

AGENDA
SAN ELIJO JOINT POWERS AUTHORITY
MONDAY APRIL 13, 2015 AT 9:00 AM
SAN ELIJO WATER RECLAMATION FACILITY – CONFERENCE ROOM
2695 MANCHESTER AVENUE
CARDIFF BY THE SEA, CALIFORNIA

1. CALL TO ORDER
2. ROLL CALL
3. PLEDGE OF ALLEGIANCE
4. ORAL COMMUNICATIONS (NON-ACTION ITEM)
5. PRESENTATION OF AWARDS

American Membrane Technology Association – 2015 Facility of the Year Award
6. * **CONSENT CALENDAR**
7. * APPROVAL OF MINUTES FOR THE MARCH 9, 2015 MEETING
8. * APPROVAL FOR PAYMENT OF WARRANTS AND MONTHLY INVESTMENT REPORTS
9. * SAN ELIJO WATER RECLAMATION FACILITY TREATED EFFLUENT FLOWS – MONTHLY REPORT
10. * SAN ELIJO JOINT POWERS AUTHORITY RECYCLED WATER PROGRAM – MONTHLY REPORT
11. * 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

12. **PRESENTATION OF THE SAN ELIJO JOINT POWERS AUTHORITY FISCAL YEAR 2015-16 RECOMMENDED BUDGET**

1. Review the Fiscal Year 2015-16 Recommended Budget;
2. Discuss and take action as appropriate.

Staff Reference: Director of Finance/Administration

13. **CONSIDER APPROVAL OF PARTNERSHIP WITH THE CITY OF SOLANA BEACH FOR DESIGN OF RECYCLED WATER PIPELINES**

1. Authorize the General Manager to execute an agreement for an amount not to exceed \$23,770 to fund engineering costs associated with recycled water pipelines; and
2. Discuss and take action as appropriate.

Staff Reference: General Manager

14. **PRESENTATION ON THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT RENEWAL**

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

Staff Reference: General Manager

15. **2015 FACILITY PLAN FOR THE SAN ELIJO WATER RECLAMATION FACILITY**

1. Accept and file the 2015 Facility Plan for the San Elijo Water Reclamation Facility; and
2. 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

None

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".

20. ADJOURNMENT

The next regularly scheduled San Elijo Joint Powers Authority Board Meeting will be Monday, May 11, 2015 at 9:00 a.m.

NOTICE:

The San Elijo Joint Powers Authority's open and public meetings meet 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 second Monday of the month, except 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 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: April 8, 2015



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

SAN ELIJO JOINT POWERS AUTHORITY
MINUTES OF THE BOARD MEETING
HELD ON MARCH 9, 2015
AT THE
SAN ELIJO WATER RECLAMATION FACILITY

David Zito, Chair

Catherine S. Blakespear, Vice Chair

A meeting of the Board of Directors of the San Elijo Joint Powers Authority (SEJPA) was held Monday, March 9, 2015, at 9:00 a.m., at the San Elijo Water Reclamation Facility at 2695 Manchester Avenue, Cardiff by the Sea, California.

1. CALL TO ORDER

Chair Zito called the meeting to order at 9:01 a.m.

2. ROLL CALL

Directors Present:

Catherine S. Blakespear
Ginger Marshall
Mark Muir
David Zito
David Ott (Solana Beach Alternate)

Directors Absent:

None

Others Present:

General Manager
Director of Operations
Director of Finance & Administration
HR/Safety Administrator
Administrative Assistant/Board Clerk

Michael Thornton
Christopher Trees
Paul Kinkel
Marisa Buckles
Jennifer Basco

SEJPA Counsel:

Procopio, Cory, Hargreaves & Savitch

Adriana Ochoa

City of Solana Beach

Interim City Manager
Director of Engineering/Public Works

David Ott
Mohammad "Mo" Sammak

Kennedy/Jenks Consultants

Patrick Huston, P.E.

San Dieguito Water District

General Manager

Bill O'Donnell

Santa Fe Irrigation District

General Manager

Michael Bardin

3. PLEDGE OF ALLEGIANCE

Chair Zito led the Pledge of Allegiance.

4. ORAL COMMUNICATIONS

None

5. PRESENTATION OF AWARDS

None

6. CONSENT CALENDAR

Moved by Board Member Muir and seconded by Board Member Marshall to approve the Consent Calendar.

Motion carried with unanimous vote of approval.

