

**AGENDA**  
**REGULAR BOARD MEETING OF THE**  
**SAN ELIJO JOINT POWERS AUTHORITY**  
**NOVEMBER 15, 2022 AT 8:30 A.M.**  
**SAN ELIJO WATER CAMPUS – BOARD MEETING ROOM**  
**2695 MANCHESTER AVENUE**  
**CARDIFF BY THE SEA, CALIFORNIA**

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1. CALL TO ORDER
2. ROLL CALL
3. PLEDGE OF ALLEGIANCE
4. ORAL COMMUNICATIONS/PUBLIC COMMENT PERIOD (NON-ACTION ITEM)
5. AWARDS AND RECOGNITION
6. \* **CONSENT CALENDAR**
7. \* [APPROVAL OF MINUTES FOR OCTOBER 18, 2022 MEETING](#)
8. \* [APPROVAL FOR PAYMENT OF WARRANTS AND MONTHLY INVESTMENT REPORTS](#)
9. \* [WASTEWATER TREATMENT REPORT](#)
10. \* [RECYCLED WATER REPORT](#)
11. \* [REPORTABLE MEETINGS](#)
12. \* [RECYCLED WATER VALVE REPLACEMENT PROJECT – REVISED STRATEGY FOR PROJECT DELIVERY](#)
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. [RECEIVING WATER MONITORING REPORT](#)  
  
No action required. This memorandum is submitted for information only.  
  
Staff Reference: General Manager
15. [RECYCLED WATER QUALITY AND SYSTEM EXPANSION STUDY](#)
  1. Discuss and take action as appropriate.  
Staff Reference: General Manager

16. GENERAL MANAGER'S REPORT

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

17. GENERAL COUNSEL'S REPORT

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

18. 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.

19. 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".*

None.

20. ADJOURNMENT

The next regularly scheduled San Elijo Joint Powers Authority Board Meeting will be Tuesday, December 13, 2022 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](http://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 on the SEJPA website at [www.sejpa.org](http://www.sejpa.org), and in the following locations:

San Elijo Water Campus (formerly known as San Elijo Water Reclamation Facility),  
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: November 10, 2022



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

SAN ELIJO JOINT POWERS AUTHORITY  
MINUTES OF THE BOARD MEETING  
HELD ON OCTOBER 18, 2022  
AT THE SAN ELIJO WATER CAMPUS

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Kellie Hinze, Chair

David Zito, Vice Chair

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A meeting of the Board of Directors of San Elijo Joint Powers Authority (SEJPA) was held Tuesday, October 18, 2022, at 8:30 a.m., at the San Elijo Water Campus

1. CALL TO ORDER

Chair Hinze called the meeting to order at 8:32 a.m.

2. ROLL CALL

*Directors Present:*

Kellie Hinze  
David Zito  
Catherine Blakespear  
Kristi Becker

*Others Present:*

General Manager  
Director of Operations  
Director of Finance and Administration  
Administrative Coordinator  
Administrative Assistant I

Michael Thornton  
Chris Trees  
Amy Chang  
Vanessa Hackney  
Tamara Cooper

*SEJPA Counsel:*

Procopio

Kevin Davis

*City of Encinitas:*

Deputy City Manager  
Senior Engineer

Jennifer Campbell  
Christina Olsen

*City of Solana Beach:*

Director of Engineering/Public Works  
City Manager

Mohammad "Mo" Sammak  
Greg Wade

*Michael R. Welch Consulting:*

CEO

Michael R. Welch, Ph. D., P.E.

3. PLEDGE OF ALLEGIANCE

General Manager, Michael Thornton, led the Pledge of Allegiance.

4. ORAL COMMUNICATION/PUBLIC COMMENT PERIOD

None.

5. AWARDS AND RECOGNITION

None.

6. CONSENT CALENDAR

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

- Agenda Item No. 7      Approval of Minutes for the September 20, 2022 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     Reportable Meetings

Motion carried with the following vote of approval:

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

13. OCEAN OUTFALL PLUME TRACKING STUDY

Guest Speaker Michael R. Welch of Michael R. Welch Consulting gave a presentation on San Elijo Ocean Outfall (SEOO) Plume Tracking Study. SEJPA discharges treated municipal wastewater from the San Elijo Water Campus to the SEOO in accordance with NPDES Permit No. CA0107999 and Regional Board Order No. R9-2018-0003. This Order incorporates both state and federal water quality requirements and has a scheduled renewal frequency of every 5 years. The Regional Board required SEJPA, Escondido, and EWA to determine the movement and fate of wastewater discharged from the outfalls in a Plume Tracking Study.

In conclusion, Ocean health is not affected by the SEOO discharge as the effluent diffuser system mixes the discharge efficiently and the discharge becomes indistinguishable from ambient ocean water within a few hundred feet of the outfall.

No action required.

14. RECYCLED WATER PROGRAM - PROPOSED WHOLESAL AGREEMENT AMENDMENT

General Manager, Michael Thornton, stated SEJPA operates a recycled water utility that sells recycled water to four water purveyors, including the City of Del Mar/22<sup>nd</sup> District Agricultural Association (22DAA).

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

minimum purchase volume is to provide SEJPA a guaranteed “fixed” minimum revenue stream for operational and capital needs.

During the last fiscal year (FY 2021-22), 22DAA did not meet its minimum purchase volume of 85 acre-feet (AF) as they encountered operational issues that limited usage to 75 AF. Staff from SEJPA and 22DAA discussed the option of providing 22DAA another year to use the approximately 10 AF that was not used in FY 2021-22. This would require 22DAA to use 95 AF in FY 2022-23.

The financial impact of not collecting the minimum purchase volume is approximately \$17,035. However, SEJPA achieved and slightly exceeded its recycled water sales and revenue goals for FY 2021-22, thus allowing 22DAA to assign the 10 AF to FY 2022-23 without budget impacts.

Moved by Vice Chair Zito and seconded by Chair Hinze to:

1. Authorize the General Manager to execute a Third Amendment to the Agreement for Sale of Reclaimed Water to the City of Del Mar and the 22<sup>nd</sup> District Agricultural Association by the San Elijo Joint Powers Authority.

Motion carried with the following vote of approval:

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

16. GENERAL MANAGER’S REPORT

General Manager, Michael Thornton, gave an update that Trussell Technologies is now onsite working in the laboratory. General Manager Thornton also stated that SEJPA will be hosting a women’s junior high and high school STEM engagement at the Water Campus on Saturday, October 22, 2022 from 10 am to 11:45 am.

17. GENERAL COUNSEL’S REPORT

General Counsel, Kevin Davis, gave an update on Assembly Bill 2499 regarding teleconferencing updates to the Brown Act.

18. BOARD MEMBER COMMENTS

None.

19. CLOSED SESSION

None.

20. ADJOURNMENT

The meeting adjourned at 9:33 a.m. The next Board of Directors meeting is scheduled to be held on Tuesday, November 15, 2022 at 8:30 a.m.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "M. Thornton", written over a horizontal line.

