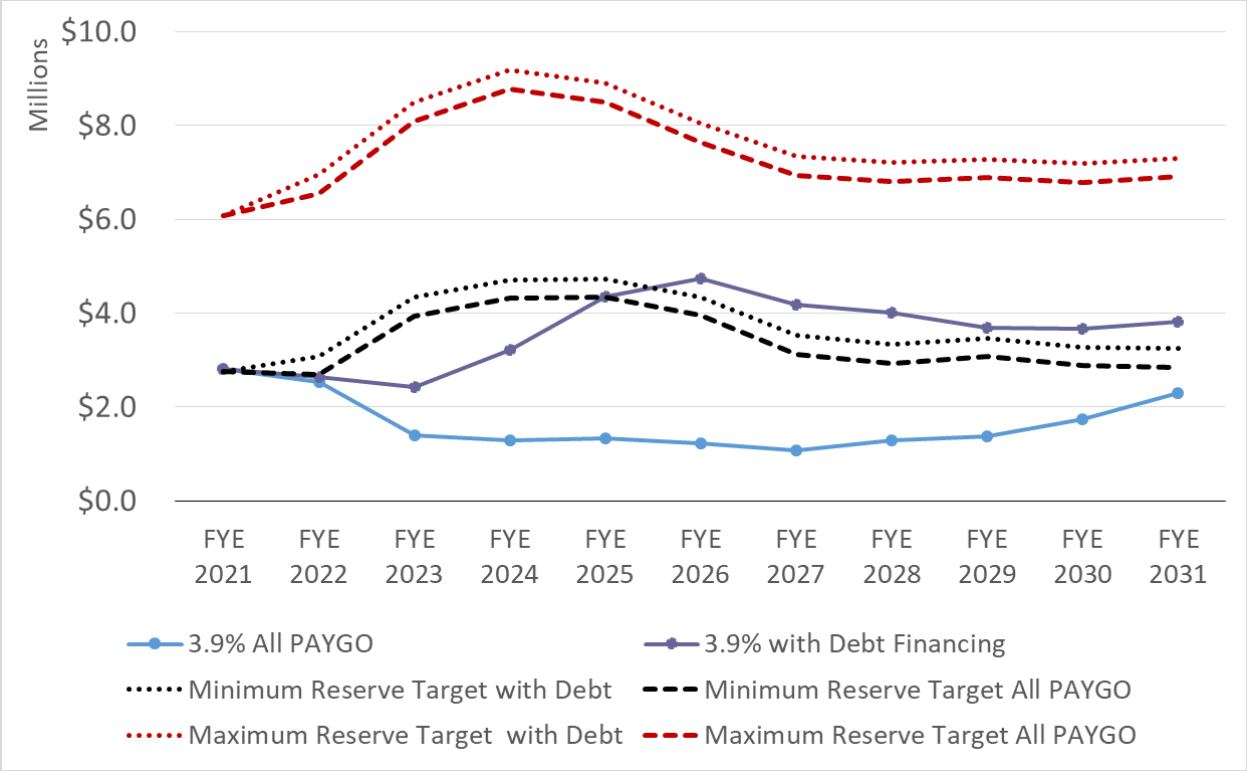
Notes:
(1) All monetary values in thousands of dollars.
(2) Totals may not tie due to rounding.

Figure 9 shows the projected reserve fund balances with reduced demands and 3.9-percent revenue increases.

Under a cash funding strategy with the planned CIP implementation schedule, the revenue shortfalls resulting from the reduction in demands would lead to reserve funds being fully depleted in FYE 2024. The fund balance would not meet or exceed the operational reserve target until FYE 2031.

If debt funding is used for the CIP, the reserve fund balance could remain favorable in spite of potential demand reductions. The balance would remain above the operational reserve target from FYE 2026 through FYE 2031.

Figure 9 Projected Reserves with Reduced Demands



Section 4

RECOMMENDATIONS

4.1 Rate Increases

As shown by the analysis and the comparison of rate increase and CIP funding strategies, any of the analyzed levels of rate increases of 3.9-percent or greater would be sufficient to meet SEJPA's financial obligations. Given that the majority of SEJPA's recycled water revenues are based directly on sales, revenues have the potential to be adversely impacted by price elasticity when rates are increases. Because higher levels of rate increases could lead to decreased usage there is an incentive to maintain rates at the lowest level that can provide sufficient revenues and a sustainable financial forecast. Based on these factors, Carollo recommends that rate increases be implemented at the 3.9-percent per year level for FYE 2022 through FYE 2026 and that those increases be coupled with the use of debt to fund a portion of CIP costs. The recommended rates are shown in Table 22.

Table 22 Recommended Rates

	FYE 2022	FYE 2023	FYE 2024	FYE 2025	FYE 2026
Revenue Increase	3.9%	3.9%	3.9%	3.9%	3.9%
Recommended Recycled Water Rate ($/AF)	**$1,704**	**$1,770**	**$1,839**	**$1,911**	**$1,986**

If SEJPA opts to forgo the recommended increases and proposed debt issuance, expenses could exceed revenues. This could jeopardize SEJPA's ability to sufficiently fund reserves targets, debt service coverage, and planned capital projects. By implementing annual increases of 3.9-percent beginning in FYE 2022 and issuing a $5.5 million debt financing in FYE 2022, SEJPA is projected to avoid this situation and maintain financial health.

4.2 Reserves and Capital Funding

At a minimum, SEJPA should work toward funding reserves to the minimum target level to protect from and respond to unforeseen circumstances that impact revenues or costs. To this end, a CIP funding strategy that smooths the impact of CIP projects by utilizing debt financing for a portion of the CIP so that costs can be amortized over multiple years is preferable. Utilizing debt financing has the added advantages of allowing for reserve to be built to more quickly to reach the reserve targets, allowing the Authority to take advantage of historically low finance rates, and allowing for CIP projects to be built sooner, reducing the exposure to anticipated construction inflation.

4.3 Future Rate Considerations

During future cost of service and rate evaluations, the Authority should consider making further updates to the rate structure, as appropriate, to enhance revenue stability and financial sustainability. The potential updates could include implementing an annual fixed charge, to be assessed to the water purveyors, to recover a share of the recycled water system's fixed costs. Such a charge would provide a stable source of revenue to pay for costs such as debt service, system maintenance, or infrastructure replacement that do not vary based on the amount of water produced. Multiple methods of assessing a potential fixed charge to the purveyors could be available including, but not limited to, charges based on rolling average deliveries, the number of connected meter equivalent units, minimum purchase volumes, or other indicators of the capacity required to serve each purveyor. If the Authority ultimately decides to implement a fixed charge, it should be done so only after a cost of service analysis is completed to determine the appropriate level of fixed revenue recovery and the most equitable manner of assessing individual purveyors.

Resolution No. 2021-04

Resolution of the Board of Directors of the San Elijo Joint Powers Authority Establishing the Recycled Water Reserve Fund Policy

WHEREAS, a key element of prudent financial planning is to ensure that sufficient funding is available for current and future operating, capital, and debt service needs;

WHEREAS, through planning and undertaking regular cost-of-service review, the San Elijo Joint Powers Authority (SEJPA) will at all times strive to have sufficient funding generated from current revenues to meet its operating expenditures, PAYGO (defined below in section 3(c)) for capital projects, and debt service cost obligations; and

WHEREAS, fiscal responsibility requires anticipating the likelihood of and preparing for unforeseen events, this Recycled Water Reserve Fund Policy outlines specific accounts to meet these planned and unforeseen obligations;

NOW, THEREFORE, BE IT RESOLVED:

1. General Provisions

The Board of Directors (Board) of SEJPA desires to designate specific fund accounts and maintain minimum fund balances consistent with statutory obligations that it has determined to be in the best interest of SEJPA and intended to ensure SEJPA has sufficient funds to meet current and future needs.

SEJPA will maintain operating and capital funds in designated accounts. The target fund balances are considered the minimum necessary to maintain the SEJPA's credit worthiness and adequately provide for:

- Compliance with applicable statutory requirements
- Financing of future capital facilities
- Cash flow requirements
- Economic uncertainties, local disasters, and other financial hardships or downturns in the local or national economy
- Contingencies or unforeseen operating or capital needs

A fundamental purpose of SEJPA's policy documents and plans is to link what must be accomplished with the necessary resources to successfully do so.

SEJPA has established and will maintain the following reserve components:

- Operating
- Rate Stabilization
- Capital Improvement and Replacement

Fund balances will be reviewed on an annual basis at the SEJPA's annual budget recommendation review to reconcile the fund balances and assess the financial capacity to accomplish identified activities and projects.

The minimum target balance established for each reserve component represents the baseline financial condition that is acceptable to SEJPA from a risk management and financial planning perspective. Maintaining funds at appropriate levels is an ongoing business process that consists of a periodic assessment of revenues and expenditure levels. This assessment includes (either alone or in combination with each other), but is not limited to, a review of fees and charges, water usage, capital financing methods, rate of return on investment of funds, and levels of capital expenditures. A maximum balance is established for each fund as a way to ensure that SEJPA may prioritize capitalization of each reserve as the Board may see as necessary and prudent, while not holding excess monies that may unduly impact water purveyors.

In order to comply with federal tax laws and regulations related to SEJPA's outstanding tax-exempt bonds, none of the reserve components established under this policy will be funded, in whole or in part, from bond proceeds.

2. Reserve Components

a. *Operating Reserve*: The Operating Reserve component is designated by the Board to maintain working capital for current operations to ensure continuity of operations during short-term fluctuations in cash flow due to demand volatility, unanticipated costs, or other factors. Utilization of the operating fund shall only be based on Board action, and any request by Staff to use the fund that shall bring the reserve below minimum Reserve Funds Policy levels shall also be accompanied by a plan and timeline for replenishment.

Source of Funds:
- Prior year ending balance carried forward
- Allocation of funds by Board action
- Budget savings

Designation of Expenses/Uses:
- Funding requirements due to short term revenue and expenditure imbalance
- Intra-fiscal year cash flow timing without Board approval, so long as the fund balance is not impaired by fiscal year-end

Target Balance:
The Operating target balance shall be a minimum of sixty (60) days and a maximum of one hundred and twenty (120) days of the current fiscal year's operating budget, less depreciation/amortization.

b. *Rate Stabilization Reserve:* The Rate Stabilization Reserve component is utilized to avoid unacceptable rate increases in combination with a cost-of-service study. Additionally, the fund may be utilized to accommodate a temporary reduction in revenues or increase in expenses such as (but not limited to) short term reductions in water sales and/or the purchase of imported water due to lack of local water. This fund may also be utilized to maintain compliance with any indebtedness obligations. Utilization of the rate stabilization fund shall only be based on Board action, and any request by Staff to use the fund that shall bring the reserve below minimum Reserve Funds Policy levels shall also be accompanied by a plan and timeline for replenishment.

Source of Funds:
- Prior year ending balance carried forward
- Allocation of funds by Board action
- Budget savings

Designation of Expenses/Uses:
- Provide operating revenue to offset unacceptable rate increases
- Offset recycled water sales revenue loss or sudden increase in expenses
- Compliance with debt service obligation

Target Balance: The Rate Stabilization Fund target balance shall not fall below the sum of the following:

- One year of debt service payments Plus
- 25% of the current fiscal year's budgeted sales revenue

And shall not at any time exceed the sum of the following:
- One year of debt service payments Plus
- 100% of the current fiscal year's budgeted sales revenue

c. *Capital Improvement and Replacement Reserve*: The Capital Improvement and Replacement Reserve component is an unrestricted fund, which is designated by the Board for capital improvements to meet regulatory requirements, system reliability, facility replacement projects, and future infrastructure upgrades, among other items. These capital improvements are identified in the Facilities Plan and budget document. The funds are accumulated and drawn down in a manner consistent with this Policy. The Board reviews utilization and funding of the Capital Improvement and Replacement component during SEJPA's annual budget process. Because this component is an unrestricted fund, the Board will retain budgetary flexibility in determining whether specified capital improvement costs will be funded through debt financing or as PAYGO expenditures. Additionally, should the Board desire to fund capital improvement costs from this component on a temporary basis, the Board may adopt an official intent resolution in accordance with the provisions of Treasury Regulations codified at 26 C.F.R. § 1.150-2.

Source of Funds:
- Prior year ending balance carried forward
- Allocation of funds by Board action

Designation of Expenses/Uses:

- Capital improvement projects
- Capital repairs and replacement projects
- Major equipment acquisitions
- Office fixtures and furnishings, computer equipment and collateral items
- Emergency capital repairs and replacement

Target Balance: The Capital Improvement and Replacement component target balance shall not exceed 100% of the total of the PAYGO portion of the first three years of the current Capital Improvement Program (CIP) costs as identified in the Facilities Plan or the current Adopted Budget. The Capital Improvement target balance shall at all times equal or exceed 100% of the PAYGO portion of the current fiscal year's CIP, 50% of the PAYGO portion of the following fiscal year's CIP, and 25% of the PAYGO portion of the succeeding fiscal year's CIP.

PAYGO is defined as the portion of capital expenditures that are not funded through debt issuance.

3. Delegation of Authority

The Board of the SEJPA has sole authority to amend or revise the Reserve Policy. Management responsibility for the Reserve Policy is hereby delegated to the General Manager by the Board who through approval of this Policy has established written procedures for the management of SEJPA's reserves.

PASSED, APPROVED AND ADOPTED by the Board of Directors of the San Elijo Joint Powers Authority at a meeting thereof held on the 18 day of May, 2021.

Ayes:	Boardmembers:
Noes:	Boardmembers:
Abstained:	Boardmembers:
Absent:	Boardmembers:

Attest:

Signature: _____ Signature: _____

Kristi Becker, Chairperson — Michael T. Thornton, P.E.

San Elijo Joint Powers Authority Board of Directors — Secretary

AGENDA ITEM NO. 16

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

May 18, 2021

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: WATER CAMPUS IMPROVEMENT PROJECT UPDATE

RECOMMENDATION

It is recommended that the Board of Directors:

1. Authorize the General Manager to amend the professional services agreement with Atlas for additional geotechnical, testing, and inspection services in the amount of $54,801; and
2. Discuss and take action as appropriate.