Consent Calendar:

Agenda Item No. 7	Approval of Minutes for the February 9, 2015 meeting
Agenda Item No. 8	Approval for Payment of Warrants and Monthly Investment Report
Agenda Item No. 9	San Elijo Water Reclamation Facility Treated Effluent Flows – Monthly Report
Agenda Item No. 10	San Elijo Joint Powers Authority Recycled Water Program – Monthly Report

11. ITEMS REMOVED FROM CONSENT CALENDAR

None

12. MEMORANDUM OF UNDERSTANDING (MOU) BETWEEN THE SAN ELIJO JOINT POWERS AUTHORITY AND THE CITY OF DEL MAR FOR PUMP STATION OPERATION AND MAINTENANCE SERVICES

In 2014, the SEJPA reached agreement with the City of Del Mar (Del Mar) for leased wastewater treatment capacity at the San Elijo Water Reclamation Facility (SEWRF). Del Mar will utilize its 21st Street Pump Station to pump its wastewater to the Solana Beach wastewater collection system for final transport to the SEWRF. General Manager Thornton stated that Del Mar has proposed that the SEJPA operate and maintain the 21st Street Pump Station. The SEJPA has carefully reviewed this request and agrees that this proposal reduces risk to all parties. Any necessary supplies and services required to maintain the pump station will be funded by Del Mar. A memorandum of

understanding (MOU) between the SEJPA and Del Mar has been developed to document the roles and responsibilities of each party.

Moved by Board Member Muir and seconded by Board Member Marshall to:

1. Authorize the General Manager to execute a Memorandum of Understanding between the SEJPA and the City of Del Mar for Pump Station Operation and Maintenance Services.

Motion carried with unanimous vote of approval.

13. JOINT POTABLE REUSE CONCEPT STUDY WITH SANTA FE IRRIGATION DISTRICT AND SAN DIEGUITO WATER DISTRICT

General Manager Thornton informed the Board of Directors that the SEJPA, Santa Fe Irrigation District, and the San Dieguito Water District are interested in exploring the feasibility of developing a potable reuse supply that could increase supply diversification and reliability for the local region. The three agencies propose to prepare an Advanced Water Purification Concept Study (AWPCS) to identify potential opportunities and challenges associated with potable reuse. The proposed total cost of the work is \$120,000, which will be allocated among the three agencies. Adequate funds are available in SEJPA's Water Reclamation Program.

Moved by Board Member Muir and seconded by Board Member Marshall to:

1. Authorize the General Manager to execute a Cost Sharing Agreement with San Dieguito Water District and Santa Fe Irrigation District to jointly fund an Advanced Water Purification Concept Study for an amount not to exceed \$40,000.

Motion carried with unanimous vote of approval.

14. CONSIDER APPROVAL OF PRELIMINARY DESIGN FOR RECYCLED WATER PIPELINES

General Manager Thornton stated that Caltrans' North Coast Corridor (NCC) Program will require the SEJPA to relocate some of its recycled water pipelines which were constructed within the Caltrans right of way. Kennedy/Jenks Consultants submitted a fee estimate of \$29,200 to the SEJPA for developing the preliminary design for the relocation of the pipeline sections. The preliminary design will analyze replacement alternatives, identify existing utilities that must be avoided, and provide recommended pipeline alignments.

In discussing the NCC Program with the City of Encinitas (Encinitas), the SEJPA learned that Encinitas is developing plans for Highway 101 streetscape improvements. The SEJPA identified a potential recycled water pipeline extension from Saxony Street to Highway 101 along Encinitas Blvd., which could supply recycled water to the new streetscape project, Cottonwood Creek Park, and several other sites. Converting these existing irrigation systems from potable to recycled water could save millions of gallons of drinking water each year. The fee for the preliminary design of the Encinitas

Boulevard pipeline extension is \$23,770, which would bring the total cost of the Kennedy/Jenks Consultants' preliminary design to \$52,970.

Moved by Board Member Muir and seconded by Vice Chair Blakespear to:

1. Authorize the General Manager to execute an agreement with Kennedy/Jenks Consultants for an amount not to exceed \$52,970.

Motion carried with unanimous vote of approval.

15. VILLAGE PARK RECYCLED WATER PROJECT UPDATE

General Manager Thornton updated the Board of Directors on the Village Park Recycled Water Project which is being developed in partnership with Olivenhain Municipal Water District (OMWD). OMWD is the lead agency for this project and is responsible for approximately \$7,000,000 in construction, with the SEJPA responsible for approximately \$1,000,000. The construction contract was awarded to SC Valley and construction is expected to begin in April 2015. The project will include more than 7 miles of new recycled water pipelines, the conversion of existing potable water reservoir to recycled water storage, and the construction of a new recycled water pressure boosting station. The project will provide recycled water for landscape irrigation for streetscape, greenbelts, parks, and several schools. It is anticipated that the project will ultimately conserve 90 million gallons of potable water per year by converting existing irrigation systems to recycled water. The SEJPA budget for the project, which includes engineering, construction, and construction management, is \$1,316,588. The General Manager noted that the SEJPA has been awarded \$328,000 in Proposition 84 IRWM grant funding. The SEJPA is seeking a low interest loan for the \$900,000 to fund the remaining project costs.