Michael T. Thornton, P.E.  
General Manager

SAN ELIJO JOINT POWERS AUTHORITY  
PAYMENT OF WARRANTS  
22-11

For the Month of October 2022

| Warrant #   | Vendor Name                    | G/L Account                                 | Warrant Description   | Amount        |
|-------------|--------------------------------|---|---|---------------|
| 41568       | A-Check Global                 | Preemployment Screening                     | New employee  | \$ 165.53     |
| 41569       | Adam Kaye                      | Services - Professional                     | Public communication  | 200.00        |
| 41570       | Akeso Occupation Health        | Services - Medical                          | Covid - 19 test   | 158.00        |
| 41571       | Ardurra Group, Inc             | Services - Engineering                      | Wancket tank refurbish support from 08/01/22 - 08/31/22                               | 12,504.56     |
| 41572       | ASCE Membership                | Dues & Memberships                          | Membership - M. Thornton  | 305.00        |
| 41573       | ATAC Inc                       | Supplies - Office                           | Blank key cards   | 107.67        |
| 41574       | BAVCO                          | Repair Parts Expense                        | Parts for backflow at a basin   | 346.73        |
| 41575       | California State Lands Commiss | Fees - Permits                              | Recycled water distribution line  | 35.56         |
| 41576       | CS-Amsco                       | Repair Parts Expense                        | AUMA actuator   | 8,791.14      |
| 41577       | Dixieline Lumber               | Supplies - Shop & Field                     | Various repair parts  | 148.02        |
| 41578       | Westbound Solar 2, LLC         | Utilities - Solar Power                     | Solar - Aug   | 15,955.32     |
| 41579       | Enthalpy Analytical, LLC       | Services - Laboratory                       | Laboratory toxicity testing services for Aug 2022                                     | 1,050.00      |
| 41580       | Environmental Water Solutions  | Repair Parts Expense                        | Recirculation pump  | 15,003.14     |
| 41581       | Excel Landscape, Inc.          | Services - Maintenance                      | Ground maintenance service - Sep  | 4,202.00      |
| 41582       | National Filter Media          | Repair Parts Expense                        | Belt press parts  | 1,512.28      |
| 41583       | Fisher Scientific              | Supplies - Lab and Chemicals                | Various supplies  | 428.42        |
| 41584       | Hach Company                   | Repair Parts Expense                        | Various repair parts  | 3,589.61      |
| 41585       | Harrington Industrial Plastics | Repair Parts Expense                        | Various repair parts  | 933.47        |
| 41586       | Idexx Distribution, Inc.       | Supplies - Lab                              | Enterolert and gamma irradi collert   | 3,673.97      |
| 41587       | Leaf & Cole, LLP               | Services - Accounting                       | Audit services  | 7,725.00      |
| 41588       | Liquid Environmental Solution  | Services - Grease & Scum                    | Pumping service   | 1,011.00      |
| 41589       | McMaster-Carr Supply Co.       | Supplies - Shop & Field                     | Various supplies  | 1,304.50      |
| 41590       | Cosby Oil Company, Inc         | Fuel  | Fuel - Sep  | 937.59        |
| 41591       | NSI Solutions, Inc.            | Supplies - Lab                              | Turbidity QC and E. aerogenes   | 103.00        |
| 41592       | Olin Corp - Chlor Alkali       | Supplies - Chem - Sodium Hypo               | Procurement of sodium hypochlorite  | 7,198.57      |
| 41593       | Olivenhain Municipal Water Dis | Rent  | Pipeline rental payment - Jul and Aug   | 30,420.00     |
| 41594       | Pacific Pipeline Supply        | Repair Parts Expense                        | Replacement valves for RW system  | 3,727.67      |
| 41595       | Polydyne Inc.                  | Supplies - Chem - Polymer                   | Clarifloc C-378   | 2,051.99      |
| 41596       | RSF Security Systems           | Services - Alarm                            | Security and Cellular fire system monitoring  | 3,650.00      |
| 41597       | Rusty Wallis, Inc.             | Services - Maintenance                      | Water softener, tank service and salt bags  | 276.88        |
| 41598       | Sartorius Corporation          | Capital Outlay                              | Bench top pure water system   | 6,657.08      |
| 41599       | Sloan Electric Company         | Repair Parts Expense                        | Pump #4 and #5 VFD replacement  | 4,403.74      |
| 41600       | Southland Manufacturing, Inc.  | Supplies - Shop & Field                     | Fill sand   | 309.24        |
| 41601       | State Water Resources Control  | Dues & Memberships                          | Certificate renewal - F. Abeyta   | 150.00        |
| 41602       | Unifirst Corporation           | Services - Uniforms and Supplies - Safety   | Uniform service and gloves  | 1,102.31      |
| 41603       | Univar Solutions USA Inc.      | Supplies - Chem - Odor                      | Caustic soda  | 2,737.72      |
| 41604       | Vantagepoint Transfer Agents   | EE Deduction Benefits                       | ICMA - 457  | 6,827.93      |
| 41605       | Vantagepoint Transfer Agents   | ICMA Retirement                             | ICMA - 401a   | 4,551.44      |
| 41606       | VEGA Americas, Inc             | Repair Parts Expense                        | Backwash we well radar level sensor   | 5,065.11      |
| 41607       | VOID                           |   |   | -             |
| 41608       | Volt Management Corp           | Services - Temp                             | Internship program period ending - 08/21/22 to 09/25/22                               | 19,243.02     |
| 41609       | WageWorks                      | Payroll Processing Fees                     | Admin fee - Sep   | 139.25        |
| 41610       | WaterReuse                     | Dues & Memberships                          | Membership - SEJPA  | 1,387.50      |
| 41611       | Water Environment Federation   | Dues & Memberships                          | Membership - M. Thornton  | 332.00        |
| 41612       | Water Environment Federation   | Dues & Memberships                          | Membership - C. Tree  | 332.00        |
| 41613-41618 | VOID                           |   |   | -             |
| 41619       | A-Check Global                 | Preemployment Screening                     | New employee  | 195.53        |
| 41620       | VOID                           |   |   | -             |
| 41621       | AT&T                           | Utilities - Telephone                       | Phone service - 09/13/22 - 10/12/22   | 630.30        |
| 41622       | AT&T                           | Utilities - Telephone                       | Alarm service - Sep   | 410.89        |
| 41623       | Atara Equipment LTD            | Repair Parts Expense                        | Conveyor parts  | 6,565.00      |
| 41624       | California Water Technologies  | Supplies - Chem - Ferric Chlo               | Ferric chloride solution  | 8,265.35      |
| 41625       | County of San Diego            | Fees - Permits                              | Permits   | 4,651.00      |
| 41626       | CWEA Membership                | Dues & Memberships                          | Certificate renewal lab grade 1 - D. Verdon   | 95.00         |
| 41627       | D&H Water Systems              | Retained Earnings                           | Chlorine analyzer parts   | 428.59        |
| 41628       | Denali Water Solutions LLC     | Services - Biosolids Hauling                | Biosolids hauling and reuse   | 5,746.38      |
| 41629       | Westbound Solar 2, LLC         | Utilities - Solar Power                     | Solar - Sep   | 13,254.81     |
| 41630       | Eurofins Calscience, LLC       | Services - Laboratory                       | Testing water samples and supplies  | 1,733.00      |
| 41631       | Flo-Systems, Inc.              | Capital Outlay                              | Replacement pump for belt press feed  | 28,467.55     |
| 41632       | Grainger, Inc.                 | Repair Parts Expense                        | Various repair parts  | 572.69        |
| 41633       | Hardy Diagnostics              | Supplies - Lab                              | Lauryl tryptose broth, nutrient agar plate and TSA UPS                                | 419.96        |
| 41634       | Hoch Consulting, APC           | Services - Professional                     | Grant admin - IRWM Prop 84 Rd 4 and Prop 1 Rd 1 Proj 6                                | 12,426.25     |
| 41635       | Idexx Distribution, Inc.       | Supplies - Lab                              | Various supplies  | 325.04        |
| 41636       | McMaster-Carr Supply Co.       | Repair Parts Expense                        | Various repair parts  | 756.02        |
| 41637       | MetLife - Group Benefits       | Dental/Vision                               | Dental - Nov  | 1,861.03      |
| 41638       | Michael Baker International    | Services - Engineering                      | Plume tracking study thru period ending 10/02/22                                      | 4,325.00      |
| 41639       | Cosby Oil Company, Inc         | Fuel  | Fuel - Oct  | 2,105.92      |
| 41640       | Olin Corp - Chlor Alkali       | Supplies - Chem - Sodium Hypo               | Procurement of sodium hypochlorite  | 7,111.52      |
| 41641       | Olivenhain Municipal Water Dis | Services - Professional and Rent            | Various grant admin and Pipeline rental payment - Sep                                 | 20,090.28     |
| 41642       | ProBuild Company, LLC          | Repair Parts Expense                        | Various repair parts  | 456.83        |
| 41643       | Procopio Cory Hargreaves       | Services - Legal                            | General - Oct   | 6,752.51      |
| 41644       | Roesling Nakamura Terada Archi | Services - Professional                     | 08/01/22 - 08/31/22   | 1,962.00      |
| 41645       | Sage Energy Consulting         | Services - Professional                     | Solar PPA implementation support  | 4,505.00      |
| 41646       | Santa Fe Irrigation District   | Utilities - Water and Distribution Pipeline | Water and Pipeline purchase payment   | 9,937.42      |
| 41647       | San Dieguito Water District    | Utilities - Water                           | Water   | 1,653.06      |
| 41648       | San Dieguito Water District    | Utilities - Water                           | Water   | 2,339.96      |
| 41649       | San Elijo Lagoon Conservancy   | Services - Professional                     | School field trips program through 04/01/22 - 09/30/22                                | 24,666.63     |
| 41650       | Sloan Electric Company         | Repair Parts Expense                        | VFD replacement for pump #4   | 4,403.74      |
| 41651       | Sunbelt Rentals                | Equipment Rental/Lease                      | Equipment rental  | 3,088.20      |
| 41652       | SWRCB - ELAP Fees              | Fees - Permits                              | ELAP certificate # 1104   | 4,250.00      |
| 41653       | Terminix Processing Center     | Services - Maintenance                      | Pest control service  | 535.00        |
| 41654       | Unifirst Corporation           | Services - Uniforms                         | Uniform service   | 486.67        |
| 41655       | Univar Solutions USA Inc.      | Supplies - Chem - Odor                      | Caustic soda  | 5,184.60      |
| 41656       | Underground Service Alert/SC   | Services - Alarm                            | Safe excavation board and Dig alert - Sep   | 127.70        |
| 41657       | USA Bluebook                   | Repair Parts Expense and Lab Supplies       | GLI pH differential pH sensor, Conductivity probe, Ricca pH buffer and HR COD reagent | 3,602.10      |
| 41658       | Vantagepoint Transfer Agents   | EE Deduction Benefits                       | ICMA - 457  | 6,822.15      |
| 41659       | Vantagepoint Transfer Agents   | ICMA Retirement                             | ICMA - 401a   | 4,544.94      |
| 41660       | VEGA Americas, Inc             | Repair Parts Expense                        | Treatment system wet well sensor  | 1,328.59      |
| 41661       | Verizon Wireless               | Utilities - Telephone                       | Cell phone - 09/08/22 - 10/07/22  | 1,015.94      |
| 41662       | Allied Storage Containers      | Equipment Rental/Lease                      | 20' and 40' storage container - 10/01/22 - 10/28/22                                   | 359.89        |
| 41663       | VOID                           |   |   | -             |
| 41664       | Superior Ready Mix             | Repair Parts Expense                        | Nine inch rock for stormwater protection  | 5,450.00      |
| On-line 714 | Calpers                        | Services - Accounting                       | GASB 68 reporting service fee   | 1,050.00      |
| On-line 715 | Public Employees- Retirement   | Retirement Plan - PERS                      | Retirement - 09/17/22 - 09/30/22  | 16,337.71     |
| On-line 716 | ReadyRefresh                   | Supplies - Lab                              | Kitchen and lab supplies  | 737.32        |
| On-line 717 | Sun Life Financial             | Life Insurance/Disability                   | Life and disability insurance - Oct   | 1,920.65      |
| On-line 718 | Aflac                          | EE Deduction Benefits                       | Aflac - November  | 339.60        |
| On-line 719 | BankCard Center                | Supplies - Lab                              | Shop, field, office supplies and parts  | 7,044.06      |
| On-line 720 | Public Employees- Retirement   | Retirement Plan - PERS                      | Retirement - 10/01/22 - 10/14/22  | 16,348.11     |
| On-line 721 | San Diego Gas & Electric       | Utilities - Gas & Electric                  | Gas and electric - 09/09/22 - 10/07/22  | 91,132.32     |
| On-line 722 | Sun Life Financial             | Life Insurance/Disability                   | Life and disability insurance - November  | 1,885.99      |
|             | San Elijo Payroll Account      | Payroll                                     | Payroll - 10/07/2022  | 84,401.98     |
|             | San Elijo Payroll Account      | Payroll                                     | Payroll - 10/21/2022  | 93,563.67     |
|             |                                |   |   | \$ 709,426.41 |