BACKGROUND

San Elijo Joint Powers Authority (SEJPA) is currently in construction of the Water Campus Improvements (WCI) project. The project commenced in Spring 2020 and completion is scheduled for October 2021. The WCI will provide a broad array of benefits to both SEJPA and the community including road safety improvements, a bicycle and pedestrian trail, public parking and future EV charging stations, stormwater flood mitigation and water quality improvements, solar energy system, and a host of facility improvements. The project has qualified for $370,000 in grant funding and will receive up to $5.4 million from Caltrans for transportation-related improvements. The 0.6-megawatt solar photovoltaic (PV) power system will be constructed and financed through a power purchase agreement with REC Solar and delivered as an integrated element of the WCI project.

Project Summary Table Water Campus Improvements Project (WCI)	
Construction Duration	June 2020 - Oct 2021 (18 months)
Budget	$20.6 Million
Delivery Method	Construction Manager at Risk (CMAR)
Contractor	PCL Construction
Architect	Roesling, Nakamura, Terada (RNT)
Engineers of Record	Kimley-Horn and Associates, Fuscoe Engineering
Owners Representative	Kennedy Jenks Consultants
Environmental Documentation & Monitoring	Helix
Geotechnical, Material Testing & Specialty Inspection	Atlas

Table 1. Project Summary Table

Regulatory, environmental, and coastal development permit approvals were obtained in 2019. PCL Construction was selected through a competitive proposal process to serve as general

contractor, and the construction contract was approved in March 2020. However, the construction agreement was immediately retracted and modified to include COVID-19 contract language, allowing the project to proceed while reducing pandemic-related risk to both SEJPA and PCL Construction. As a result of these modifications, the project contract was developed as two separate elements (Phase 1 and Phase 2).

The phased approach allowed storm channel and deep underground utility work to be completed during the dry season, while allowing the opportunity to rebid building and site improvement elements to include COVID-19 preventative measures and final permit requirements. Phase 1 was substantially completed in October 2020. Phase 2 construction is currently underway and includes the multi-use path, administration/operations building, public parking, security fencing, site landscaping, and Manchester traffic signal and right-of-way improvements.

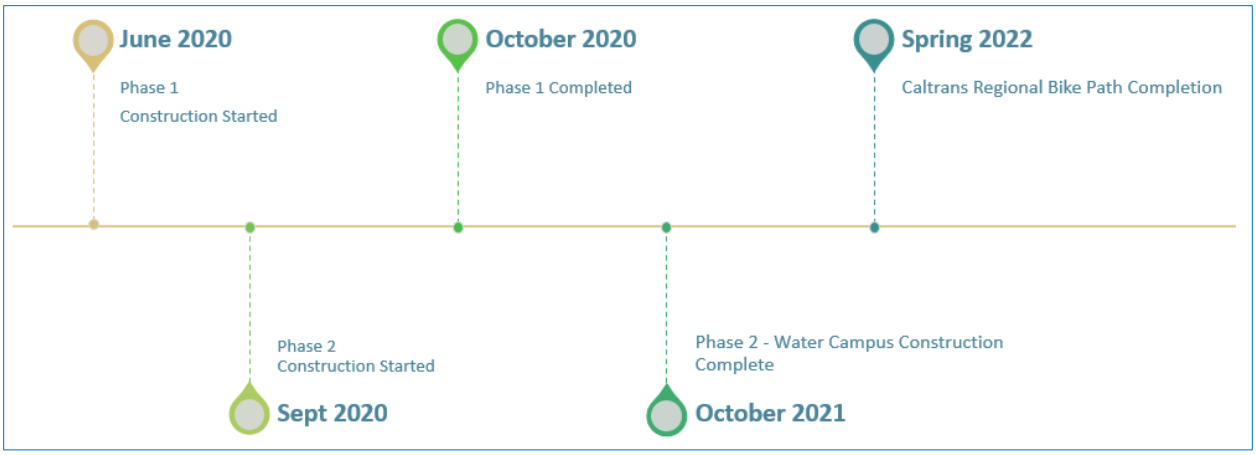


Figure 1. Project Schedule Milestones

DISCUSSION

The Water Campus Improvements are approximately 70% complete and trending on schedule and budget. The WCI project team fosters a safe working environment, exercises collaborative problem-solving, and produces high quality work, while managing the overall project schedule and budget. Despite challenges associated with higher than anticipated groundwater levels, deep utility relocations, and site flooding, the project is currently on schedule. Figures 2 and 3 below depict progress of the new building construction and multi-use path.

Major work milestones include:

- Building roof and exterior wall installation
- Interior wall framing
- Mechanical, electrical, and plumbing rough-in
- Traffic signal and crossing equipment ordered
- SDG&E building and trail power connections approved
- Solar PV system design and permitting started

Figure 3. Building Roof and Exterior Wall Installation

In March 2020, the Board of Directors approved a professional services contract with Atlas (formerly Southern California Soils & Testing) to provide geotechnical, testing, and inspection services for $119,609. In order to ensure critical project elements were constructed per the specifications and building permit requirements, the scope of work included the testing and observation of the building pad and foundation construction, subgrade improvements, concrete and asphalt work, structural steel placement, epoxy anchoring, welding, utility trenching, and groundwater remediation.

During construction, unforeseen conditions were encountered that required additional testing and inspection work by Atlas. The unforeseen conditions included abandoned utilities, unstable soils, and higher than anticipated groundwater levels. In addition, Atlas provided testing and geotechnical services required for the Caltrans' multi-use path that were not identified initially by the engineer of record but were required by the City inspector. All construction issues to date have been resolved promptly with Atlas' support.

In order to maintain project schedule and quality control oversight, Atlas agreed to continue inspection services at-risk until a contract amendment was negotiated and approved. The amendment proposal includes $16,454 for the additional work performed to date, and $38,347 for remaining testing, inspection, and technical services to complete the project, for a total amendment request of $54,801 (Attachment 1). Staff negotiated, reviewed, and recommends approval of the additional scope and fee.

***Figure 4. Aerial View of the Operation/Administration Building with Multi-Use* Path**

FINANCIAL IMPACT

The Water Campus Improvements project is proceeding on budget and schedule. The proposed cost for additional geotechnical, inspection, and testing services in the amount of $54,801 is available in the Construction Fees and Support Services budget (Table 2).

CONSTRUCTION FEES & SUPPORT SERVICES				
Item	**Budget**	**Spent**	**% Budget**	**Est at Completion**
Support Services				
Engineering/Construction Management	$ 319,155	$ 176,482	55%	$ 319,155
Inspection/Testing	$ 145,400	$ 134,978	93%	$ 174,410
IT/Comm/Security Integration	$ 124,245	$ -	0%	$ 124,245
Environmental Monitoring & Compliance Reporting	$ 131,200	$ 72,160	55%	$ 122,500
Total	$ 720,000	$ 383,620	53%	$ 740,310
City of Encinitas Permits/Inspection Fees	$ 400,000	$ 257,645	64%	$ 317,645
San Diego Regional Water Quality Control Board	$ 150,000	$ 149,500	100%	$ 149,500
Total	$ 550,000	$ 407,145	74%	$ 467,145
Grand Total	$ 1,270,000	$ 790,765	62%	$ 1,207,455

Table 2. Construction Fees & Support Services Budget

The overall project budget is detailed below in Table 3, with approximately $13.7 million spent to date and a forecast to complete the project slightly under budget.

WATER CAMPUS IMPROVEMENTS PROJECT PROJECT BUDGET				
Item	Budget	Spent	% Budget	Est at Completion
CONSTRUCTION				
Building and Site Improvements	$ 12,795,269			
Multi-use Path	$ 5,400,000			
Sub Total	$ 18,195,269	$ 12,455,476	68%	$ 18,195,269
Construction Contingency (scope gap)	$ 214,000	$ 146,000	68%	$ 214,000
GMP Total	$ 18,409,269	$ 12,601,476	68%	$ 18,409,269
Owner Contingency (5%)	$ 915,731	$ 342,480	37%	$ 915,731
Total	$ 19,325,000	$ 12,943,956	67%	$ 19,325,000
CONSTRUCTION FEES & SUPPORT SERVICES				
Engineering/Construction Management	$ 319,155	$ 176,482	55%	$ 319,155
Inspection/Testing	$ 145,400	$ 134,978	93%	$ 174,410
IT/Comm/Security Integration	$ 124,245	$ -	0%	$ 124,245
Environmental Monitoring & Compliance Reporting	$ 131,200	$ 72,160	55%	$ 122,500
Total	$ 720,000	$ 383,620	53%	$ 740,310
City of Encinitas Permits/Inspection Fees	$ 400,000	$ 257,645	64%	$ 317,645
San Diego Regional Water Quality Control Board	$ 150,000	$ 149,500	100%	$ 149,500
Grand Total	$ 20,595,000	$ 13,734,721	67%	$ 20,532,455

Table 3. Project Budget

It is therefore recommended that the Board of Directors:

1. Authorize the General Manager to amend the professional services agreement with Atlas for additional geotechnical, testing, and inspection services in the amount of $54,801; and
2. Discuss and take action as appropriate.

Respectfully submitted,

Michael T. Thornton, P.E.
General Manager

Attachment 1: Atlas Amendment Request Proposal

6280 Riverdale Street
San Diego, CA 92120
(877) 215-4321 | oneatlas.com

May 6, 2021

Atlas No. 200099P5

MIKE KONICKE, LEED AP
SENIOR PROJECT MANAGER
SAN ELIJO JOINT POWERS AUTHORITY
2695 MANCHESTER AVENUE
ENCINITAS, CALIFORNIA 92007

Subject: Change Order Request No. 1R2
SEJPA Multi-Use Path, RCB Culvert, and Headquarters Building
2695 Manchester Avenue, Encinitas, California

Dear Mike:

Atlas is requesting an increase to our authorized budget for the additional inspections and testing needed to complete the subject project. The estimated additional inspections and testing were provided by Jared Landa, Project Superintendent of PCL Construction Services. We are requesting an additional **$54,800.95** to complete the project. Table 1, attached, presents a breakdown of our change order request. All other terms and conditions will be in accordance with the previously executed agreement.

If you have any questions, please call me at (619) 280-4321.

Respectfully submitted,

Thomas B. Canady, PE
Principal Engineer

Ron Baudour
Director of Field Services

TBC:JRB

Attachment: Table 1 - Change Order Request No. 1R2

Distribution: konickem@sejpa.org

Project: SEJPA Multi-Use Path, RCB Culvert, and Headquarters Building | Atlas No. 200099P5
Client: San Elijo Joint Powers Authority | May 6, 2021
Budget Summary/Cost Estimate Table | **California State Prevailing Wage Rates**

TABLE 1 - CHANGE ORDER REQUEST NO. 1R2
CONSTRUCTION INSPECTION AND TESTING SERVICES

Original Contract Amount:	**$119,609.00**
Approved Change Order(s) to Date:	**$0.00**
Authorized Budget:	**$119,609.00**
Charges to Date:	**$136,062.95**
Remaining Budget:	**-$16,453.95**
Estimated Additional Services (Detailed Summary Below):	**$38,347.00**
Change Order Amount (Estimated Additional Services - Remaining Budget):	**$54,800.95**
Total Amended Contract Amount:	**$174,409.95**

ESTIMATED ADDITIONAL SERVICES	ESTIMATED HOURS/UNIT	RATE/UNIT	COST
FIELD SERVICES			
Soils, Aggregate Base, Asphalt Concrete (Group 1)	222 hours	$96.00 /hour	$21,312.00
Rebar, Concrete, CMU, Post-Installed Anchors (Group 2)	60 hours	$99.00 /hour	$5,940.00
Structural Steel (Group 2)	8 hours	$99.00 /hour	$792.00
PROJECT MANAGEMENT			
Project Manager	16 hours	$128.00 /hour	$2,048.00
Administrative Assistant	8 hours	$62.00 /hour	$496.00
PROFESSIONAL STAFF/REPORTS			
Senior Professional - As-Graded Geotechnical Report	8 hours	$155.00 /hour	$1,240.00
Staff Professional - As-Graded Geotechnical Report	16 hours	$106.00 /hour	$1,696.00
Drafter - As-Graded Geotechnical Report	8 hours	$77.00 /hour	$616.00
LABORATORY TESTING			
Concrete Cylinder Compressive Strength	32 tests	$23.00 /test	$736.00
R-Value	3 tests	$276.00 /test	$828.00
Sieve Analysis	3 tests	$90.00 /test	$270.00
Sand Equivalent	3 tests	$88.00 /test	$264.00
Hveem - Maximum Bulk Specific Gravity (Cal 308)	3 tests	$300.00 /test	$900.00
Rice - Maximum Theoretical Specific Gravity AC	3 tests	$133.00 /test	$399.00
Percent Bitumen Asphaltic Concrete	3 tests	$180.00 /test	$540.00
Sieve Analysis - Extracted Aggregate	3 tests	$90.00 /test	$270.00
TOTAL COST FOR ESTIMATED ADDITIONAL SERVICES			**$38,347.00**

AGENDA ITEM NO. 17

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

May 18, 2021

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: CLIMATE CHANGE ACTION PLAN

RECOMMENDATION

It is recommended that the Board of Directors:

1. Accept and File the San Elijo Water Campus Climate Change Action Plan; and

2. Discuss and take action as appropriate.

BACKGROUND

The San Elijo Joint Powers Authority (SEJPA) seeks to develop its Climate Change Action Plan (CCAP) as a communication tool with its elected Board of Directors, the communities and local government agencies it serves, and the regulatory community.

The CCAP is intended to provide guidance and transparency to the SEJPA's strategy for planning and adapting to climate change. The CCAP will be submitted to the Regional Water Quality Control Board in compliance with Special Studies Requirement VI.A of RWQCB Order No. R9-2018-0003. To address the requirements of this Order, the CCAP summarizes:

- Potential Climate Change Effects: Projected climate change effects and their impact on SEJPA and tributary wastewater facilities if current climate change trends continue
- Greenhouse Gas Emissions (GHG): Address GHG emissions, identify reduction goals, and achieve those reduction goals
- Planning Process for Addressing Climate Change: Steps taken or planned, to address projected climate change effects and GHG Emissions
- Implementation: The process and schedule for updating the CCAP and support studies, financing issues, and any required climate related NPDES permit revisions

DISCUSSION

Projected Climate Change Effects

Staff identified potential climate change-related impacts to SEJPA and tributary area facilities and operations if current trends continue. It is acknowledged that future revision of these projections will be warranted as additional climate change data are developed.

Based on the climate change projections, the following have been identified as potential climate change-related impacts if no actions are taken:

- Temperature Rise
- Reduction in Fresh Water Supplies
- Precipitation-Driven Flooding in Inland Areas
- Increase in Wastewater Flows
- Degradation of Wastewater Quality
- Increase in Wildfires
- Sea Level Rise

Greenhouse Gas Emissions

Climate action plans have been adopted by SEJPA member agencies (Cities of Encinitas and Solana Beach) and by other jurisdictions that contribute wastewater to the SEWC (City of Del Mar and County of San Diego). Each of these adopted climate action plans establish GHG reduction goals and estimate GHG emissions from wastewater facilities.

Wastewater facilities and operations represent a fraction of one percent of the total community wide GHG emissions within the municipalities that comprise the SEWC service area. SEJPA facilities planning efforts and SEWC operations optimization efforts are consistent with the GHG reduction goals established by SEJPA member agencies. These goals are being achieved by investing in energy efficiency and optimizing and improving treatment and treatment reliability while at the same time reducing energy consumption and chemical use.

Planning Process for Addressing Climate Change

In the near future, SEJPA treatment facilities and processes are not projected to be discernibly impacted by climate-related effects. Nonetheless, climate change has represented an important planning consideration in implementing improvements at the SEWC. Recent energy efficiency and treatment optimization improvements at the SEWC are consistent with agency and regional GHG reduction strategies and goals. SEJPAs expanded recycled water efforts are consistent with State of California water supply goals, goals established by the RWQCB, and goals established within the climate action plans of SEJPA member agencies.

SEWC planning needs are addressed through the following ongoing and periodic planning efforts:

- Facilities plans for the SEWC
- The annual SEJPA Capital Improvement Program (CIPs)

The SEWC Facilities Plan is typically updated by SEJPA every 7 to 10 years or as necessary to address changed conditions. As part of such periodic updates, SEJPA will update climate assessments, facilities vulnerability analyses, and assess potential facilities or operational modifications that are consistent with reducing GHG emissions, enhancing water supply, and meeting other goals of the agency climate action plans.

The SEJPA adopts an annual budget which includes funding for CIP. Many of the projects addressed within the CIP help SEJPA achieve improved energy efficiency, reduce GHG emissions, improve water quality, or enhance regional water supplies.

Implementation

It is required that SEJPA CCAP include a proposed schedule for updating the CCAP as more information on climate change and its effects become more available. Given that no immediate

climate-related impacts are projected, SEJPA proposes to complete an update to this CCAP by the earlier of the following:

- As required by the RWQCB in an update or amendment to Order No. R9-2018-0003
- As directed by the SEJPA Board of Directors
- By the end of the succeeding NPDES permit term (anticipated to be May 31, 2028)

To the degree that updated information becomes available, the SEJPA CCAP will incorporate:

- Any new or revised climate change projections developed since submittal of this CCAP
- Any climate-related studies completed by SEJPA or contributing agencies
- Any revisions to agency climate action plans
- Updates on the SEJPA and agency GHG reduction efforts
- Updates on climate-related research that may affect wastewater facilities or operations
- Updates on efforts to assess facilities vulnerability and resiliency
- Any relevant climate-related changes in SEJPA that have been identified or proposed
- Any additional future steps SEJPA or contributing agencies may be proposing to address climate change effects, identify proposed climate adaptation
- A proposed schedule for developing future updates of the CCAP

It is also required that the SEJPA CCAP include discussion of "the financing needed to pay for planned actions." Through its annual budgeting processes, facility planning reports, and cost of service studies, SEJPA and the government agencies it serves are presented with proposed capital improvement planning and budgets for both direct and indirect climate-related infrastructure expenditures.

No change in NPDES requirements is anticipated to address near-term or long-term climate-related impacts to SEJPA wastewater operations. SEJPA continues to advance its mission to provide safe and reliable wastewater and recycled water services in order to protect the environment and public health. The CCAP will serve as an overarching guide that leads to continual improvement and advancements in GHG reduction and climate change adaptation.

FINANCIAL IMPACT

There are no financial impacts associated with this staff report.

It is therefore recommended that the Board of Directors:

1. Accept and File the San Elijo Water Campus Climate Change Action Plan; and

2. Discuss and take action as appropriate.

Respectfully submitted,

Michael T. Thornton, P.E.
General Manager

Attachment 1: San Elijo Water Campus Climate Change Action Plan

Attachment 1

SAN ELIJO | JOINT POWERS AUTHORITY

SAN ELIJO WATER CAMPUS

CLIMATE CHANGE ACTION PLAN

APRIL 2021

CLIMATE CHANGE ACTION PLAN

DRAFT

San Elijo Water Campus

(formerly known as the San Elijo Water Reclamation Facility)

SUBMITTED IN COMPLIANCE WITH:

SPECIAL STUDIES REQUIREMENT VI.A OF THE

MONITORING AND REPORTING PROGRAM FOR

ORDER NO. R9-2018-0003 (NPDES CA0107999)

April 2021

SAN ELIJO | JOINT POWERS AUTHORITY

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List of Abbreviations

AFV	alternative fueled vehicles
BOD	biochemical oxygen demand
CCAP	Climate Change Action Plan (required by the RWQCB Order No. R9-2018-0003)
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
°F	degrees Fahrenheit
gpcd	gallons per capita per day
GHG	greenhouse gas
I&I	inflow and infiltration
IPCC	Intergovernmental Panel on Climate Change
kWh	kilowatt hours
mgd	million gallons per day
NOAA	National Oceanographic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System (discharge permit)
OPC	California Ocean Protection Council
OPC-SAT	California Ocean Protection Council - Science Advisory Team
RSFCSD	Rancho Santa Fe Community Services District
RWQCB	California Regional Water Quality Control Board, San Diego Region
SCADA	supervisory control and data acquisition
SEJPA	San Elijo Joint Powers Authority
SEOO	San Elijo Ocean Outfall
SEWC	San Elijo Water Campus (formerly known as the San Elijo Water Reclamation Facility)
SEWRF	San Elijo Water Reclamation Facility (now known as the San Elijo Water Campus)
SLR	sea level rise
SSMP	Sewer System Management Plan
SSO	sanitary sewer overflow
SWRCB	State Water Resources Control Board
TSS	total suspended solids
USBR	U.S. Bureau of Reclamation
USGS	U.S. Geological Survey
ZEV	zero emission vehicle

"Protecting the Environment and Public Health is our Mission"

We are pleased to present San Elijo Joint Powers Authority's (SEJPA) Climate Change Action Plan (CCAP). SEJPA continues to advance its mission to provide safe and reliable wastewater and recycled water services in order to protect the environment and public health. For more than 50 years, we have served our community by protecting the water environment through the investment in efficient operations, treatment technologies, and our technical staff. Over time, SEJPA has embraced progressive approaches to wastewater, recycled water, and stormwater. We are led by our commitment to provide sustainable solutions for resilient communities. The CCAP will serve as an overarching guide that leads to continual improvement and advancements in greenhouse gas (GHG) reduction and climate change adaptation.

PREPARING FOR CLIMATE CHANGE IMPACTS

Climate change is a global issue that is projected to have significant effects to our region. If no actions are taken, climate change-related impacts will include: increased temperatures and increased frequency of extreme heat events; increased potential for precipitation-driven flooding; changes to water supply availability; increased rate of wildfires; and rising sea levels. The CCAP addresses these impacts and identifies goals and strategies for implementing sustainable practices for GHG reduction.

ESTABLISHING CCAP GOALS

SEJPA's facilities and capital planning are consistent and supportive with the GHG reduction goals established by the communities we serve (cities of Del Mar, Encinitas, and Solana Beach). Together, we can achieve widespread CCAP benefits by investing in energy efficiency, developing renewable local resources such as energy and water, supporting walkable and bikeable communities, and incorporating CCAP considerations in future operations and capital projects.

Guided by this CCAP, we will continue to deliver excellent service, while maximizing opportunities to reduce GHG's and increase local sustainability.

Respectfully,

Michael T. Thornton, P.E.
General Manager

SEJPA's recent energy efficiency and optimization investments and actions include:

- Treatment Optimization Improvements
- Centrifugal Blower Replacement
- SEOO Land Outfall Replacement *(Protecting against potential increased erosive effects associated with climate change)*
- Recycled Water Improvements *(Enhanced treatment processes improve efficiency and allow for offset of potable water)*
- Water Campus Improvements Project – PV Solar System *(Construction is underway on site upgrades that include renewable energy production and features that meet CCAP measures)*

CCAP BENEFITS:

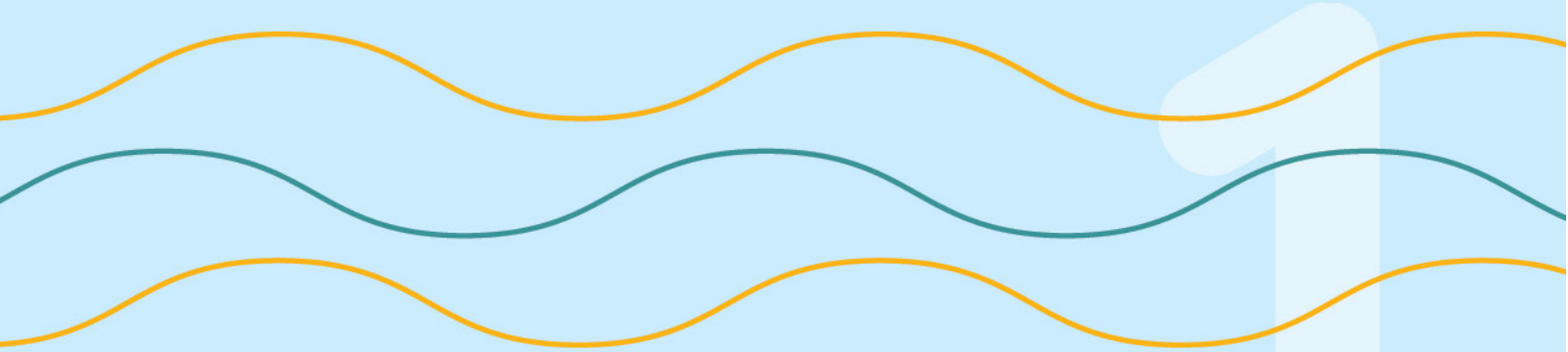
ENVIRONMENT

PUBLIC HEALTH

RESOURCE EFFICIENCY

CHAPTER 1

INTRODUCTION



Chapter 1

INTRODUCTION

1.1 Purpose of Climate Change Action Plan (CCAP)

The San Elijo Joint Powers Authority (SEJPA) seeks to develop its CCAP as a communication tool with its elected Board of Directors, the communities and local government agencies it serves, and the regulatory community.

The CCAP is consistent with and meets the objectives of Regional Water Quality Control Board (RWQCB) Order No. R9-2018-0003 (NPDES CA0107999) that regulates the treatment of wastewater at San Elijo Water Campus or SEWC (formerly known as the San Elijo Water Reclamation Facility) and the discharge of treated SEWC wastewater to the Pacific Ocean via the San Elijo Ocean Outfall (SEOO).

The CCAP provides the following:

- identify projected impacts on SEJPA facilities if current climate change trends continue,
- identify steps taken or planned to address greenhouse gas (GHG) emissions associated with wastewater treatment and disposal, and
- identify steps being taken or planned to address:
    - climate-related changes in flooding or rises in sea levels,
    - potential changes related to volatile rain periods (both wet and dry),[1]
    - potential climate-related changes in wastewater flows (both high and low flows),
    - potential changes in process design parameters due to climate-related changes in influent characteristics, including biochemical oxygen demand (BOD), ammonia, and total suspended solids (TSS),
    - potential climate-related changes on wastewater treatment operations and effluent quality,
    - the potential need to adjust NPDES permit conditions and wastewater operations,
    - the financing needs to pay for planned climate-related actions,
    - schedules to update the CCAP as more data become available, and
    - any other factors of relevance to climate change.

1 Volatile rain periods, as addressed within Order No. R9-2018-0003 include climate-related changes in the frequency, duration, and intensity of precipitation events.

The RWQCB has established identical CCAP requirements on all other San Diego Region ocean outfall NPDES permits that have been issued since 2017, including the City of Escondido which also discharges to the SEOO.[2]

Purpose and Scope of CCAP. The CCAP is intended to provide guidance and transparency to the SEJPA's strategy for planning and adapting to climate change. The CCAP is submitted in compliance with Special Studies Requirement VI.A of RWQCB Order No. R9-2018-0003. To address the requirements of Order No. R9-2018-0003, the CCAP summarizes:

- projected climate change effects and the impact of projected climate change on SEJPA and tributary wastewater facilities if current climate change trends continue (Chapter 2),
- ongoing activities of SEJPA, SEJPA member agencies, and other agencies contributing flows to the SEWC to address GHG emissions, identify GHG reduction goals, and achieve the GHG reduction goals (Chapter 3),
- steps being taken or planned to be taken to address projected climate change effects on SEJPA facilities and operations and tributary wastewater facilities and operations (Chapter 4), and
- the process and schedule for updating the CCAP and support studies, financing issues, and any required climate-related NPDES permit revisions (Chapter 5).

The CCAP aligns with SEJPA's CIP, which includes elements that help SEJPA achieve improved energy efficienty, reduce GHG emissions, improve water quality, or enhance regional water supplies.