SAN ELIJO JOINT POWERS AUTHORITY

PAYMENT OF WARRANTS SUMMARY

**For the Month of October 2022  
As of October 31, 2022**

|                     |       |               |
|---------------------|-------|---------------|
| PAYMENT OF WARRANTS |       | \$ 709,426.41 |
| Reference Number    | 22-11 |               |

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.



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Amy Chang  
Director of Finance & Administration

STATEMENT OF FUNDS AVAILABLE FOR PAYMENT OF WARRANTS  
AND INVESTMENT INFORMATION  
As of October 31, 2022

| FUNDS ON DEPOSIT WITH  | AMOUNT           |
|--|------------------|
| <br>   |                  |
| <b>LOCAL AGENCY INVESTMENT FUND</b><br><i>(OCTOBER 2022 YIELD 1.772%)</i>                      |                  |
| UNRESTRICTED DEPOSITS  | \$ 18,883,373.05 |
| <br>   |                  |
| <b>CALIFORNIA BANK AND TRUST</b><br><i>( 2022 OCTOBER YIELD 0.01%)</i>                         |                  |
| REGULAR CHECKING   | 403,834.18       |
| PAYROLL CHECKING   | 5,000.00         |
| <br>   |                  |
| <b>PARS - TRUSTEE (POST-EMPLOYMENT BENEFITS TRUST)</b><br><i>(SEPTEMBER 2022 YIELD -6.29%)</i> | 374,564.13       |
| <br>   |                  |
| <b>TOTAL RESOURCES</b>   | \$ 19,666,771.36 |

SAN ELIJO JOINT POWERS AUTHORITY  
MEMORANDUM

November 15, 2022

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 September 2022. 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 **98.8** and **99.3** percent removal, respectively, during the month of September.

Exceptional Water Treatment

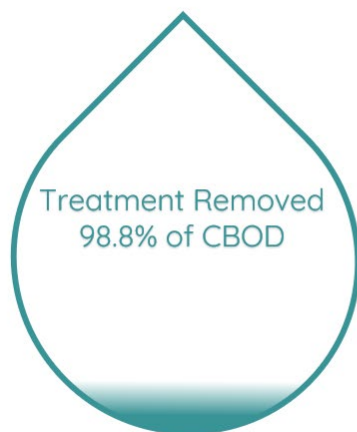
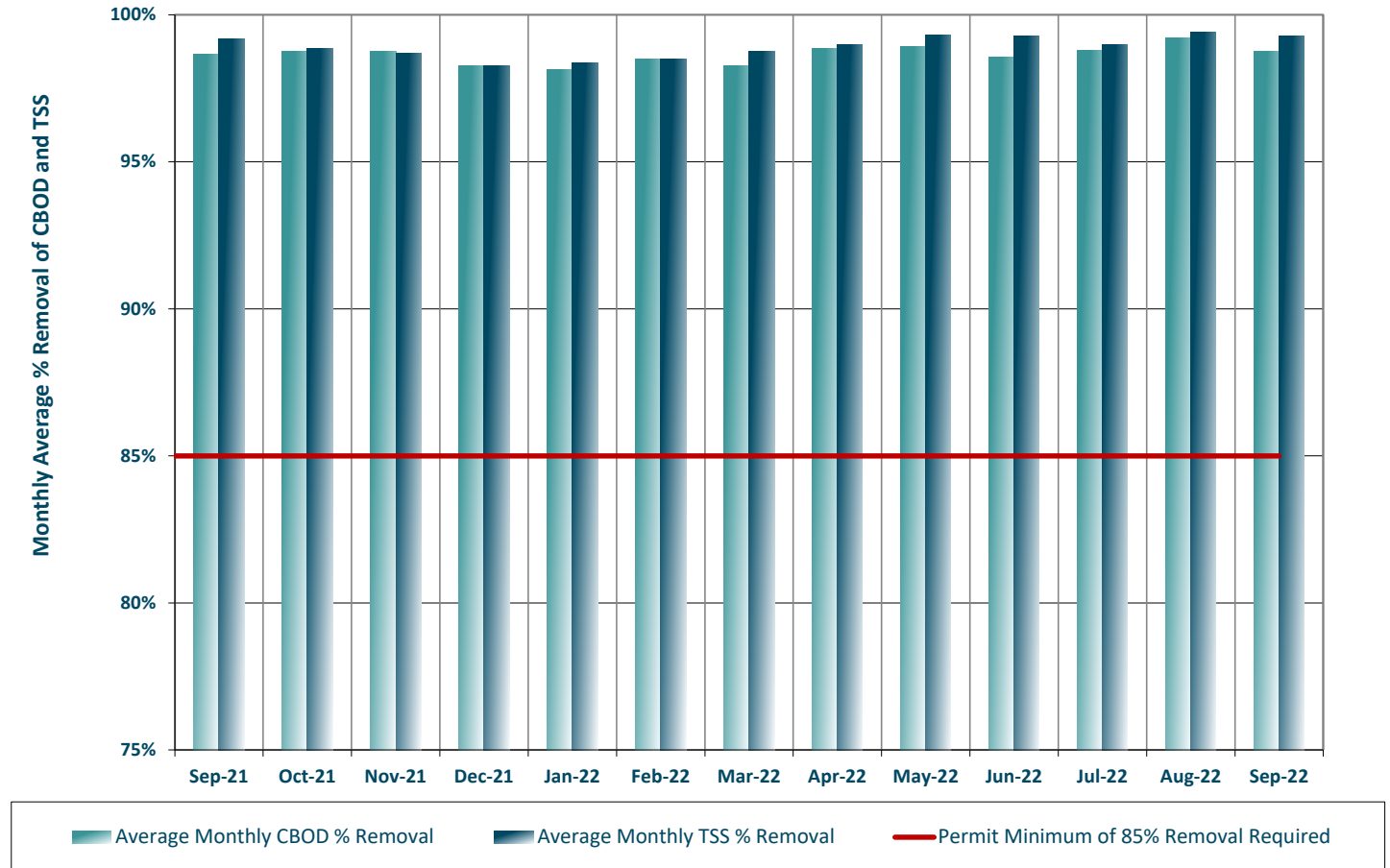