While the CCAP addresses climate-related issues associated with SEJPA treatment and discharge facilities, the SEJPA CCAP also summarizes actions of agencies who maintain wastewater collection systems that contribute flow to the SEWC.[3] These agencies include:

- the City of Encinitas and the City of Solana Beach (SEJPA member agencies),
- the City of Del Mar, which directs its municipal wastewater flow to the SEWC for treatment, and
- and Rancho Santa Fe Community Services District (RSFCSD), which serves unincorporated areas within the County of San Diego that are tributary to the SEWC.[4]

2 CCAP requirements have been established by the RWQCB for the City of San Diego (Order No. R9-2017-0007) City of Escondido (Order No. R9-2018-0002), Encina Wastewater Authority (Order No. R9-2018-0058), City of Oceanside (Order No. R9-2019-0166), U.S. Marine Corps Base Camp Pendleton (Order No. R9-2019-0167) and Fallbrook Sanitary District (Order No. R9-2019-0169).

3 RWQCB Order No. R9-2018-0003 establishes requirements for SEJPA wastewater treatment and discharge facilities and operations. Wastewater collection systems owned and operated by SEJPA member agencies (City of Encinitas and City of Solana Beach) and by wastewater agencies that contribute flows to the SEWC (City of Del Mar and County of San Diego) are regulated through requirements established by the State Water Resources Control Board (SWRCB) within Orders No. 2006-0003-DWQ and Order No. 2013-0058-EXEC. The SWRCB Orders establish state-wide discharge requirements for sanitary sewer collection systems and require each enrolling agency to develop, maintain and update Sewer System Management Plans (SSMPs). SSMPs are required to include an operation and maintenance plan, design and performance provisions, system evaluation and capacity assurance provisions, and a monitoring program for assessing sanitary sewer overflows (SSOs). While climate-change effects are not explicitly addressed in the SWRCB Orders, requirements governing the prevention of SSOs implicitly require that capacity and planning analyses take into account anticipated future conditions, including climate change.

4 The SEWC receives inflow from the City of Del Mar and from a portion of the RSFCSD (which serves unincorporated areas within the County of San Diego) through interagency agreements with SEJPA.

Applicable Climate Action Plans. Climate Action Plans that have been adopted and implemented by SEJPA member agencies include:

- *City of Encinitas Final Climate Action Plan* (City of Encinitas, January 2018 and Interim Revision, November 2020), and
- *City of Solana Beach, Final Climate Action Plan* (City of Solana Beach; July 2017, February 2020).

Other adopted climate action plans applicable to the SEWC service area include:

- *Del Mar Climate Action Plan* (City of Del Mar, June 2016) and
- County of San Diego Climate Action Plan (County of San Diego, February 2018).

Each of the agency's adopted climate action plans presents:

- a summary of projected climate-change issues and probable effects,
- an inventory of GHG emissions,
- GHG reduction strategies,
- vulnerability assessment, resiliency and adaptation plans,
- implementation and monitoring provisions, and
- procedures and schedules for updating the climate action plans.

To varying degrees, each of the adopted climate action plans addressed wastewater operations and facilities.

1.2 Preparation of CCAP

This CCAP was prepared by SEJPA under the direction of Mr. Christopher Trees, SEJPA Director of Operations. While this CCAP has been prepared by SEJPA, the SEJPA CCAP is consistent with climate change plans and goals adopted both by SEJPA member agencies and by other agencies that contribute wastewater flows to the SEWC.

As described herein, future updates to the SEJPA CCAP will be periodically prepared and submitted to the RWQCB as required to address updated wastewater facilities plans and updated climate-change effects or projections. Questions or comments concerning this CCAP should be directed to:

Mr. Michael Konicke
Senior Project Manager
San Elijo Joint Powers Authority
Tel: (760) 753-6203, extension 77
Email: konickem@sejpa.org

CHAPTER 2

PROJECTED CLIMATE CHANGE EFFECTS

Chapter 2

PROJECTED CLIMATE CHANGE EFFECTS

2.1 Summary of Climate Change Projections

Basis of Projections. This section identifies potential climate change-related impacts to SEJPA and tributary area facilities and operations if current trends continue. It is acknowledged that future revision of these projections will be warranted as additional climate change data are developed.

State and Regional Climate Projections. A number of state and regional climate change reports and studies have been released that have assessed climate change in San Diego County. In 2018, the State of California issued *California's Fourth Climate Change Assessment*, which incorporated climate projections from 33 State-funded research projects and contributions from 11 external researchers.[5]

Increased atmospheric carbon dioxide (CO_2) concentration resulting from human activity is the overarching driver of the climate change effects forecast within *California's Fourth Climate Assessment*. Table 2-1 summarizes general trends cited in *California's Fourth Climate Change Assessment* and the San Diego Region portion of the Fourth Climate Change Assessment.[6]

Table 2-1
Summary of Projected Climate Change Trends
California's Fourth Climate Change Assessment[6,7,7]

Category	Trend	Scientific Confidence
Temperature	Warming	Very High
Sea Levels	Rising	Very High
Snowpack	Declining	Very High
Annual Precipitation	Unknown	Low
Intensity of Heavy Precipitation Events	Increasing	Medium High
Frequency of Drought	Increasing	Medium High
Acres Burned by Wildfires	Increasing	Medium High

5 From Table 3-A of California's Fourth Climate Change Assessment, Statewide Summary Report. Source: State of California (2018a).

6 California's Fourth Climate Change Assessment, San Diego Region Report. State of California (2018b).

7 Table 3-A of California's Fourth Climate Change Assessment, Statewide Summary Report does not list ocean acidification, but other sections of the report identify a probable increasing trend in ocean acidification (decrease in pH). State of California (2018a).

Agency Climate Change Reports. Climate change trends projected for the San Diego Region within *California's Fourth Climate Change Assessment* are consistent with climate change projections addressed within the climate action plans adopted by agencies that contribute flow to the SEWC.[8] Key climate change effects addressed within the agency climate plans include:

- *Increased temperatures and increased frequency of extreme heat events.* Average temperatures will increase, hotter and drier days will become more frequent, and heat waves will become more frequent and more prolonged.
- *Reductions in fresh water.* Water and energy demand will increase while extended and more frequent droughts will likely decrease the availability of water from traditional imported water sources.
- *Increased potential for precipitation-driven flooding.* Climate change will result in a greater variation in precipitation, potentially resulting in increased frequency and duration of extreme precipitation events that can cause inland and coastal flooding.
- *Increased rate of wildfires.* Drier weather may increase the frequency and size of wildfires and extend the length of the wildfire season.
- *Rising sea levels.* Projected sea level rise, coastal erosion, and increasing storm surges may cause fragile sea cliffs to collapse, beaches to shrink, more frequent coastal flooding and increased erosion. These effects, in turn, may impact infrastructure and ecosystems.

In addition to the CO2-related effects addressed within *California's Fourth Climate Change Assessment* and the agency climate change reports, projected CO_2 emissions may trigger a gradual warming of ocean temperatures and trigger changes in ocean water chemistry.[9]

Of particular importance with respect to SEJPA and member agency wastewater facilities and operations are:

- projected increases in sea levels and associated coastal flooding and erosion, and
- potential climate-related effects on water supply availability.

Temperature Variation. As documented within California's Fourth Climate Change Assessment, the climate within San Diego County will become hotter and drier in the coming decades. By 2050, average annual air temperatures will increase by 2 to 3 degrees Fahrenheit (°F), and the temperature rises will be more significant during summer months.[10]

The pattern of projected temperature change is projected to vary between coastal and inland areas, with projected increased temperatures along the coast being less than projected temperature increases in

8 Includes the City of Encinitas Final Climate Action Plan (January 2018, Interim Revision November 2020), the City of Solana Beach Climate Action Plan (July 2017), the Del Mar Climate Action Plan (June 2016) and the County of San Diego Climate Action Plan (February 2018).

9 As stated on page E-27 of the Monitoring and Reporting Program of RWQCB Order No. R9-2018-0003.

10 Larger temperature increases are projected by the end of the 21st century, with San Diego Region temperature increases ranging from 4-6 °F under some climate modeling scenarios and up to 7-9 °F under more worst-case modeling scenarios. Source: California's Fourth Climate Change Assessment, San Diego Region Report (State of California, 2018b).

inland areas. By 2050, the amount of additional temperature increase in the interior regions of San Diego County is projected to exceed temperature increase along the coastal zone by 1 °F.[11]

Heat waves (periods of uncomfortably hot days and nights) will increase in frequency, duration, and magnitude. Demonstrating this, the 98th percentile heatwave that occurred during the period 1970-2000 (which typically occurs twice per year and lasts for two days), is projected to occur 12-16 times per year by 2050 and last for an average of four days.[12]

Ocean temperatures are also projected to rise. Fumo et al. (2020) document a 2 °F increase in ocean temperatures at the Scripps Pier in La Jolla during the past century. Fumo et al. (2020) also document that periods of elevated temperatures in marine waters (e.g., marine heat waves) have increased both in intensity and duration during the past century. As an example of these rising temperatures, the two warmest San Diego Region ocean temperatures on record occurred in August, 2020.[13]

Reductions in Fresh Water Supplies. *California's Fourth Climate Change Assessment* notes that climate change is projected to result in extended and more frequent droughts both in local watersheds and in watersheds which supply the region's two imported water supplies – the Colorado River and State Water Project. Additionally, climate change is projected to result in less snowpack in the watersheds that supply the Colorado River and State Water Project, resulting in shorter periods of seasonal runoff compared to historic conditions.[14] The change in runoff patterns, in turn, may also result in increased environmental restrictions which further limit the availability of imported supplies. Overall, the availability of imported supplies may shrink significantly by 2050. The U.S. Bureau of Reclamation *San Diego Watershed Basin Study* (USBR, 2016) projects that climate-related changes may decrease the availability of State Project Water supplies from 13 percent (hot wet conditions) to 27 percent (hot dry conditions) by 2050.[15] Even more significant climate-related decreases in Colorado River imported supplies are forecast.[16]

At the same time, the San Diego County Water Authority is projecting that, even with increased water conservation, increased population within the region will increase total annual Municipal and Industrial water demands from approximately 588,000 acre-feet per year in 2020 to 719,000 acre-feet per year in 2040.[17] Since water demands are projected to be above average during the drought periods that are projected with climate change, climate change is projected to result in increased need for the development of sustainable local water supplies.[18]

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11 See page 19 of California's Fourth Climate Change Assessment, San Diego Region Report (State of California, 2018b).

12 County of San Diego office of Emergency Services and San Diego County Unified Disaster Council (2017), pages 29-30.

13 The temperature at Scripps Pier on August 3, 2020 was 78.8 °F and the temperature was 78.6 °F on August 1, 2020. The prior warmest temperature occurred in July 1931. Source: Angela Fritz of the Washington Post (August 6, 2020).

14 Snowpack effectively stores water for subsequent release upon melting, resulting in runoff occurring during a longer portion of the year. This prolonged runoff effect allows for more effective use of storage reservoirs and imported water diversion and conveyance facilities.

15 See Section 4.2 (Table 10) of USBR (2016).

16 See Section 4.1 of USBR (2016).

17 San Diego County Water Authority (2015), page 2-7.

18 The San Diego County Water Authority (2015) superimposed a range of climate change estimates onto a regional water demand model, and concluded that the climate-related effect on projected demand was near negligible during wet years but that demands increased approximately 16 percent above normal during hotter and drier years. Estimated demands are in the process of being updated.

Precipitation-Driven Flooding in Inland Areas. Climate model results indicate that the San Diego Region will retain its Mediterranean pattern, with most precipitation occurring during winter months. While the models generally agree with respect to projected temperature increases, significant disagreement occurs among the models as to the effects of climate change on precipitation, with some models projecting increases in annual precipitation while other models project decreases in annual precipitation.[19]
Most models, however, project greater volatility in precipitation, with fewer days of precipitation, but more precipitation on the days that rain does occur.[20] If such effects occur, this could lead to an increased potential for precipitation-driven flooding in inland areas even if long-term average annual precipitation totals are not markedly affected by climate change.

Wildfires. While the potential economic impacts of wildfires are projected to be greater as the San Diego Region population increases, climate change is projected to potentially result in an increased frequency and magnitude of wildfires, due to:

- increased air temperatures and extended fire season,
- drier vegetation during periods of drought,
- denser vegetation during wetter than normal years, and
- possible increase in the duration of Santa Ana Winds, prolonging extreme fire conditions.[21]

Overall, the number of days each year with ideal conditions for large-scale wildfires is projected to significantly increase by 2050.[27]

Sea Level Rise/Coastal Flooding. Sea level rise and coastal flooding (and associated erosive effects) represents the greatest potential for climate-related impact to SEJPA facilities and operations. Over the past century, mean global sea level has risen approximately 0.07 inches per year, accelerating to a rate of approximately 0.13 inches per year since 1993.[22] Tide gauges in the region indicate a sea level rise of approximately about 0.09 inches per year during the past 100 years.[23] This sea level rise will result in increased coastal flooding, particularly during high tide and storm events. The sea level rise and coastal flooding will also result in increased erosion along coastal bluffs, cliffs and beaches.

Considerable research has been conducted to date to assess sea level rise projections in San Diego County. In 2018, the State of California provided a comprehensive update of sea level rise guidance in *State of California Sea Level Rise Guidance, 2018 Update* (California SLR Guidance).[24] Incorporating science from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report[25] and the California Ocean Protection Council Science Advisory Team (OPC-SAT) Rising Seas Report[26], the California SLR

19 San Diego County Water Authority (2015), page 2-12. Also see USBR (2016).

20 California's Fourth Climate Change Assessment, San Diego Region Report (State of California, 2018b).

21 Source: State of California (2018b).

22 IPCC (2013).

23 NOAA (2018).

24 California Natural Resources Agency and California Ocean Protection Council (2018).

25 IPCC (2014).

26 OPC-SAT (2017).

Guidance addressed advances in sea-level rise modeling and improved understanding of the processes that drive global sea level rise. Key technical findings and recommendations presented within the California SLR Guidance, in part, include:

- Scientific understanding of sea-level rise is advancing at a rapid pace.
- The direction of sea-level change is clear; sea levels are rising.
- The rate of ice loss from the Greenland and Antarctic ice sheets is increasing, and California is particularly vulnerable to sea-level rise caused by ice loss from West Antarctica.
- New scientific evidence has highlighted the potential for extreme sea-level rise.
- Probabilistic model projections should be used to understand and address impacts and consequences associated with sea level rise.[27]

The 2018 California SLR Guidance and 2018 guidance issued by the California Coastal Commission[28] included sea level rise projections for the San Diego region based on probabilistic modeling presented by Kopp et al. (2014) and Sweet et al. (2017). Table 2-2 summarizes the sea level rise projections for the San Diego region, as per the 2018 California SLR Guidance and the 2018 California Coastal Commission guidance.[29]

Table 2-2
Projected Sea Level Rise in the San Diego Region, 2030-2050[30, 31]

Risk Category	Description	Projected Sea Level Rise (feet)		
		2030	2040	2050
Low Risk Aversion[32]	17% probability that sea level rise exceeds the listed value	0.6	0.9	1.2
Medium-High Risk Aversion[33]	0.5% probability that sea level rise exceeds the listed value	0.9	1.3	2.0
Extreme Risk Aversion[33]	Single maximum occurrence (no assigned probability)[34]	1.1	1.8	2.8

27 California Natural Resources Agency and California Ocean Protection Council (2018), pages 1-3 and 1-4.

28 California Coastal Commission (2018).

29 While Table 2-2 shows projected sea level rise through 2050 (an appropriate planning horizon for wastewater facilities planning), even greater increases in sea levels are projected in the latter half of the 21st century. Source: California Natural Resources Agency and California Ocean Protection Council (2018).

30 See Table 34 (page 78) from California Natural Resources Agency and California Ocean Protection Council (2018).

31 See Table G-12 (Appendix G, page 304) from California Coastal Commission (2018).

32 Sea level rise projections presented in the California SLR Guidance and California Coastal Commission Guidance is based on modeling projections presented by Kopp et al. (2014).

33 Sea level rise projections presented in the California SLR Guidance and the California Coastal Commission Guidance is based on modeling projections presented by Sweet et al. (2017).

34 The California SLR Guidance and Coastal Commission SLR Guidance notes that probabilistic projections may underestimate the likelihood of extreme sea-level rise resulting from loss of the West Antarctic ice sheet, particularly under high emissions scenarios. To address this, both guidance documents include an extreme scenario called the H++ scenario. The probability of this scenario is currently unknown, but its consideration is important, particularly for high-stakes, long-term decisions. The above-listed values for "extreme risk" are based on this H++ scenario.

In addition to the near-term projected rises in sea levels shown in Table 2-2, the rate of sea level rise in the second half of the 21st century could be significantly higher. By year 2100, sea levels may rise by approximately 2.4 to 5.9 feet, with the potential for an extreme scenario of 10.2 feet of rise.[35]

2.2 Potential Impacts on Wastewater Facilities

Based on the climate change projections presented in Section 2.1, this section identifies potential climate change-related impacts to SEJPA and member agency wastewater facilities and operations if no actions are taken.[36]

Temperature Variation. Projected increases in San Diego County air temperatures associated with climate change have the theoretical potential to result in:

- slight potential for increased temperatures in wastewater treatment plant influent,
- slight potential for effects on nitrification within recycled water treatment operations, and
- potential for increased power outages related to regional power use spikes during heat waves.

Temperature Effects on Wastewater Treatment. Temperature-related issues are not projected to represent a significant impact to SEWC treatment operations. While increased influent temperature could enhance microbiological reactions in the secondary treatment and reduce solids retention times, the slight potential increase in temperature in the SEWC influent is not projected to significantly affect overall wastewater treatment processes or operations. Further, the SEWC maintains standby power in the event of temperature-related regional power outages.

Temperature Effects on Ocean Discharge Operations. Slight increases in the temperature of the discharged effluent are likely to be offset by increased ocean temperatures, resulting in minimal impacts to outfall performance or initial dilution.

Reductions in Fresh Water Supplies. Actions during the past 30 years have significantly diversified water supply sources within the San Diego Region.[37] SEJPA's long-standing and ongoing actions to increase recycled water use are consistent with San Diego County Water Authority, local water districts, RWQCB, and member agency goals to develop sustainable local water supplies to help alleviate projected shortfalls in the future availability of imported water supplies.

35 California Natural Resources Agency and Ocean Protection Council (2018).

36 Potential climate-related impacts discussed herein are preliminary. Additional facility-specific assessments will be required to evaluate site-specific vulnerabilities of wastewater facilities.

37 In 1990, imported water from the Metropolitan Water District of Southern California (MWD) comprised more than 90 percent of the San Diego County water supply. In 2019, MWD imported water comprised only 29 percent of the region's water supply. Source: San Diego County Water Authority 2019 Annual Report.

Precipitation-Driven Flooding in Inland Areas. Per requirements in existing RWQCB and SWRCB discharge orders, all existing SEJPA treatment and disposal facilities have been designed to protect against the waters of a once-in-100-year flood event and once-in-100-year runoff event.[38]

Member agency wastewater collection facilities have been sited and designed to operate under extreme hydrologic conditions, including 100-year flood and runoff conditions. As additional climate change projections become available, it is projected that the County will, where applicable, develop revised 100-year flood maps. If and when such flood projections are revised, SEJPA and member agency planners will need to evaluate whether:

- existing and planned facilities may be affected by such revised flood plain delineations and, if so,
- what additional means of protection are required to address the potential for increased facilities vulnerability to future climate-related flood or runoff events.

Wastewater Flows. In addition to increasing flood and runoff vulnerability, increased precipitation (along with sea level rise and coastal flooding) may also affect sewer system inflow and infiltration (I&I). Key factors that may affect I&I include:

- *Increased Precipitation Intensity.* As noted, uncertainty exists as to whether or how climate change will affect overall San Diego Region precipitation patterns. Even if climate change does not impact long-term average annual precipitation totals, however, many climate change models indicate a potential for more varied and intense precipitation. This increased severity in storms may lead to increased sewer system I&I during such extreme wet periods.
- *Coastal Flooding*. In the absence of protective measures, projected sea level rise combined with high tide events or storm surges will result in an increased number of times coastal areas are inundated. SEWC wastewater inflows could potentially increase as a result of increased I&I during these coastal inundation events. Additionally, increases in climate-related I&I could result in increased TDS concentrations in the SEWC influent.[39]

The degree to which future I&I may be influenced by climate change is currently unknown. SEWC flow projections are periodically updated as part of ongoing master planning efforts, but trends in SEWC inflows in recent years has been downward due to water conservation efforts. SEJPA and its contributing agencies will continue to monitor wastewater flow in future years to determine if any climate-related trends in wastewater flows are evident.

Wastewater Quality. Water conservation efforts in recent years has led to a modest increase in SEWC influent concentrations of TSS and BOD. SEJPA will continue to monitors trends in SEWC influent quality, but climate change is not projected to discernibly impact the quality (or mass loads) of BOD and TSS in the SEWC influent.

38 All existing SEJPA facilities and tributary pumping stations have been designed to provide protection against present day and near-term 100-year flood and runoff events. Further site-specific study will be required to assess how long-term climate change conditions may alter future flood and runoff protection needs beyond 2050. Future update to the CCAP will address the results of these studies when available.

39 Additionally, if significant coastal I&I were to occur as a result of climate-related coastal flooding, this could lead to sudden increases in influent TDS at the SEWC which could potentially result in salinity-related toxic effects on the microbiology of SEWC secondary treatment processes.

As noted, climate-related coastal flooding could result in increased I&I, which in turn could result in increased TDS concentrations in the SEWC influent. If this were to occur, TDS concentrations in the SEWC recycled water could also increase, making the SEWC recycled water less desirable for irrigation. SEJPA, however, will be able to control TDS concentrations in the SEWC recycled water to a degree because of the reverse osmosis system that was installed in 2012.

Wildfires. Wildfires would have the potential to temporarily disrupt SEJPA wastewater treatment and collection operations only if the fires are immediately adjacent to and threatening to the facilities. Wildfires, however, may also affect:

- the regional transportation grid which in turn can potentially delay sewer and water response crews, and/or
- the regional power grid, which may result in increased reliance on back-up power sources at pump stations and treatment facilities.

Sea Level Rise. The sea level rise projections presented in Section 2.1 have the potential to affect SEJPA and member agency wastewater operations in several ways, including:

- potential sea level rise impacts (and or storm surge effects) on existing pumping stations and collection facilities that are located in low lying coastal areas,
- erosion impacts on existing wastewater pumping and collection facilities that are located in coastal areas, and
- increased I&I into coastal wastewater collection facilities, increasing peak flows at regional wastewater treatment facilities.

Impacts to SEWC Treatment Facilities or Operations. The SEWC site is located on elevated ground north of San Elijo Lagoon, and the site is not projected to be adversely affected by coastal flooding, sea level rise, or storm runoff. Additionally, improvements to the local storm channel facilities are being implemented as part of the SEJPA Water Campus Improvements Project.[40] As part of this project, the existing storm channel is being replaced by underground culverts and a segment of the North Coast Bike Trail is to be constructed along the culvert alignment.

Other than potential effects on I&I (see page 2-7) sea level rise is not projected at this time to result in any discernible impacts to SEWC treatment facilities or treatment operations.

Impacts to Ocean Discharge Facilities and Operations. In 2021, SEJPA completed a project to replace the land outfall section of the SEOO. The original land outfall was completed in 1965 and consisted of an asbestos-concrete pipe installed at a shallow depth. The replacement land outfall is constructed of high-density polyethylene pipe and was installed using directional drilling techniques at a depth of up to

40 In addition to storm runoff improvements, the project incorporates interactive educational features, a segment of the North Coast Bike Trail, solar energy production facilities, and additional parking for SEJPA, nature path and lagoon visitors. An aerial photo showing the new underground stormwater channel construction work immediately west of the SEWC is presented on the cover of this report. The Water Campus Improvements Project is scheduled to be completed by the end of 2021.

75 feet. The land outfall connects to the SEOO at San Elijo State Beach a depth approximately 15 feet below Mean Sea Level. Because of the depth of the land and ocean outfall, erosive and coastal flooding effects on the land and ocean outfall are projected to be negligible.

While projected increases in sea levels will slightly reduce the static head available for conveying wastewater through the outfall, this slight decrease in available head is not projected to significantly affect outfall operations. Projected sea level rise is also not projected to have a discernible effect on outfall capacity, as the existing capacity of the SEOO is limited by pressure ratings on the inshore portion of the 30-inch-diameter SEOO which would not be affected by a slight reduction in available static head.

Agency Wastewater Collection Facilities. While climate change effects are not projected to discernibly impact the SEWC and SEOO, climate change effects offer the potential for impacting wastewater collection facilities operated by SEJPA member agencies and other agencies that contribute flow to the SEWC.

Detailed climate change vulnerability assessments on specific wastewater collection facilities have not been completed, but preliminary assessments indicate the potential for long-term sea level rise to potentially affect low elevation coastal wastewater collection facilities and pump stations through coastal erosion and coastal flooding. The City of Encinitas, in collaboration with the San Diego Foundation and Local Governments for Sustainability is in the process of developing the San Diego Regional Coastal Resilience Assessment which will assess vulnerability of coastal assets (including wastewater facilities) using the U.S. Geological Survey (USGS) CoSMoS sea level model.[41] Similarly, the City of Solana Beach climate plan calls for conducting additional sea level rise studies to better understand the risks and develop long-term mitigation recommendations.[42]

In addition to assessing climate effects on sewer mains, the vulnerability assessments will evaluate potential climate-related effects on wastewater pump stations. Three principal pump stations are located adjacent to San Elijo Lagoon which convey wastewater to the SEWC. These include:

- *Cardiff Pump Station.* The Cardiff Pump Station is owned and operated by the City of Encinitas, and is located along Manchester Avenue across the street from the SEWC. The Cardiff Pump Station conveys wastewater to the SEWC from the Cardiff Gravity Sewer and Cardiff Relief Trunk Sewer, which serve the coastal areas of the Cardiff Sanitary Division within the City of Encinitas.[43]
- *Olivenhain Pump Station.* The Olivenhain Pump Station is located on Manchester Avenue immediately east of Interstate 5. This pump station (owned and operated by the City of Encinitas) conveys flows to the SEWC from the inland portion of the Cardiff Sanitary Division. The Olivenhain Pump Station also handles flows from a small portion of the City of Solana Beach as well as flows from a portion of the RSFCSD.

41 See Section 5.1.1 of the City of Encinitas Final Climate Action Plan (City of Encinitas, January 2018).

42 See Section 4.3.4 of the City of Solana Beach Climate Action Plan (January 2017, revised February 2020).

43 Wastewater from the Cardiff Sanitary Division within the City of Encinitas is conveyed southward to the SEWC. Wastewater from the Encinitas Sanitary Division within the City of Encinitas is conveyed northward to the Encina Wastewater Authority.

- *Solana Beach Pump Station.* The Solana Beach Pump Station is owned and operated by the City of Solana Beach. The Solana Beach Pump Station is located on the coastal side of San Elijo Lagoon and conveys wastewater to the SEWC from the majority of the City of Solana Beach as well as from the City of Del Mar.