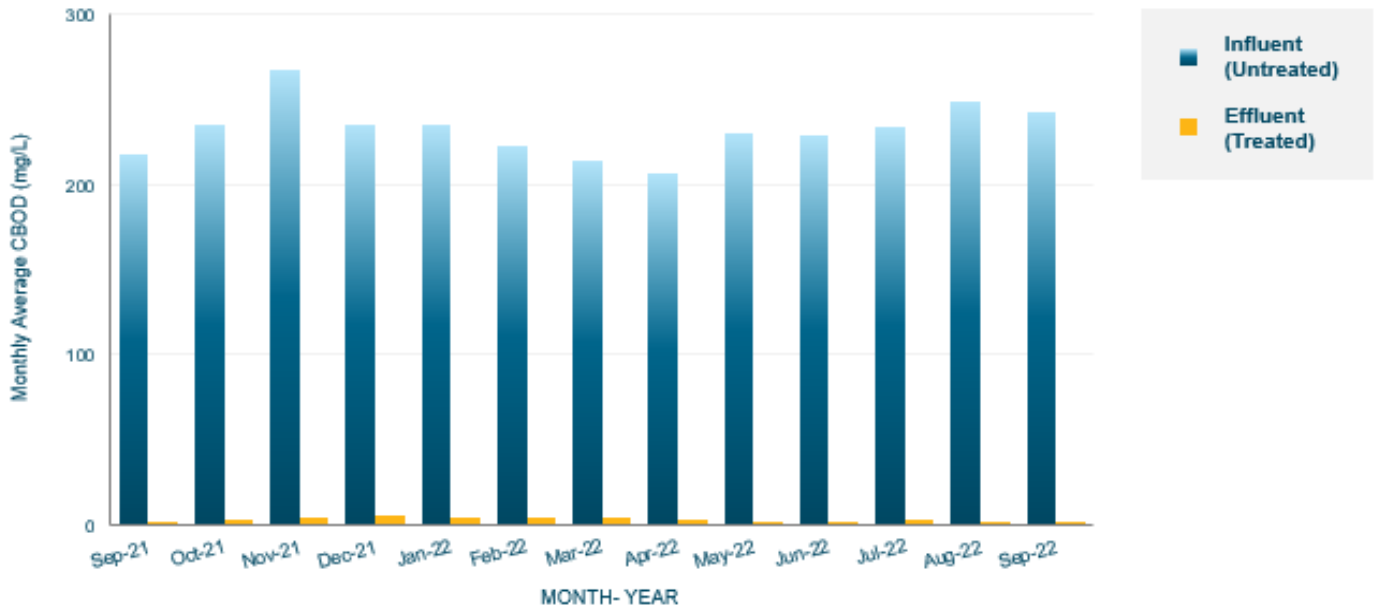
Figure 1 (below) shows historic treatment performance trends for the removal of CBOD and TSS over the last 13 months compared to the permit minimum removal requirement of 85%.

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

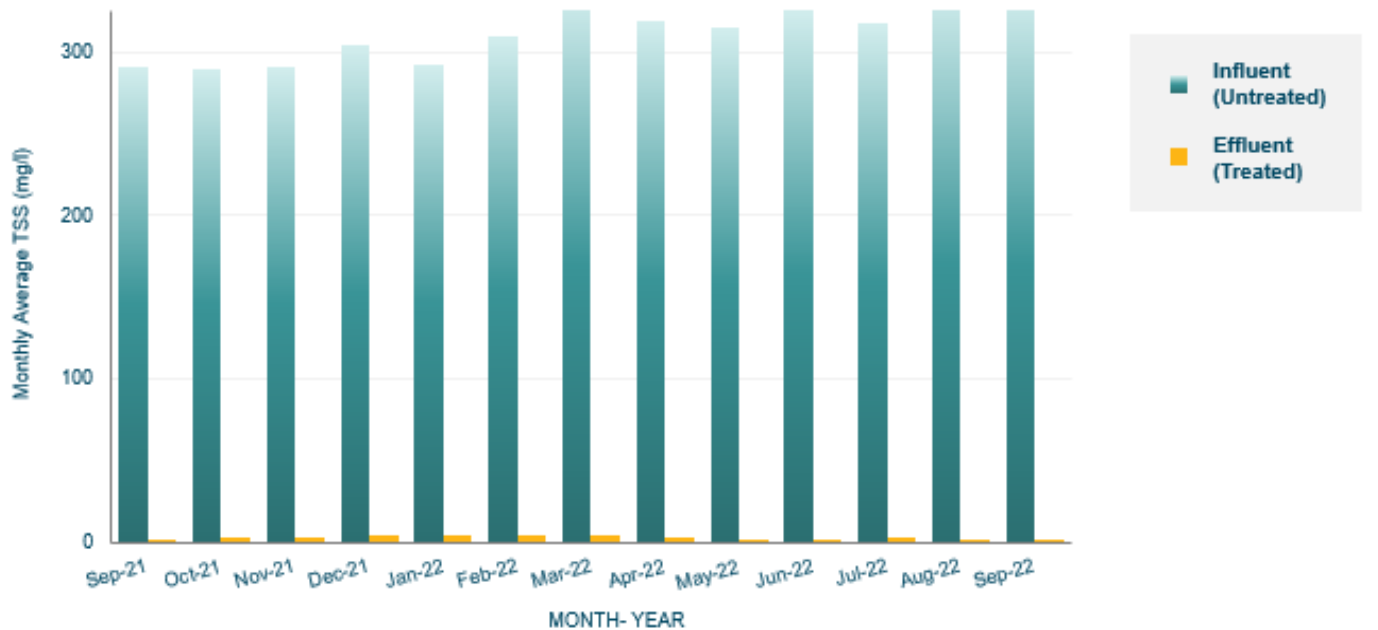


Figures 2 and 3 (below) show historic influent vs effluent CBOD and TSS concentration fluctuations in the strength of the wastewater being received and discharged by the SEJPA.

**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 September. Average daily influent flows were recorded for each Member Agency. Total effluent flow was calculated for the San Elijo Water Campus. Approximately 80% of the influent flow was diverted for recycled water use in September.

**TABLE 1 – INFLUENT AND EFFLUENT FLOWS IN SEPTEMBER**

| <b>SEPTEMBER</b>                         |                       |                             |                        |
|--|-----------------------|-----------------------------|------------------------|
|  | <b>Influent (mgd)</b> | <b>Recycled Water (mgd)</b> | <b>Effluent (mgd)*</b> |
| <b>Cardiff Sanitary Division</b>         | <b>1.139</b>          | <b>0.909</b>                | <b>0.230</b>           |
| <b>City of Solana Beach</b>              | <b>0.904</b>          | <b>0.721</b>                | <b>0.183</b>           |
| <b>Rancho Santa Fe SID</b>               | <b>0.125</b>          | <b>0.100</b>                | <b>0.025</b>           |
| <b>City of Del Mar</b>                   | <b>0.381</b>          | <b>0.304</b>                | <b>0.077</b>           |
| <b>Total San Elijo Water Campus Flow</b> | <b>2.549</b>          | <b>2.034</b>                | <b>0.515</b>           |