Each of the three primary pump stations are protected against near-term flood and coastal erosion effects. While no near-term flooding or erosive effects are projected for City of Encinitas wastewater collection facilities, however, the *City of Encinitas Climate Action Plan* identifies the long-term potential for impact, as follows:

> *By 2100, coastal flooding is projected to impact Cardiff Sewer Pump Station, sewer system infrastructure surrounding San Elijo Lagoon.*[44]

The City of Solana Beach recently completed work on rehabilitating the Solana Beach Pump Station. While the Solana Beach Pump Station is protected against 100-year flood events for the near term, the City of Solana Beach Climate Action Plan notes that:

> *Longer-term sea level will increase rapidly in the second half of the century and will be punctuated by short periods of storm-driven extreme sea levels that will imperil existing infrastructure, structures, and ecosystems with increasing frequency.*[45]

In parallel with the rehabilitation work on the Solana Beach Pump Station, a number of improvements to the hydraulics of San Elijo Lagoon have been implemented as part of the San Elijo Lagoon Restoration Project.46 Adaptation to climate change is an important element of this lagoon restoration project, which involves improvements to the east, central and west basins of San Elijo Lagoon. Hydraulic improvements to the west basin (where the Solana Beach Pump Station is located) which should help to mitigate against future climate-related impacts include, in part:

- dredging the main lagoon channel (north end of the basin) to a greater depth and installing a culvert at the south end to increase tidal circulation and reduce potential flood-related impacts,
- removing the water control feature to ensure that the lagoon remains open to tidal flushing, and
- installing rock slope protection to the western embankment of the lagoon inlet to absorb storm surges to address future sea level rise.[47]

44 City of Encinitas Final Climate Action Plan (2018, 2020), Table 5-1.

45 City of Solana Beach Climate Action Plan (Revised 2020).

46 The project is also known as the Reviving Your Wetlands – San Elijo Lagoon Restoration project. This project was implemented as part of the Build North Coast Corridor program of transportation and environmental enhancements, which is funded through the San Diego County voter-approved regional half-cent sales tax for transportation that is administered by SANDAG (the San Diego Association of Governments). The project is being implemented through collaboration with the Nature Collective (formerly known as the San Elijo Lagoon Conservancy).

47 Source: Nature Collective website, located at: https://thenaturecollective.org/project/san-elijo-lagoon-restoration/.

In addition to the three primary pump stations which convey flow to the SEWC, a number of smaller coastal pump stations are operated by the Cities of Encinitas, Solana Beach, and Del Mar which contribute flow to the three primary pump stations. Some of these smaller pump stations may also be subject to long-term climate change effects such as coastal erosion and coastal flooding.

In summary, all existing SEWC conveyance facilities comply with 100-year-frequency flood and runoff requirements of Order No. R9-2018-0003 and all facilities are projected to continue to comply with these requirements for the near-term. Future site-specific analyses, however, will be required to address long-term (e.g., beyond year 2050) sea level rise and coastal flooding effects on pump stations and conveyance facilities that contribute flow to the SEWC. Facilities warranting such analysis include conveyance facilities located near coastal bluffs or in low-elevation coastal areas.

CHAPTER 3

GREENHOUSE GAS EMISSIONS

Chapter 3

GREENHOUSE GAS EMISSIONS

3.1 GHG Reduction Goals

As noted, climate action plans have been adopted by SEJPA member agencies (Cities of Encinitas and Solana Beach) and by other jurisdictions that contribute wastewater to the SEWC (City of Del Mar and County of San Diego). Each of these adopted climate action plans establish GHG reduction goals and estimate GHG emissions from wastewater facilities.

Facility-specific GHG assessments and reduction goals that target individual wastewater facilities within the SEWC service area have not been developed to date, but each climate plan inventories baseline GHG emissions from the community at large and from aggregate wastewater facilities/operations. Additionally, each agency climate plan identifies GHG reduction goals in accordance with directions established within, Assembly Bill 32, Senate Bill 32, and Executive Orders B-30-15 and S-3-05.[48]

Table 3-1 (page 3-2) summarizes inventoried GHG emissions reported in the climate plans adopted by the Cities of Solana Beach, Encinitas, and Del Mar. Table 3-1 also presents:

- community-wide GHG emissions under "business as usual" conditions,[49] and
- GHG emission targets established in the respective climate plans.

Table 3-2 (page 3-2) presents projected GHG emissions related to wastewater facilities and operations presented in the climate action plans adopted by the Cities of Encinitas, Solana Beach and Del Mar. As shown in Table 3-2, wastewater facilities and operations represent only a fraction of one percent of the total community-wide GHG emissions within the three municipalities that comprise most of the SEWC service area. For comparison, water supply operations comprise approximately 3 percent of projected GHG emissions in the City of Encinitas, 2.2 percent in the City of Solana Beach, and 2.4 percent within the City of Del Mar.[50]

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48 The California Global Warming Act of 2006 (Assembly Bill 32) created a multi-year comprehensive program for reducing GHG emissions and established a goal of reducing GHG emission in year 2020 to 1990 levels. Executive Order B-30-15 and Senate Bill 32 extended the goals of Assembly Bill 32 and established a 2030 goal of reducing emissions 40 percent from 2020 levels. Executive Order No. S-3-05 established a goal of reducing GHG emissions to 80 percent below 1990 levels by year 2050.

49 The "business as usual" projections shown in Table 3-1 reflect estimated GHG emissions if no actions are taken to address climate change. Each agency climate action plan also presented projected GHG emissions under "business as usual" conditions which are adjusted to reflect actions mandated under state and federal climate laws, policies, initiatives, regulations.

50 See City of Encinitas (2018, 2020), City of Solana Beach (2017, 2020), and City of Del Mar (2016).

Table 3-1
GHG Emission Reduction Goals and Future Projected GHG Emissions if No Reductions are Achieved

Municipality Contributing Flow to the SEWC[51]	Annual Community-Wide GHG Emissions Metric tons per year of Carbon Dioxide equivalents (CO_2e)[52]						
	Baseline Conditions	Projected "Business as Usual" Conditions if No Action is Taken[53]			GHG Emission Targets Established in the Climate Action Plans		
		2020	2030	2035	2020	2030	2035
City of Encinitas[54]	483,773 (Year 2012)	474,712	483,150	---	421,481	285,426	---
City of Solana Beach[55]	139,216 (Year 2010)	139,215	131,868	142,707	118,334	---	69,608
City of Del Mar[56]	55,855 (Year 2012)	54,822	---	55,314	47,477	---	27,928

Table 3-2
Projected GHG Emissions Attributed to Wastewater Facilities/Operations

Municipality Contributing Flow to the SEWC[52]	Projected Annual GHG Emissions Attributed to Wastewater Facilities/Operations[53] Metric tons per year of Carbon Dioxide equivalents (CO_2e)				Wastewater-Related GHG Emissions as a Percent of Total Community-Wide Emissions[53]
	"Baseline" Conditions	2020	2030	2035	
City of Encinitas[55]	2,155 (Year 2012)	2,460	2,625	---	0.4%
City of Solana Beach[56]	593 (Year 2012)	617	---	656	0.5%
City of Del Mar[57]	81 (Year 2010)	85	---	90	0.1%

51 The SEWC also receives wastewater from a portion of the Rancho Santa Fe Community Services District (RSFCSD) which is under the land use jurisdiction of the County of San Diego. The portion of the RSFCSD service area that contributes flow to the SEWC is small compared to the total jurisdictional area of San Diego County. County-wide GHG projections (both for the total community and for wastewater facilities) are thus not applicable for this small portion of the RSFCSD area. For this reason, Table 3-1 focuses on the municipalities of Encinitas, Solana Beach and Del Mar, which are almost wholly tributary to the SEWC.

52 Values as presented in the respective climate action plans adopted by the City of Encinitas (2018, updated in 2020), City of Solana Beach (July 2017, updated in 2020) and City of Del Mar (2016).

53 Projected "business as usual" conditions represent conditions under which no actions are taken to reduce future GHG emissions, including actions required pursuant to state and federal laws, policies and regulations, including the California Renewables Portfolio Standards, California Solar Policies and Programs, California Energy Efficiency Standards, and Federal and California vehicle efficiency standards.

54 The City of Encinitas Final Climate Action Plan (January 2018, updated 2020) inventoried GHG emissions during 2012 and utilized years 2020, 2030 and 2050 for GHG milestone projections.

55 The City of Solana Beach Climate Action Plan (July 2017, updated 2020) inventoried GHG emissions during 2010 and utilized years 2020 and 2035 for GHG milestone projections.

56 The Del Mar Climate Action Plan (June 2016) inventoried GHG emissions during 2012 and utilized years 2020 and 2035 for GHG milestone projections.

3.2 GHG Reduction Implementation Strategies

SEJPA Member Agency GHG Reduction Strategies and Actions. The climate action plans adopted by SEJPA member agencies identify a comprehensive set of goals, actions and targets to reduce GHG emissions. These actions include a combination of ordinances, policies, programs, outreach and education activities, incentives and operational actions.

Table 3-3 (page 3-4) summarizes GHG reduction strategies and implementation actions addressed within the climate action plans of the Cities of Encinitas and Solana Beach (SEJPA member agencies). As shown in Table 3-3, key GHG reduction strategies implemented by SEJPA member agencies include, in part, development of renewable energy, improved building efficiency, reducing energy and water consumption, developing sustainable local water supplies and improving water efficiency.

SEJPA Implementation Actions. SEJPA facilities planning efforts and SEWC operations optimization efforts are consistent with the GHG reduction goals established by SEJPA member agencies. These goals are being achieved by (1) investing in energy efficiency and (2) optimizing and improving treatment and treatment reliability while at the same time reducing energy consumption and chemical use. Recent energy efficiency and optimization investments and actions implemented by SEJPA at the SEWC include:

- adding biological selectors within the biological reactors (activated sludge aeration basins) to improve biological treatment and reduce chemical use,
- replacing existing centrifugal air blowers with high efficiency turbo-blowers to reduce energy consumption per million gallons treated,
- installing dissolved oxygen monitoring probes within the activated sludge aeration basins to measure oxygen levels to accurately apply air and optimize energy use,
- installing temperature and nitrogen monitoring probes to collect critical information to optimize biological treatment and minimize use of downstream chemicals, and
- implementing SCADA (supervisory control and data acquisition) process monitoring and automation which reduces pump cycling and energy use.

Actions taken to improve community resiliency, reduce dependency on imported water, and achieve the water efficiency goals of the SEJPA member agency climate action plans include;

- in 2012, constructing micro-filtration treatment for processing of secondary effluent for use as recycled water (1 million gallons per day capacity expansion),
- in 2012, adding 0.5 million gallons per day (mgd) of reverse osmosis capacity to control TDS in the SEWC recycled water,[57]
- expanding recycled water distribution system and offsite storage (Encinitas Ranch Recycled Water Expansion, Village Park RW Expansion, Via de la Valle RW Expansion) which replaced proximately 250 acre-feet per year of potable water consumption with recycled water,

57 This 0.5 mgd of reverse osmosis capacity also will help to control future increases in TDS concentrations which may occur as a result of increased I&I in coastal areas due to sea level rise and increased coastal flooding.

Table 3-3 Summary of GHG Reduction Implementation Strategies and Actions SEJPA Member Agencies		
Agency	GHG Reduction Category	Implementation Action Established in Climate Action Plan[59,60]
City of Encinitas[58]	1. Building Efficiency	• Require energy audits of existing residential structures • Require new single-family homes to install solar water heaters • Adopt higher energy standards for commercial buildings • Require commercial buildings to install solar water heaters • Continue implementation of energy-efficient projects in municipal facilities
	2. Renewable Energy	• Establish a community-choice energy program • Require new homes to install photovoltaic systems • Require commercial buildings to install photovoltaic systems • Supply municipal facilities with onsite renewable energy
	3. Water Efficiency	• Reduce City-wide potable water consumption
	4. Clean and Efficient Transportation	• Complete and implement the City-wide active transportation plan • Implement a local shuttle system • Improve traffic flow • Require residential electric vehicle charging stations • Require commercial electric vehicle charging stations • Transition the municipal vehicle fleet to zero emission vehicles (ZEV)
	5. Reduce Off-Road Equipment	• Adopt a leaf blower ordinance to limit use of 2-stroke leaf blowers
	6. Zero Waste	• Implement a zero waste program
	7. Carbon Sequestration	• Develop and implement an urban tree planting program
City of Solana Beach[59]	1. Transportation	• Increase electric vehicles (EVs) and alternative fueled vehicles (AFVs) to 30% of total vehicle miles traveled • Increase commuting by vanpools by 20% of labor force • Reduce average commuter trip distance by 1 mile • Increase commuting by mass transit to 10% of labor force • Increase preferred parking for EVs and AFVs to 20% of eligible parking spots • Retime four traffic signals • Promote telecommuting to achieve 10% participation of labor force • Convert municipal gasoline fueled vehicles to EVs to achieve 50% gasoline reduction • Increase commuting by walking to 5% of the labor force • Increase commuting by bicycling by achieving approximately 17 bike lane miles • Promote alternative work schedule to achieve participation of 1% of the labor force
	2. Renewable Energy and Buildings	• Implement a community choice aggregation program (subject to City Council approval) • Achieve 10.8-megawatt capacity via residential rooftop photovoltaic systems • Achieve 2.0-megawatt capacity via commercial rooftop photovoltaic systems • Solar water heating at 20% of existing commercial spaces • Solar water heating at 25% of new homes and retrofits • Residential energy efficiency retrofits to achieve 15% reduction • Commercial energy efficiency retrofits to achieve 15% reduction
	3. Waste and Water	• Divert 90% of waste from landfills and capture 85% of landfill gas emissions • Implement existing water rate and billing structure • Expand recycled water program to reduce potable water use by 10% • Capture 100 of emissions from wastewater treatment • Water conservation
	4. Carbon Sequestration	• Carbon sequestration (urban tree planting program)

58 From City of Encinitas Final Climate Action Plan (January 2018, Interim Revision November 2020).

59 From City of Solana Beach Climate Action Plan (July 2017, revised February 2020).

- increasing recycled water use to the point where an average of 57 percent of the SEWC influent flow has been recycled during the past five years (the maximum percent of monthly SEWC flow that has been recycled during this five-year period is 91 percent),
- coordinating with the City of Del Mar to design and install a force main to convey wastewater from Del Mar[60] to the SEWC to (1) utilize unused SEWC treatment capacity and (2) provide the SEWC with a new source of wastewater for helping meet increased SEWC recycled water demands, and
- continuing ongoing efforts to assess means of achieving greater reuse of SEWC recycled water and reducing regional energy usage.[61]

Also consistent with GHG reduction goals of its member agencies, SEJPA is implementing the San Elijo Water Campus Improvements Project, which includes:

- educational features, stormwater improvements and (consistent with traffic reduction goals) the construction of an extension of the North Coast Bike Trail adjacent to the SEWC site, and
- construction of public parking lot near nature trails with and electric vehicle charging station.

Further, SEJPA has constructed new operation and administration facilities that help achieve GHG reduction goals through:

- reduced energy use, and
- implementation of renewable onsite energy via a solar photovoltaic system that produces 0.6 megawatt-hours of 100 of renewable electricity, which makes these new facilities net-neutral in energy consumption and offsets a portion of overall SEWC energy use.

Demonstrating the success of SEWC operations optimization efforts in reducing energy consumption (consistent with GHG reduction goals and strategies), Figure 3-1 (page 3-6) demonstrates the trend in energy reduction per million gallons of treated at the SEWC during the past 15 years. As shown in Figure 3-1, energy use per million gallons treated at SEWC has been cut by nearly half over the past 15 years.[62]

GHG Reduction Plans of Contributing Agencies. Proposed GHG reduction strategies and actions are also being implemented by the City of Del Mar (which conveys wastewater flows to the SEWC) and the County of San Diego (which has planning jurisdiction over the portions of the RSFCSD that are tributary to the SEWC. Table 3-4 (page 3-7) summarizes key GHG reduction categories targeted within the *Del Mar Climate Action Plan* and the *County of San Diego Climate Action Plan.*

60 City of Del Mar wastewater flows were previously discharged to the San Diego Metropolitan Sewerage System.

61 The developing tertiary disinfected recycled water utilizes considerably less energy that would be required to convey imported water to the San Diego Region. Recycled water thus represents a net energy offset compared to imported water supplies.

62 Average monthly energy use at the SEWC (exclusive of recycled water operations was approximately 174,000 kilowatt hours during 2005. Since 2015, monthly energy use at the SEWC (exclusive of recycled water operations) has averaged less than 100,000 kilowatt-hours. It is noteworthy that this reduction occurred while flows treated at the SEWC increased as a result of adding the City of Del Mar to the SEWC tributary area.

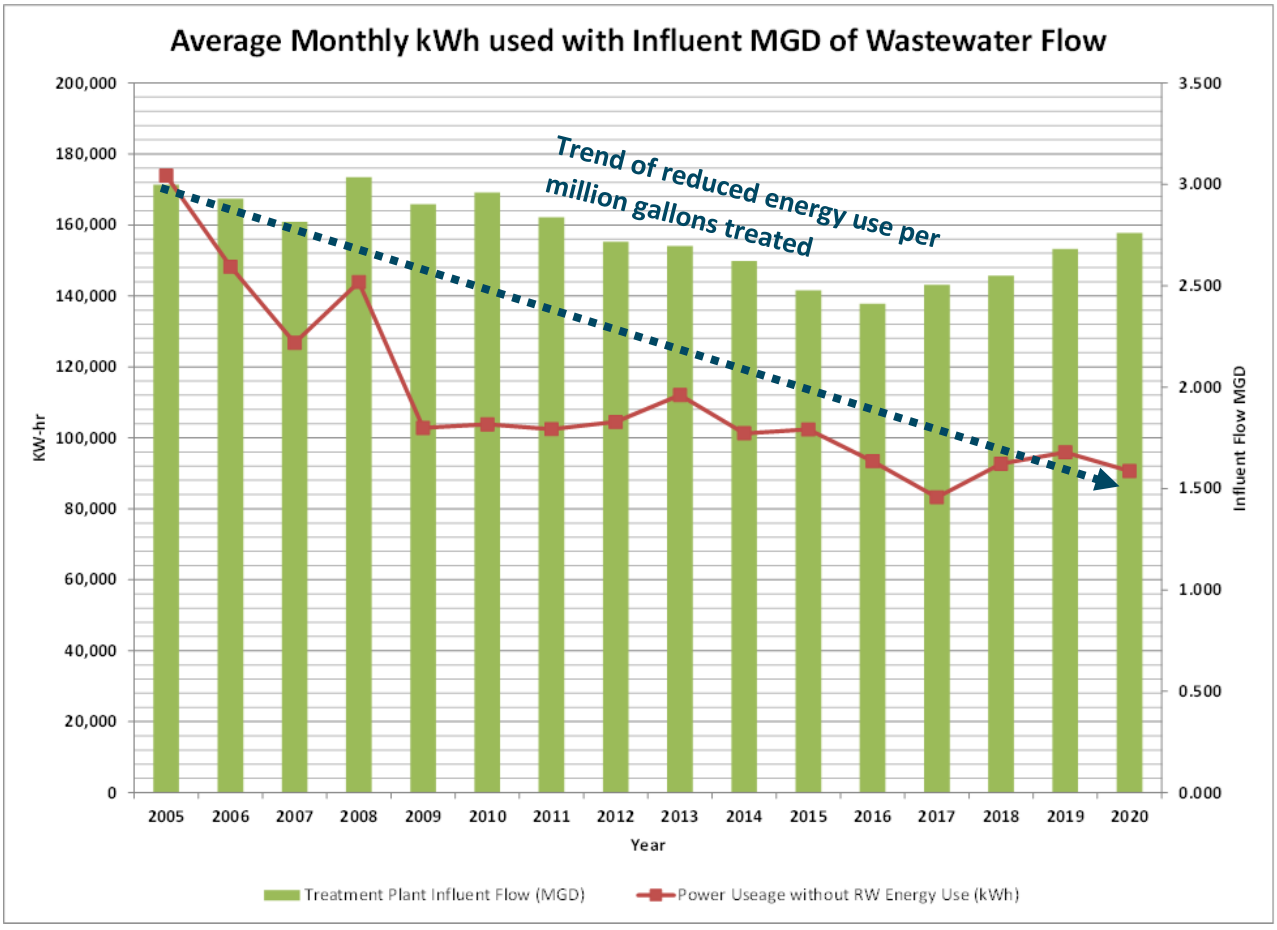

Figure 3-1 Energy Reduction at the SEWC, 2005-2020

Table 3-4 Summary of GHG Reduction Implementation Categories Other Jurisdictions Contributing Flow to the SEWC[64,65]		
Agency	GHG Reduction Category	Implementation Goal
City of Del Mar[63]	1. Energy and Buildings	• Achieve 0.7 and 1.0 megawatts (MW) of photovoltaics on residential properties by 2020 and 2035 • Achieve 1.2 and 1.5 MW of photovoltaics on commercial properties by 2020 and 2035, respectively • Reduce energy demand by 20% and 30% in 10% of residences by 2020 and 2035, respectively • Reduce energy demand by 20% and 50% in 10% of multi-family residencies by 2020 and 2035 • Reduce energy demand by 10% and 50% per square foot in 10% of commercial properties by 2020 and 2035, respectively • Retrofit 8% and 15% of homes with solar water heaters by 2020 and 2035, respectively • Achieve 100% renewable energy supply by 2035
	2. Water and Waste	• Achieve 20% and 40% reduction of indoor water use by 2020 and 2035, respectively • Reduce outdoor water use by 20 and 30 gallons per capita day by 2020 and 2035, respectively • Achieve 80% and 95% solid waste diversion by 2020 and 2035, respectively • Achieve 75% and 80% of methane capture at landfills by 2020 and 2035, respectively • Mandate pool covers on 100% of swimming pools by 2020 • Achieve 98 percent methane capture at wastewater treatment plants by 2035
	3. Transportation	• Achieve 4% mass transit ridership of Del Mar work force by 2020 and 8% by 2035 • Install 2.0 and 2.1 miles of bike lanes per square mile by 2020 and 2035 respectively • Achieve “walk to work” percentages of 4% and 10% by 2020 and 2035, respectively • Achieve EV/AFV vehicles comprising 15% of vehicle miles traveled by 2020 and 30% of vehicle miles traveled by 2035 • Set aside 10 percent of parking spaces for EVs and AFVs by 2020 • Construct at least three traffic roundabouts by 2020 • Achieve alternative schedules for 5% and 6% of the work force by 2020 and 2035, respectively • Increase vanpooling to 3 and 5 percent of work force by 2020 and 2035, respectively
	4. Urban Tree Planting	• Develop and implement an urban tree planting program
County of San Diego[64]	1. Built Environment and Transportation	• Reduce vehicle miles traveled • Shift towards alternative modes of transportation • Decarbonize on-road and off-road vehicle fleet • Invest in local projects to offset carbon emissions
	2. Energy	• Increase building energy efficiency • Increase renewable electricity use
	3. Solid Waste and water	• Increase solid waste diversion
	4. Water and Wastewater	• Reduce potable water consumption • Increase rainwater use
	5. Agriculture and Conservation	• Support conversion of agricultural equipment to alternative fuels • Increase carbon sequestration

63 City of Del Mar wastewater flows are directed to the SEWC through an interagency agreement. The listed GHG reduction strategies are from the *Del Mar Climate Action Plan* (June 2016).

64 The SEWC received flow from a portion of the RSFCSD, which is located within the planning jurisdiction of the County of San Diego. The listed County-wide GHG reduction strategies are from the *County of San Diego Climate Action Plan* (February 2018).

3.3 Agency Climate Plan Updates and Progress Reporting

Each of the agency climate plans establish provisions for monitoring GHG inventories and assessing compliance with climate plan and state goals. Each agency' climate plan also establishes provisions for providing progress updates to the respective governing bodies. Table 3-5 summarizes scheduled climate plan update frequencies and progress reporting frequencies for the respective agencies.

Table 3-5
Summary of Monitoring and Reporting Provisions
Climate Action Plans within the SEWC Tributary Area

Agency	Scheduled Climate Plan Update Interval	Progress Reporting Interval
City of Encinitas[65]	At discretion of City	Biannual[66]
City of Solana Beach[67]	Every 5 years starting in 2022	Biannual
City of Del Mar[68]	Not specified	Annual (or semiannually or at other unspecified intervals)
County of San Diego[69]	Every 5 years	Annual: Formal annual monitoring report issued

65 From *City of Encinitas Final Climate Action Plan* (January 2018, Interim Revision 2020).

66 The City of Encinitas also maintains a web-based dashboard which tracks progress of climate change tasks and actions.

67 From City of Solana Beach Climate Action Plan (July 2017, updated 2020).

68 From the Del Mar Climate Action Plan (June 2016).

69 From the *County of San Diego Climate Action Plan* (February 2018). The County of San Diego is the land use planning agency with jurisdiction within the portion of the Rancho Santa Fe Community Services District that is tributary to the SEWC.

CHAPTER 4

PLANNING PROCESS FOR ADDRESSING CLIMATE CHANGE

Chapter 4

PLANNING PROCESS FOR ADDRESSING CLIMATE CHANGE

4.1 Planning Overview

A number of agencies are responsible for assessing potential climate change impacts on wastewater facilities within the SEWC tributary area. SEJPA is responsible for planning, constructing and operating the SEWC, conveyance facilities to provide recycled water to partner agencies and users, and the SEOO land and ocean outfall system. SEJPA member agencies (the Cities of Encinitas and Solana Beach) are responsible for planning, constructing, and maintaining wastewater collection and conveyance facilities which deliver wastewater to the SEWC. As municipalities, SEJPA member agencies also are responsible for land use planning and implementing climate action plans within their respective jurisdictions.

Similarly, outside agencies that contribute flow to the SEWC (City of Del Mar and RSFCSD) are responsible for planning, constructing and maintaining their respective wastewater collection and conveyance facilities. As such, the City of Del Mar and County of San Diego (the agency responsible for land use planning within the RSFCSD) handle climate action planning within their jurisdictions.
While no site-specific vulnerability analyses have been conducted to date, SEJPA, SEJPA member agencies, and agencies that contribute flow to the SEWC have taken a number of preliminary steps to:

- identify potential climate-related risks[70] to wastewater facilities, and
- identify areas where additional planning work is required to assess or respond to climate-related risks.

4.2 SEJPA Wastewater Planning and Climate Change

Lack of Near-Term Vulnerabilities of Existing SEJPA Facilities. As documented in Chapter 2, in the near term, SEJPA treatment facilities and processes are not projected to be discernibly impacted by sea level rise, coastal erosion or other climate-related effects due to the elevation and location of the SEWC site.
Nonetheless, climate change has represented an important planning consideration in implementing improvements at the SEWC. Recent energy efficiency and treatment optimization improvements at the SEWC, for example, are consistent with agency and regional GHG reduction strategies and goals. Further, SEJPAs expanded recycled water efforts are consistent with State of California water supply goals, goals

70 Preliminary risks to SEJPA and wastewater collection facilities that contribute flow to the SEWC are summarized in Chapter 2 of this CCAP.

established by the RWQCB as part of the *San Diego Water Board Practical Visio*n, and goals established within the climate action plans of SEJPA member agencies.[71]

Climate Change and Wastewater Planning. SEWC planning needs (including considerations associated with climate change) are addressed through several ongoing and/or periodic planning efforts, in part, including:

- facilities plans for the SEWC, and
- the annual SEJPA Capital Improvements Program (CIPs) which implement facilities improvements or rehabilitation efforts addressed in the SEWC facilities plans.

SEWC Facility Plan. SEJPA maintains and periodically updates a master plan for the SEWC. The *2015 Facility Plan for the San Elijo Joint Powers Authority San Elijo Water Reclamation Facility* (hereinafter SEWC Facilities Plan) is the current master plan for the SEWC.[72] The SEWC Facilities Plan identifies and prioritizes potential improvements at the SEWC. Climate planning is an important element of the SEWC Facilities Plan. Section 3.5.1.9 of the 2015 SEWC Facilities Plan acknowledges that, while no near-term climate related impacts on SEWC facilities or operations are projected, future climate-related studies and planning are warranted, as follows:

Specific climate change issues addressed within this strategy [statewide climate adaptation strategy] that warrant future SEJPA facilities planning attention include:

- Effects of projected rises in seawater levels on SEJPA wastewater treatment and conveyance facilities and wastewater collection facilities of SEJPA member agencies,
- Potential effects of seawater level changes on inflow and infiltration into wastewater collection systems tributary to the SEWRF,[73] and
- Changes in regional hydrology, which may affect wet weather peak, flow hydraulics and peak flow-sizing considerations for wastewater conveyance and treatment facilities.