\* 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 CAMPUS MONTHLY REPORT - FLOWS AND EDUS**

| MONTH  | AVERAGE DAILY INFLUENT FLOW RATE (MGD) |       |       |       |             | CONNECTED EDUs |     |       |       |            | AVERAGE UNIT INFLUENT FLOW RATE (GAL/EDU/DAY) |     |     |     |             |
|--------|--|-------|-------|-------|-------------|----------------|-----|-------|-------|------------|---|-----|-----|-----|-------------|
|        | CSD                                    | RSF   | SB    | DM    | TOTAL PLANT | CSD            | RSF | SB    | DM    | TOTAL EDUS | CSD   | RSF | SB  | DM  | TOTAL PLANT |
| 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         |
| Apr-21 | 1.232                                  | 0.160 | 0.925 | 0.320 | 2.637       | 8,552          | 579 | 8,110 | 2,616 | 19,857     | 144   | 277 | 114 | 129 | 133         |
| May-21 | 1.189                                  | 0.157 | 0.932 | 0.323 | 2.601       | 8,552          | 579 | 8,110 | 2,616 | 19,857     | 139   | 271 | 115 | 130 | 131         |
| Jun-21 | 1.218                                  | 0.148 | 0.938 | 0.358 | 2.662       | 8,554          | 579 | 8,110 | 2,616 | 19,859     | 142   | 256 | 116 | 145 | 134         |
| Jul-21 | 1.183                                  | 0.144 | 0.972 | 0.435 | 2.734       | 8,554          | 579 | 8,124 | 2,616 | 19,873     | 138   | 249 | 120 | 178 | 138         |
| Aug-21 | 1.178                                  | 0.150 | 0.966 | 0.480 | 2.774       | 8,556          | 579 | 8,124 | 2,616 | 19,875     | 138   | 259 | 119 | 196 | 140         |
| Sep-21 | 1.153                                  | 0.129 | 0.948 | 0.353 | 2.583       | 8,557          | 579 | 8,124 | 2,616 | 19,876     | 135   | 223 | 117 | 144 | 130         |
| Oct-21 | 1.225                                  | 0.126 | 0.885 | 0.329 | 2.565       | 8,557          | 579 | 8,124 | 2,616 | 19,876     | 143   | 218 | 109 | 139 | 129         |
| Nov-21 | 1.156                                  | 0.131 | 0.911 | 0.329 | 2.527       | 8,557          | 581 | 8,124 | 2,616 | 19,878     | 135   | 226 | 112 | 135 | 127         |
| Dec-21 | 1.264                                  | 0.145 | 0.913 | 0.310 | 2.632       | 8,557          | 581 | 8,124 | 2,616 | 19,878     | 148   | 250 | 112 | 127 | 132         |
| Jan-22 | 1.174                                  | 0.140 | 0.906 | 0.357 | 2.577       | 8,557          | 581 | 8,124 | 2,616 | 19,878     | 137   | 241 | 112 | 145 | 130         |
| Feb-22 | 1.113                                  | 0.158 | 0.929 | 0.300 | 2.500       | 8,557          | 581 | 8,124 | 2,616 | 19,878     | 130   | 272 | 114 | 120 | 126         |
| Mar-22 | 1.176                                  | 0.142 | 0.946 | 0.307 | 2.571       | 8,557          | 581 | 8,124 | 2,616 | 19,878     | 137   | 245 | 116 | 123 | 129         |
| Apr-22 | 1.134                                  | 0.140 | 0.875 | 0.315 | 2.464       | 8,557          | 582 | 8,124 | 2,616 | 19,879     | 133   | 241 | 108 | 129 | 124         |
| May-22 | 1.146                                  | 0.140 | 0.877 | 0.301 | 2.464       | 8,557          | 582 | 8,124 | 2,616 | 19,879     | 134   | 241 | 108 | 123 | 124         |
| Jun-22 | 1.133                                  | 0.138 | 0.921 | 0.452 | 2.644       | 8,557          | 583 | 8,124 | 2,616 | 19,880     | 132   | 237 | 113 | 184 | 133         |
| Jul-22 | 1.124                                  | 0.129 | 0.948 | 0.438 | 2.639       | 8,557          | 583 | 8,142 | 2,616 | 19,898     | 131   | 221 | 116 | 179 | 133         |
| Aug-22 | 1.163                                  | 0.133 | 0.929 | 0.448 | 2.673       | 8,557          | 583 | 8,142 | 2,616 | 19,898     | 136   | 228 | 114 | 185 | 134         |
| Sep-22 | 1.139                                  | 0.125 | 0.904 | 0.381 | 2.549       | 8,557          | 584 | 8,142 | 2,616 | 19,899     | 133   | 214 | 111 | 158 | 128         |

CSD: Cardiff Sanitary Division

RSF: Ranch Santa Fe Community Service District

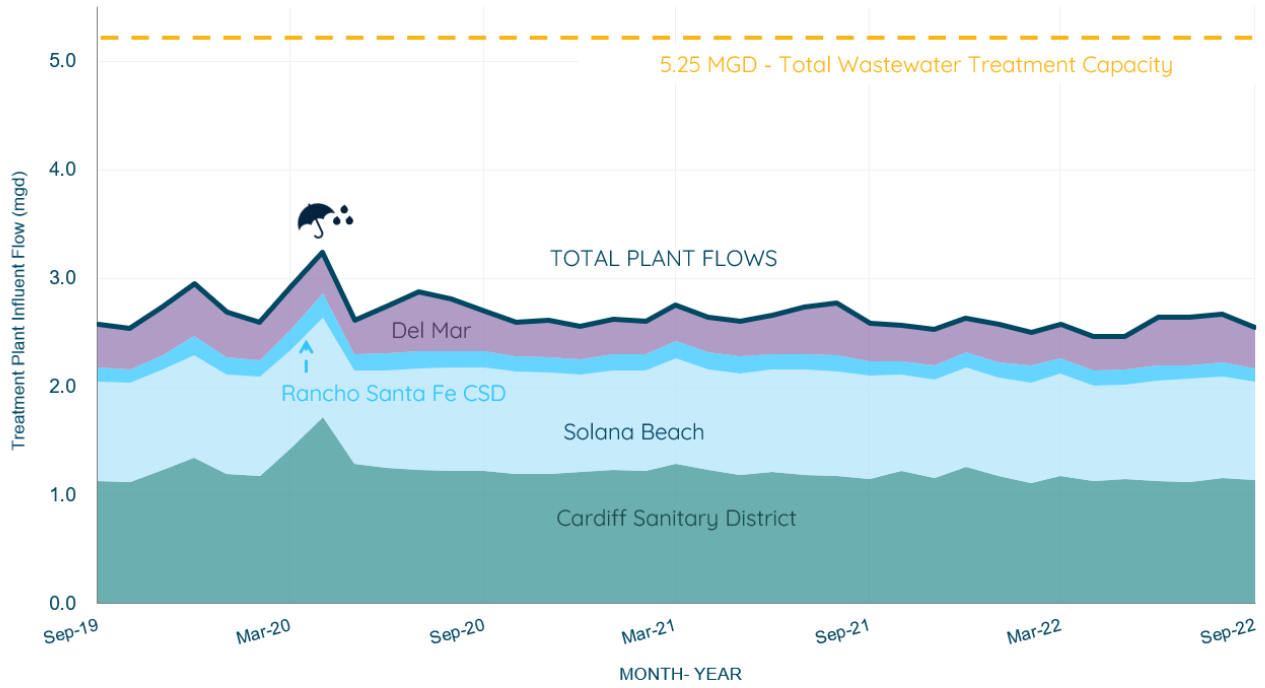
SB: Solana Beach

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 September 2022 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) | 6.99       |
| Escondido (Peak flow rate)    | 17.8       |

Connected Equivalent Dwelling Units

The Cities of Encinitas, Solana Beach and Del Mar updated the number of connected EDUs that are reported to the SEJPA in July 2022. The Rancho Santa Fe CSD update their connected EDUs report 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   | 8,557           |
| Rancho Santa Fe SID         | 584             |
| City of Solana Beach        | 7,806           |
| San Diego (to Solana Beach) | 337             |
| City of Del Mar             | 2,616           |
| <b>Total EDUs to System</b> | <b>19,899</b>   |

Respectfully submitted,



Michael T. Thornton, P.E.  
General Manager

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SAN ELIJO JOINT POWERS AUTHORITY  
MEMORANDUM

November 15, 2022

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 September 2022, recycled water demand was 192.9 acre-feet (AF), which was met using 190.2 AF of recycled water and 2.7 AF supplementation with potable water. September demand was 3.2% above budget expectations of 187 AF.

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 September for the last ten years to provide a year-over-year comparison. Figure 3 (attached) compares budget versus actual recycled water sales for FY 2021-22.