The SEWC Facilities Plan is periodically updated by SEJPA as directed by the SEJPA Board and as necessary to address changed conditions. As part of such periodic updates, SEJPA will update climate assessments, facilities vulnerability analyses, and assess potential facilities or operational modifications that are consistent with reducing GHG emissions, enhancing water supply, and meeting other goals of the agency climate action plans.

SEJPA Capital improvements Program (CIP). The SEJPA adopts an annual fiscal year budget to accomplish the SEJPA mission of providing wastewater treatment, water reclamation and waste disposal to ratepayers while meeting state and federal water quality standards. Each annual budget includes a Capital

71 As documented herein, climate action plans established by the Cities of Encinitas and Solana Beach (SEJPA member agencies) include goals for increasing the use of recycled water. State of California recycled water goals are established in the *Water Quality Control Policy for Recycled Water* (SWRCB, 2019). RWQCB water supply goals are established in the *San Diego Water Board Practical Vision* (RWQCB, 2013).

72 See Carollo Engineers and San Elijo Joint Powers Authority (2015).

73 The San Elijo Water Reclamation Facility (SEWRF) is now known as the San Elijo Water Campus (SEWC).

Improvement Program (CIP) for both new and ongoing projects for improvements to wastewater treatment, the ocean outfall system, pumping stations and the recycled water program. CIP projects include projects identified within the SEWC Facilities Plan and other projects or improvements required to address facilities needs or to better achieve SEJPA goals. Many of the projects addressed within the CIP include elements help SEJPA achieve improved energy efficiency, reduce GHG emissions, improve water quality, or enhance regional water supplies.

As previously described, examples of recent projects that have proceeded through the SEJPA planning process and have helped SEJPA achieve climate-related benefits include:

- *Treatment Optimization Improvements.* As part of this afore-mentioned project, improvements to the SEWC have been implemented (see page 3-3) to improve energy efficiency and to optimize treatment. These improvements include adding biological selectors within the biological reactors, replacing existing centrifugal air blowers with high efficiency turbo-blowers, installing dissolved oxygen monitoring probes within the activated sludge aeration basins to measure oxygen levels to accurately apply air, installing temperature and nitrogen monitoring probes to collect critical information to optimize biological treatment and minimize use of downstream chemicals,, and implementing SCADA process monitoring and automation which reduces pump cycling saves energy
- *Water Campus Improvements Project.* As part of this afore-mentioned project, the existing storm channel is being replaced by underground culverts and a segment of the North Coast Bike Trail is to be constructed along the culvert alignment to help achieve traffic reduction goals. Additionally, the project includes educational features and parking facilities for nature trails, and an electric vehicle charging station.
- *SEWC Preliminary Treatment Improvements.* SEJPA has constructed a new preliminary treatment system to expand capacity for accepting peak wet weather flows by more than 50 percent. These preliminary treatment improvements position SEJPA to improve readiness for handling more extreme weather conditions.
- *SEOO Land Outfall Replacement.* SEJPA in 2020 completed replacement of the land outfall portion of the SEOO which tunneled under the San Elijo Lagoon Reserve and passes under the North County Transit District rail lines, the SDGE regional gas line, and terminates at the Cardiff Beach. In addition to meeting current state requirements for outfall design and structural reliability, the land outfall replacement provides improved protection against potential increased erosive effects associated with climate change.
- *New Administrative Facilities.* Newly constructed administrative facilities at the SEWC feature low energy use, are compatible with projected sea level rise, and include solar power generating facilities capable of producing 600 kilowatt hours of renewable energy, which makes the new facilities net-neutral in energy consumption and offsets a portion of energy use for operating SEWC treatment facilities.
- *Recycled Water Improvements.* Adding advance treatment processes (microfiltration) to treat SEWC recycled water and expanding the recycled water distribution system to provide increased recycled water supplies which offset potable water use.

4.2 Tributary Agency Wastewater Planning and Climate Change

Potential Collection System Vulnerabilities. As noted, existing wastewater collection facilities within the SEWC tributary area are adequately protected in the near term against coastal flooding and erosive effects associated with sea level rise. Worst-case sea level rise projections for the latter half of the 21st century, however, indicate the potential for sea level rise (and associated erosive effects) to adversely impact low elevation wastewater collection facilities near the coast and San Elijo Lagoon.

As additional sea level rise data and projections become available in the future, facility-specific vulnerability assessments will be required to assess risks to collection facilities, including key pump stations such as the Cardiff Pump Station, Olivenhain Pump Station, and Solana Beach Pump Station. The need for such future vulnerability analyses is outlined in the respective climate action plans of the Cities of Encinitas and Solana Beach.

Ongoing/Periodically Updated Wastewater Plans. Climate change risks, facility vulnerabilities, and climate adaptation strategies will be considered as part of a number of ongoing or periodic planning efforts by agencies that contribute wastewater flow to the SEWC. These ongoing or periodic planning efforts include:

- *Updates to Climate Action Plans.* As discussed in Section 3.3 (page 3-8), each of the adopted climate action plans developed within the SEWC tributary area are to be periodically updated. As the respective climate action plans are updated, the updated plans will present refined assessments of how projected climate change will impact wastewater facilities. The updated plans, where warranted, will also identify any support studies (such as wastewater system vulnerability assessments) that are planned or in progress to assess climate adaptation strategies for lessening climate-related risks to wastewater facilities.
- *Updates to Sewer Master Plans.* Sewer master plans are maintained by each agency that contributes wastewater to the SEWC.[74] The sewer master plans assess existing and future sewer facility needs, present recommendations on required improvements, and evaluate probable costs of proposed improvements. As part of these analyses, the sewer master plans evaluate the condition and capacity of major elements of the existing wastewater collection systems. The sewer master plans also evaluate risks associated with flooding, sea level rise, and projected trends in I&I and, if warranted, identify proposed facilities improvements to guard against such risks.
- *Updates to Sewer System Management Plans (SSMPs).* SWRCB Order Nos. 2006-0003-DWQ and 2013-0058-EXEC establish state-wide discharge requirements for sanitary sewer collection systems and require each enrolling agency to develop, maintain and update SSMPs. SSMPs are required to include an operation and maintenance plan, design and performance provisions, system evaluation and capacity assurance provisions, and a monitoring program for assessing sanitary sewer overflows (SSOs). SSMPs must be updated every five years. While climate-change effects are not explicitly addressed in the SWRCB Orders, requirements governing the prevention of SSOs implicitly require

74 This includes the *Cardiff and Encinitas Sewer Master Plan Update* (Dudek and the City of Encinitas, 2011), which addresses facilities within the Cardiff Sanitation Division of the City of Encinitas, as well as sewer master plans for the City of Solana Beach, the City of Del Mar, and RSFCSD.

that capacity and planning analyses take into account anticipated future conditions, including climate change.

- *Facility-Specific Studies.* Sewer agencies contributing flow to the SEWC may periodically elect to conduct facility-specific planning studies to assess special needs. Climate change effects will be addressed, as applicable, with any of these special planning studies. Such planning studies may directly evaluate facility vulnerabilities resulting from climate change. At the discretion of the agencies, such special planning studies may also evaluate opportunities for expanded recycled water use, wet weather wastewater handling needs, opportunities for capturing dry weather runoff, changes in flow trends due to changed land use or updated interagency agreements, or other issues requiring planning outside of the normal agency wastewater plan updates.
- *Annual Budget Planning and CIPs.* Each wastewater agency implements an annual fiscal year budget process that incorporates a CIP that addresses wastewater collection facilities needs within the agency's sewer service area. Each agency's CIP addresses any facility upgrades or new facilities required to maintain or upgrade the agency's wastewater collection system.

Table 4-1 summarizes typical update frequencies for these ongoing, scheduled or special climate-related planning efforts. Results from these ongoing wastewater plan updates will be reported, where applicable, within future updates to the SEJPA CCAP.

Table 4-1
Summary of Scheduled, Periodic and Special Planning Efforts
Related to Wastewater Facilities and Climate Change

Planning activity	Update Frequency	Agency				
		City of Encinitas	City of Solana Beach	City of Del Mar	RSFCSD	County of San Diego
Updates to climate action plans	Every 5 years	✓[75]	✓	✓[76]		✓
Update to sewer master plans	As required	✓	✓	✓	✓	
Updates to SSMPs	Every 5 years[76]	✓	✓	✓	✓	
Facility-specific plans	As required	✓	✓	✓	✓	
Annual budget and CIPs	Annually	✓	✓	✓	✓	

75 Climate action plans adopted by the City of Encinitas and City of Del Mar do not explicitly state a scheduled climate action plan update frequency.

76 Five-year SSMP update frequency is mandated by SWRCB Order No. WQO 2006-0003, as revised by SWRCB Order No. WQ 2013-0003.

CHAPTER 5

IMPLEMENTATION

Chapter 5

IMPLEMENTATION

5.1 Schedule for Updating the CCAP

Special Studies Requirement VI.A of the Monitoring and Reporting Program of Order No. R9-2018-0003 requires that the SEJPA CCAP include a proposed schedule for updating the CCAP as more information on climate change and its effects become more available.

As documented in Chapter 2, no immediate climate-related impacts on SEJPA facilities or wastewater collection facilities are projected to occur in the near term. Further, a number of ongoing and periodic SEJPA and agency planning efforts will, in part, assess facilities and operations needs and climate impacts. These include annual CIP updates as well as periodic updates to wastewater facilities master plans.

While no near-term climate-related impacts are projected, it is probable that the next update of the agency climate plans (and any associated vulnerability assessments) will include updated information on projected impacts and proposed mitigation strategies. Updates to each of the agency climate plans are anticipated within the next five years.

Given that no immediate climate-related impacts are projected, SEJPA proposes to complete an update to this CCAP by the earlier of the following:

- as required by the RWQCB in an update or amendment to Order No. R9-2018-0003,
- as directed by the SEJPA Board of Directors, or
- by the end of the succeeding NPDES permit term.[77]

To the degree that updated information becomes available, the updated SEJPA CCAP will incorporate:

- any new or revised climate change projections that have been developed since submittal of this CCAP,
- any climate-related studies that have been completed by SEJPA or contributing agencies,
- any revisions agency climate action plans,

77 Order No. R9-2018-0003 expires on May 31, 2023. It is projected that the subsequent five-year NPDES permit term will extend to 2028 (or beyond if administratively extended by the RWQCB).

- updates on the SEJPA and agency GHG reduction efforts,
- updates on climate-related research that may affect wastewater facilities or operations,
- updates on efforts to assess facilities vulnerability and resiliency,
- any relevant climate-related changes in SEJPA facilities or operations that have been identified or proposed,
- any additional future steps SEJPA or contributing agencies may be proposing to address climate change effects, identify proposed climate adaptation, and
- a proposed schedule for developing future updates of the CCAP.

5.2 Finance Issues Related to Climate Change

Special Studies Requirement VI.A of the Monitoring and Reporting Program of Order No. R9-2018-0003 requires that the SEJPA CCAP include a discussion of "the financing needed to pay for planned actions."

On the basis of climate change planning conducted to date, no additional near-term changes[78] to current SEJPA or member agency facilities or operations are required over and above those that are currently being implemented.[79] Near-term climate change conditions have already been considered as part of existing SEJPA and member agency plans and facilities assessments.

Normal SEJPA and agency wastewater system operations are funded through sewer fees paid by users. Infrastructure improvements (depending on the nature of the improvement) may be funded by a combination of user fees, government grants or loans, or private financing. Through its annual budgeting processes, SEJPA and its member agencies are presented with proposed budgets for both direct and indirect climate-related infrastructure expenditures as well as CIPs that present long-range plans (a multiple year budget forecast) for all individual capital improvements projects and financing.[80] For any proposed infrastructure improvement, the respective governing body assesses cost/benefits and determines the method of funding.

SEJPA, SEJPA member agencies and contributing agencies are committed to continuing efforts to meet the climate change challenges and meet the climate change goals established by the State of California and within agency climate plans. To this end, SEJPA and the agencies within their respective annual budget process will target adequate resources and funding to complete the requisite studies, facilities improvements, or operational modifications identified in adopted wastewater plans.

78 Near term changes include modifications that would be required to address climate change effects that occur within the current NPDES permit term or within the subsequent five-year NPDES cycle.

79 Ongoing and current climate-related projects such as the SEJPA Water Campus Improvements Project and SEWC treatment optimization project has already been addressed and funded.

80 CIP projects are unique construction, rehabilitation, or infrastructure improvement projects. Annual budgets adopted by SEJPA and the agencies also address funding for any required studies, master plans, or operational considerations.

5.3 Adequacy of Existing NPDES Permit Provisions

No change in NPDES requirements is anticipated to address near-term or long-term climate-related impacts to SEJPA wastewater operations, either as part of Order No. R9-2018-0003 (which expires in 2023) or as part of the subsequent five-year NPDES permit renewal cycle.

As noted, assessing climate change issues (particularly sea level rise and coastal flood conditions) will be part of all future SEJPA, member agency, and contributing and agency wastewater facilities plans. If these assessments determine the need for any significant changes in SEJPA or member agency facilities or operations, such changes will be addressed by SEJPA through the submittal of a Report of Waste Discharge that requests amended permit conditions and describes the changes and the rationale for the requested NPDES permit revisions.[81]

81 As required by law, a Report of Waste Discharge will be submitted in the event that (after SEJPA consultation with the RWQCB), the RWQCB determines that climate-related operational or facilities changes proposed by SEJPA are sufficiently significant to warrant the submittal of a Report of Waste Discharge.

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REFERENCES

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