Respectfully submitted,



Michael T. Thornton, P.E.  
General Manager

FIGURE 1: RECYCLED WATER DEMAND AND RAINFALL COMPARISON

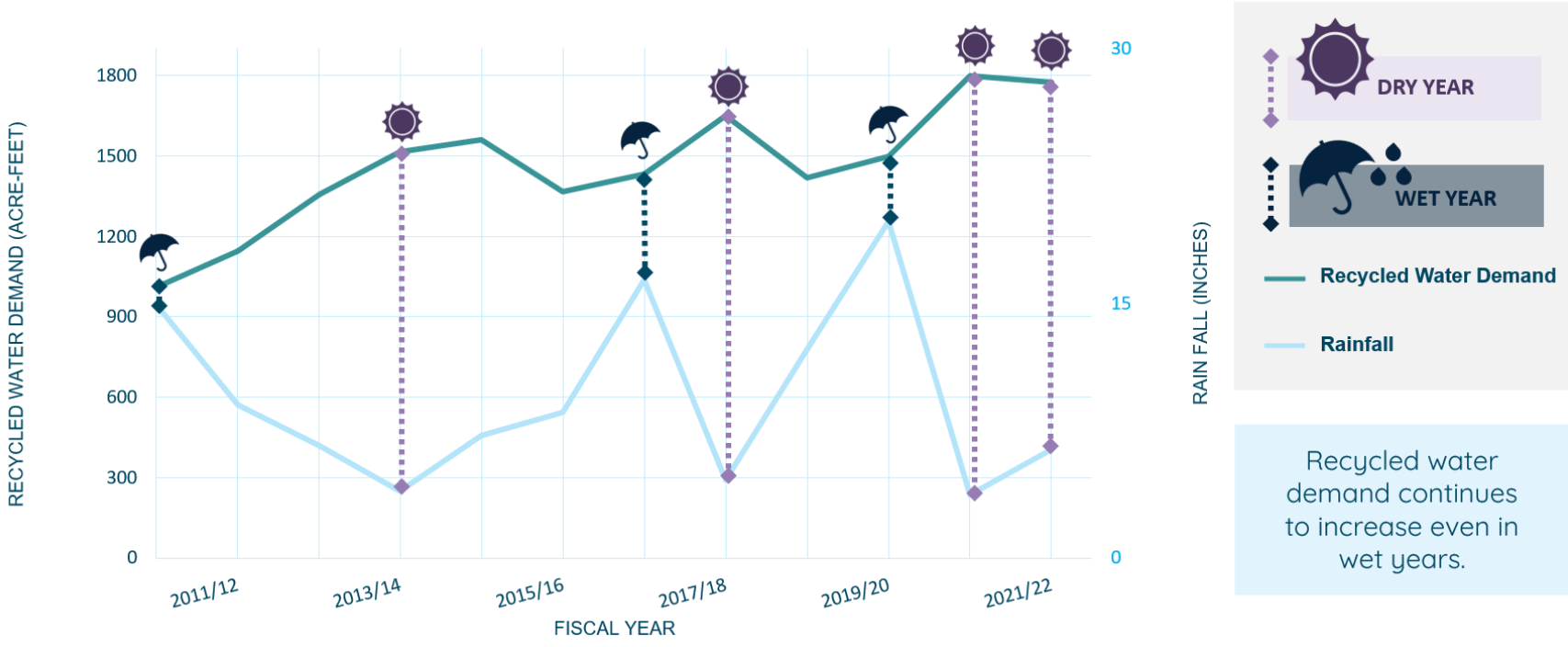


FIGURE 2: SEPTEMBER RECYCLED WATER DEMAND

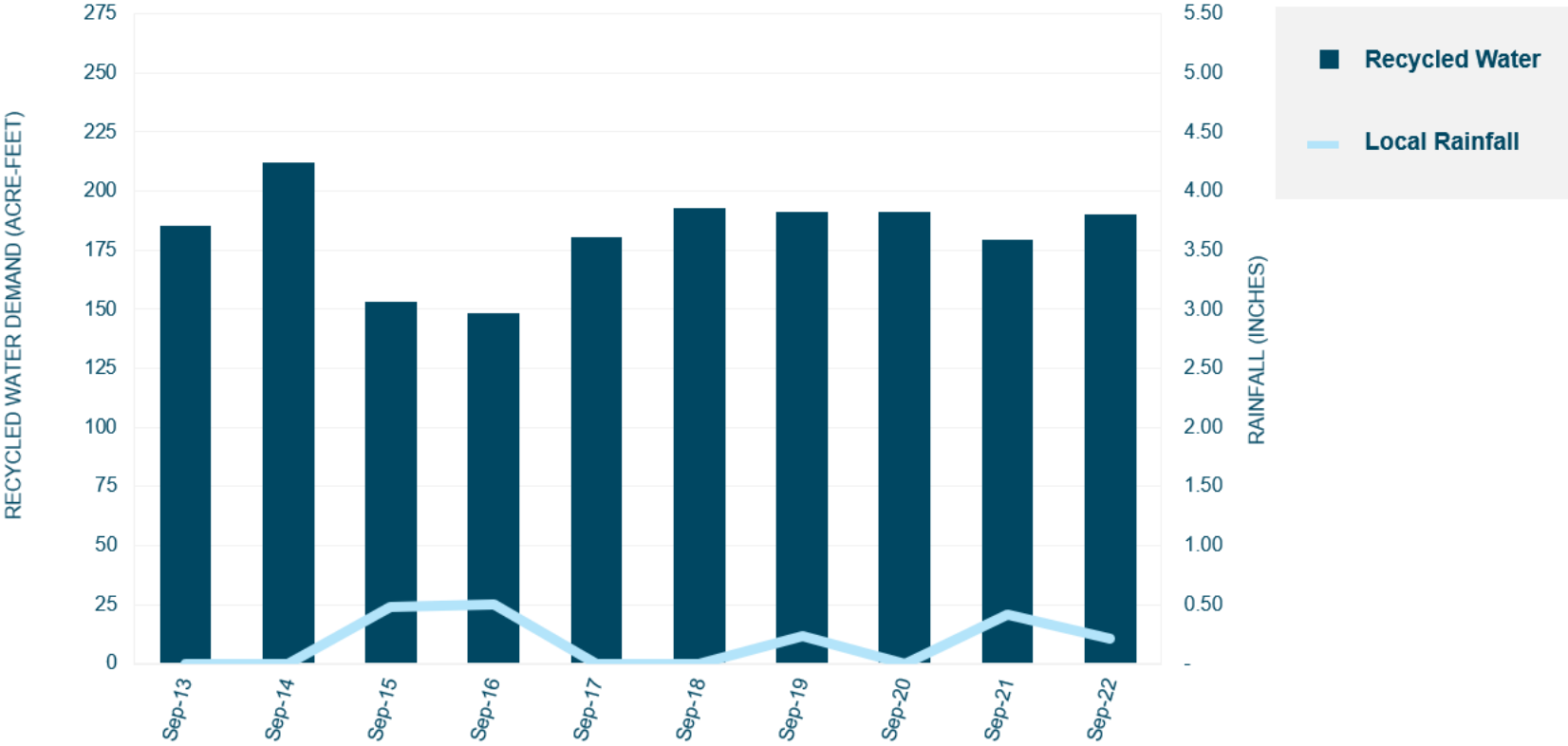
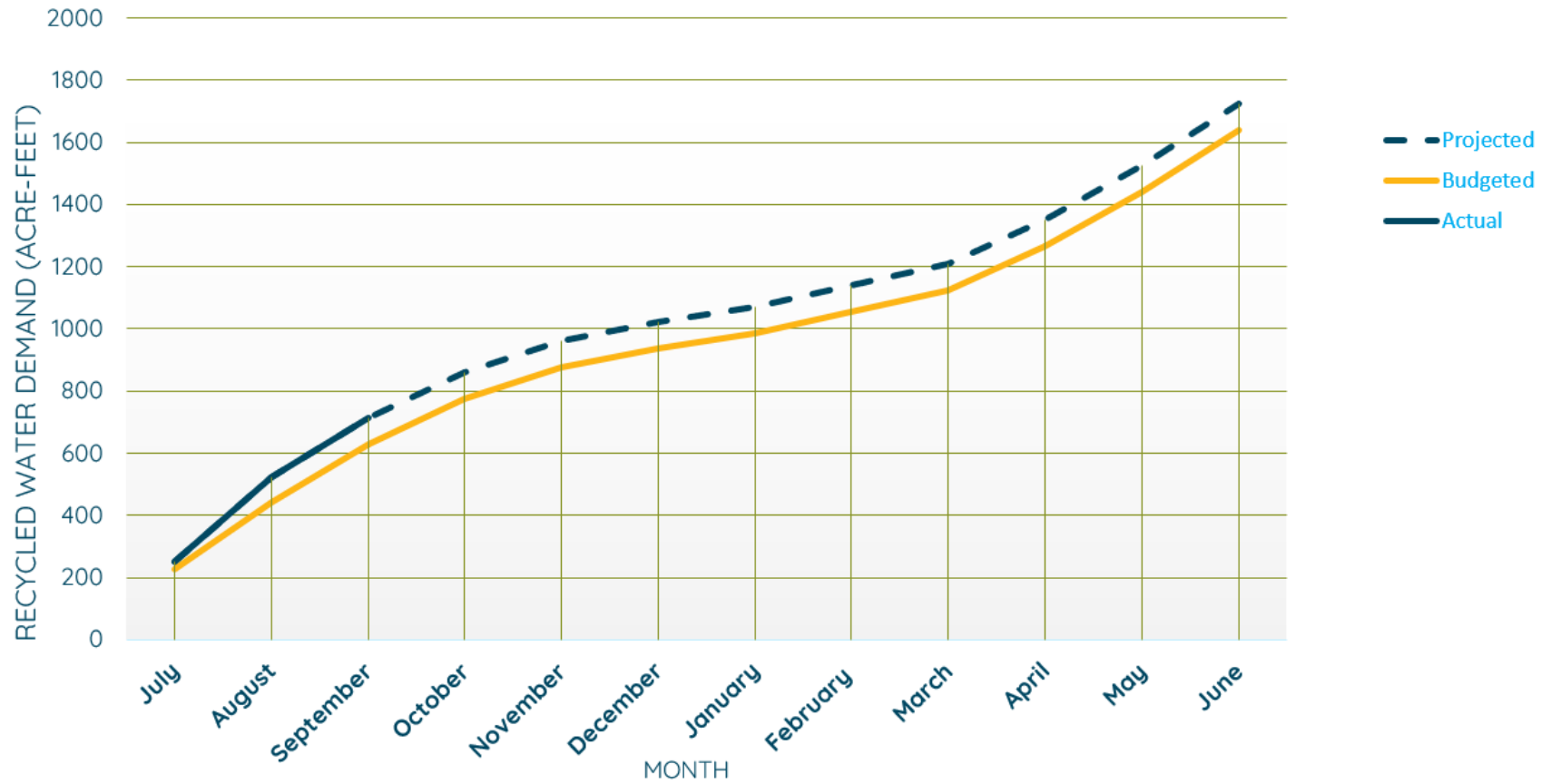


FIGURE 3: FY2022/23 CUMULATIVE DEMAND VS BUDGET



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AGENDA ITEM NO. 11

SAN ELIJO JOINT POWERS AUTHORITY  
MEMORANDUM

November 15, 2022

TO: Board of Directors  
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: REPORTABLE MEETINGS

RECOMMENDATION

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

BACKGROUND

The General Manager or his designee may meet monthly with one or more Board Members in preparation for the Board Meeting.

DISCUSSION

The following meetings have taken place since the previous Board Meeting:

1. Meeting to review Board Meeting Agenda with Board Chair Hinze on October 17, 2022.

FINANCIAL IMPACT

Per the SEJPA Restatement Agreement, SEJPA pays the Board Member \$160 for each reportable meeting. These meetings are accounted for in our annual budget.

Respectfully submitted,



Michael T. Thornton, P.E.  
General Manager

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AGENDA ITEM NO. 12

SAN ELIJO JOINT POWERS AUTHORITY  
MEMORANDUM

November 15, 2022

TO: Board of Directors  
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: RECYCLED WATER VALVE REPLACEMENT PROJECT – REVISED  
STRATEGY FOR PROJECT DELIVERY

RECOMMENDATION

It is recommended that the Board of Directors:

1. Reject all bids and authorize SEJPA staff to pursue revised strategy for delivering critical project elements; and
2. Discuss and take other action as appropriate.

BACKGROUND

The San Elijo recycled water distribution system was originally constructed in 1999 and has slowly expanded from that time. The distribution system currently includes approximately 20 miles of distribution pipelines and 121 isolation valves. The purpose of the valves is for isolation of pipelines within the system during routine maintenance and during emergency pipeline repairs. From system inspection reports, 35 of the original valves have been identified for replacement.

In August 2022, SEJPA publicly noticed and advertised a Request for Bids for Recycled Water Distribution System Valve Replacement Project on PlanetBids, its online bidding portal, to replace these 35 valves. A total of 15 entities accessed the bidding documents via PlanetBids during the bid period. The Engineer's Estimate and SEJPA budget was \$362,727. Two bids were received on September 14, 2022: (1) Shaw Equipment Rentals, Inc. with responsive bid of \$474,903.45 and (2) RE Chaffee Construction Inc. with a responsive bid of \$910,400.00. The bids are valid for 75 days (i.e., through November 28, 2022).

DISCUSSION

The water industry is experiencing an unusually high bidding climate due to the volume of public works projects throughout southern California, exacerbated by historically high inflationary pressures on equipment, supplies, materials, and labor. The limited bidder response to this

advertisement and the bid values being significantly higher than anticipated is believed to be a result of reduced competition and temporal material cost escalation and labor shortages.

SEJPA operations staff has re-assessed the project scope, identifying a reduced number of high priority valves (20 of the originally bid 35 sites are considered "high priority" and the rest designated as "medium priority" and considered serviceable into the near future). The valve replacement project could be combined with the Wanket Tank rehabilitation project, with the bid schedule listing both high and medium priority valves as separate items that can be optioned at the SEJPA's discretion and budget allowance. Staff expects the construction bidding of the combined project in the second quarter of 2023.

Combining the projects is also anticipated to gain pricing advantage through economy of scale of similar trade work and increased bidder interest due to the larger project size, which should increase competitiveness in the bids. Furthermore, it should improve efficiencies for SEJPA in its use of internal and external resources for managing and inspecting construction.

In light of this reassessment, staff is recommending the Board reject all bids and readvertise the project as set forth above in a future publicly noticed bid package. Public Contract Code Section 20783 allows the Board, in its discretion, to reject any bids and readvertise.

#### FINANCIAL IMPACT

There is no fiscal impact associated with the recommended Board action.

It is therefore recommended that the Board of Directors:

1. Reject all bids and authorize SEJPA staff to pursue revised strategy for project delivery; and
2. Discuss and take other action as appropriate.

Respectfully submitted,



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Michael T. Thornton, P.E.  
General Manager



SAN ELIJO JOINT POWERS AUTHORITY  
MEMORANDUM

November 15, 2022

TO: Board of Directors  
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: RECEIVING WATER MONITORING REPORT

RECOMMENDATION

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

BACKGROUND

The San Elijo Joint Powers Authority (SEJPA) discharges treated municipal wastewater from the San Elijo Water Campus (SEWC) to the San Elijo Ocean Outfall (SEOO) in accordance with National Pollutant Discharge Elimination System (NPDES) Permit No. CA0107999 and San Diego Regional Water Quality Control Board (RWQCB) Order No. R9-2018-0003. This Order incorporates both state and federal water quality requirements and has a scheduled renewal frequency of every five years. The current NPDES permit expires in May 2023 and staff is preparing the necessary documents to renew the permit for an additional five-year period. Prior to renewal, SEJPA is required to present a summary of ocean conditions to the RWQCB.

DISCUSSION

The current NPDES permit became effective on June 1, 2018, and since that time there have been over 1,600 daily samples of the effluent water collected and analyzed for compliance. The regulated categories of potential effluent pollutants include physical/chemical parameters (such as flow, solids concentration, oxygen demand, and grease), toxic inorganic parameters (such as metals and cyanide), toxic organic parameters (such as volatile organic compounds, acids, and pesticides), and whole effluent toxicity (tested using giant kelp).

The ocean water near the SEOO is also monitored by collecting weekly ocean water shoreline samples, quarterly nearshore (3,000-foot seaward of shore samples), and quarterly offshore (120-foot depth contour) ocean water samples. Ocean bottom sediment is collected and analyzed once during the five-year term to monitor chemical contaminants, toxicity, and organism health and diversity. In addition, fish and macroinvertebrates are monitored for bioaccumulation of harmful chemicals.

Data collected during the term of the permit is analyzed and presented in a Receiving Water Monitoring Report that is submitted to the RWQCB 180 days prior to permit expiration.

Conclusions of the Receiving Water Monitoring Report can be summarized as follows:

- The SEWC achieves a high degree of treatment compared with typical secondary treatment ocean discharges
- The SEWC discharge consistently achieves compliance with NDPES effluent limitations, performance goals, and effluent toxicity standards.
- The SEOO discharge consistently achieves compliance with State of California Ocean Plan receiving water standards
- The SEOO discharge has no discernible effect on sediment conditions
- The SEOO discharge has no discernible adverse effects on benthic species populations or diversity
- The SEOO discharge has no discernible adverse effect on the health of fish
- The SEOO discharge zone (which is a marine protected area) is characterized by high quality ocean water and abundant sea life

#### FINANCIAL IMPACT

There is no financial impact associated with this informational report. Additional costs and studies required by the renewed permit will be funded by the Ocean Outfall program and presented in the FY 2023-24 budget.

#### RECOMMENDATION

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

Respectfully submitted,



Michael T. Thornton, P.E.  
General Manager

SAN ELIJO JOINT POWERS AUTHORITY  
MEMORANDUM

November 15, 2022

TO: Board of Directors  
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: RECYCLED WATER QUALITY AND SYSTEM EXPANSION STUDY

RECOMMENDATION

It is recommended that the Board of Directors:

1. Discuss and take action as appropriate.

BACKGROUND

The San Elijo Joint Powers Authority (SEJPA) has served non-potable recycled water in north San Diego County for over 20 years. In 2016 and 2019, SEJPA in collaboration with local water and wastewater districts evaluated the feasibility of expanding non-potable reuse and future potable reuse. SEJPA currently recycles 57% annually, limited in part due to the seasonal demand fluctuations of a predominately non-potable system. Potable reuse provides an alternative for year-round water demand which would enable reuse of nearly all water treated at the San Elijo Water Campus (SEWC). Building on those prior studies, SEJPA evaluated capital improvements that would help ensure compliance with future regulations; maximize the value, performance, and capacity of existing recycled water assets; and position SEWC for potable reuse. Collectively, these studies confirm the viability of increasing recycled water production.

A potable reuse project would require partnerships and agreements with other agencies to accept and purvey the purified water, as well as to acquire more wastewater to satisfy the project demand. Potential project partners include San Dieguito Water District (SDWD), Olivenhain Municipal Water District (OMWD), and Santa Fe Irrigation District (SFID) for receiving the pure water. Potential partners for accessing additional wastewater include Leucadia Wastewater District (LWD), City of Encinitas, and City of Escondido. To satisfy forthcoming direct potable reuse (DPR) regulations, anticipated by the end of 2023, additional treatment components and unique institutional arrangements would also be required.

Improving treatment efficiency, enhancing water quality, and expanding recycled water aligns with SEJPA's vision to produce clean water in an environmentally, socially, and fiscally responsible manner. It is prudent to routinely assess SEWC's operational objectives and strategies for reinvesting in the facilities within the context of evolving regulations, drought, and asset management.

## DISCUSSION

In 2022, Trussell Technologies performed an engineering study to evaluate options for improving SEJPA recycled water quality and system performance. Near-term improvements were focused on eliminating intermittent presence of coliform bacteria associated with sand filtration, reducing fouling rates of membrane treatment, improving disinfection performance, and maximizing water production. The study outlined a stepwise approach that addresses desired near-term improvements, benefiting the current recycled water program as well as being foundational for future pure water treatment. By advancing projects in a stepwise manner, SEJPA can achieve project benefits at the earliest, economically viable time while avoiding the risk of stranded assets should future criteria favor an alternative strategy for expanding the recycled water program. The study identified the following four sequential projects.

### Project 1: NDN Upgrades and CCB Retrofit

Purpose: Upgrade the biological treatment to a nitrification and denitrification (NDN) biological process, which removes ammonia/nitrogen in addition to suspended solids and organics from the water.

#### Key Project Elements:

- Retrofit existing aeration basins with fine bubble diffusers, dissolved oxygen probes and controllers, internal mixed liquor pumps/piping, baffles and mixing for anoxic zone.
- New high-speed blowers to increase aeration capacity.
- Retrofit existing chlorine contact basin to increase capacity from 3 MGD to 4 MGD.
- Reconfigure existing chlorine contact basin to expanded recycled water wetwell volume.

Project 1 will relieve several operational constraints (i.e., excess nutrients that encourages biofouling on filters, membranes, and in the distribution system, chloramines as a primary disinfectant). It also allows SEJPA to defer alternative capital investments (e.g., new recycled water pump station wetwell expansion). In addition, Project 1 will improve tertiary process performance by producing higher quality water and preparing SEJPA for future regulatory concerns, while positioning SEJPA to pursue reuse opportunities if they arise. The estimated project cost is in the range of \$8.6 million to \$10.4 million.

### Project 2: MF Expansion

Purpose: Replace existing sand filters and membrane filtration (MF) modules that are both approaching end of useful life with new, expanded MF system to provide a total tertiary treatment capacity of 3.5 MGD.

#### Key project elements:

- Replace aging, packaged MF system that is approaching end of useful life with new, modernized MF process units (2 duty + 1 standby) and ancillary systems.
- Remove from service the +20 year old sand filtration units.

Project 2 retires infrastructure that has served its purpose in starting up SEJPA's recycled water program and meeting non-potable demands over the past +20 years but is proving less reliable as it ages. Replacement of aging infrastructure with modernized technologies would alleviate operational risks as more stringent water quality requirements evolve in the future. The estimated project cost is in the range of \$16.7 million to \$20.1 million.

### Project 3: 1 MGD of Potable Reuse to Expand Water Recycling, “Pure Water” (Initial Phase)

Purpose: Construct 1.0 MGD Potable Reuse project for indirect potable reuse of approximately 850 acre-feet per year (AFY), while continuing to serve the existing recycled water demands (~1,700 AFY). Project 3 would leverage previous recycled water investments, in particular Projects 1 and 2 described above, to increase reuse potential throughout the year by producing a resilient, local water supply at a cost that is competitive with projected future imported water prices.

Key project elements:

- 1.0 MGD of reverse osmosis (RO), Ultraviolet light advanced oxidation process (UV/AOP), and ancillary chemical storage/treatment systems
- Pump station and conveyance pipeline for pure water delivery
- Accepting additional wastewater flows

Although several pure water delivery options are available to the SEJPA (e.g., delivery to Lake Hodges, or direct potable reuse to neighboring agencies’ SDWD and/or OMWD), Project 3 assumes delivery to San Dieguito Reservoir as it is the best-defined option based on previous studies and provides a reasonable estimate for developing planning-level costs. The estimated project cost is in the range of \$31.3 million to \$37.5 million.

### Project 4: Expand Potable Reuse Capacity to 3 MGD to Maximize Reuse, “Pure Water” (Buildout)

Purpose: Expand the potable reuse system to a capacity of up to 3 MGD for indirect potable reuse of 1,700 AFY to a single delivery point or a combination of local agency interconnections, while continuing to serve the existing non-potable recycled water demands (~1,700 AFY).

Key project elements:

- 3 MGD RO System and ancillary systems
- Expanded UV/AOP process units
- Expanded chemical and treatment systems
- Accepting additional wastewater flows

Project 4 would leverage the previously constructed treatment and conveyance infrastructure to maximize reuse potential by creating a sustainable, high-quality and resilient source of water supply to the Encinitas, Solana Beach, and Rancho Santa Fe communities. The estimated project cost is in the range of \$26.4 million to \$31.6 million.

### Next Steps

This study provides further support that a pure water project at SEWC is technically feasible and economically comparable with ongoing potable reuse projects in the region and that the cost of pure water could be competitive with the projected cost of imported water, providing justification to proceed along this path. The stepwise approach allows SEJPA to take incremental steps that benefit current customers in the near-term while maintaining flexibility for responding to the variety of externalities that could confront SEJPA in the future, including more stringent ocean discharge regulations or opportunities to expand non-potable and/or pure water.

With the concurrence of the Board, the next steps would be to (1) validate the business case for immediate implementation Project 1 - NDN and CCB Retrofit; (2) request engineering proposals to prepare design and construction documents for Project 1; and (3) prepare financing options to

fund Project 1. The business case validation, engineering proposals and project funding plan will be presented to the Board at a future meeting for discussion and consideration of approval.

#### FINANCIAL IMPACT

There is no fiscal impact associated with this staff report as it is an informational item only. SEJPA has received notice from the US Bureau of Reclamation for a grant award associated with recycled water development. This could bring up to \$2.5 million in federal funding for the first project, however it should be noted that the grant has a 2025 completion requirement.

It is therefore recommended that the Board of Directors:

1. Discuss and take action as appropriate.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'M. Thornton', written over a horizontal line.

Michael T. Thornton, P.E.  
General Manager