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

16. GENERAL MANAGER'S REPORT

None

17. GENERAL COUNSEL'S REPORT

None

18. BOARD MEMBER COMMENTS

None

19. CLOSED SESSION

None

20. ADJOURNMENT

The meeting adjourned at 10:00 a.m. The next Board of Directors meeting will be held on April 13, 2015.

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****15-04****For the Month of March**

Warrant #	Vendor Name	G/L Account	Warrant Description	Amount
31365	Barracuda Networks, Inc.	Utilities - Internet	Network back-up	50.00
31366	City of Solana Beach	Due to Member Agencies	Encinitas bond payment	28,938.62
31367	Guardian	Dental/Vision	Dental - 03/01/15 - 03/31/15	2,317.91
31368	Hoch Consulting, APC	Services - Engineering	Project engineering services	5,665.00
31369	Home Depot Credit Services	Supplies - Shop & Field	Water heater and supplies	838.06
31370	Todd Hutchinson	Subsistence - Travel/Rm & Bd	Training	1,172.28
31371	Jennifer Basco	CSRMA Wellness Program	Health and wellness reimbursement	60.00
31372	Public Employees - Retirement	Retirement Plan - PERS	Retirement - 02/14/15 - 02/27/15	15,340.81
31373	Michael Thornton	CSRMA Wellness Program	Health and wellness reimbursement	60.00
31374	Vantagepoint Transfer Agents	EE Deduction Benefits	457 - ICMA	5,983.16
31375	Vantagepoint Transfer Agents	ICMA Retirement	401a - ICMA	2,634.58
31376	WageWorks	Payroll Processing Fees	FSA Administration and compliance fee	113.00
31377	WEX Bank	Interest Expense	Fuel	407.72
31378	Aflac	EE Deduction Benefits	Aflac - February and March	1,386.72
31379	Ag Tech, LLC	Services - Biosolids Hauling	Biosolids hauling - February	8,984.03
31380	Applied Industrial Tech.	Supplies - Shop & Field	Repair and supplies	727.61
31381	Aquatic Bioassay	Services - Laboratory	Chronic NPDES Bioassays	3,065.00
31382	Susana Arredondo	Dues & Memberships	Membership and Lab certificate	250.00
31383	Arrowhead	Supplies - Lab	Supplies - 01/21/15 - 02/20/15	383.37
31384	AT&T	Utilities - Telephone	DSL - 01/20/15 - 02/19/15	90.64
31385	AT&T	Utilities - Telephone	Alarm service	400.47
31386	Atlas Pumping Service Inc.	Services - Grease & Scum	Grease and scum pumping	3,358.83
31387	BankCard Center	Supplies - Safety	Printing, safety supplies, and parts	2,841.24
31388	Boot World, Inc.	Uniforms - Boots	Safety boots	150.00
31389	Boyd Fasteners	Supplies - Shop & Field	Anchors and carbide bit	69.40
31390	California Water Technologies	Supplies - Chemicals	Ferric Chloride	4,582.84
31391	Consolidated Electrical Dist.	Repair Parts Expense	Fuses and cable ties	123.70
31392	Chevron & Texaco Business Card	Fuel	Fuel	205.93
31393	Complete Office	Supplies - Office	Office supplies	311.99
31394	Corodata	Rent	Record storage - February	74.60
31395	CS-Amsco	Repair Parts Expense	Plug valves	5,275.61
31396	Del Mar Blue Print	Printing	Color scan	63.72
31397	EDCO Waste & Recycling Service	Utilities - Trash	Trash service - February	234.21
31398	City of Encinitas	Service - IT Support; Maintenance	Admin network; vaccuuming flooded sump pit	3,126.48
31399	Environmental Water Solutions	Repair Parts Expense	Bolts for manhole cover	650.08
31400	Euronfins Calscience, Inc.	Services - Laboratory	Testing water samples	303.00
31401	Evantec Lab Supply	Supplies - Lab	Filters, potassium iodide	776.52
31402	Fisher Scientific	Supplies - Chemicals	Sodium Dodecylbenzenesulfonate	230.26
31403	Global Capacity	Utilities - Internet	T-1 service - April	279.27
31404	Golden State Overnight	Postage/Shipping	Mailing lab samples	85.93
31405	Hach Company	Repair Parts Expense	Motor and gear	265.26
31406	Hardy Diagnostics	Supplies - Lab	Azide dextrose and brain heart infusion	224.59
31407	Michael Henke	Subsistence - Meals	Meeting	53.17
31408	Hoch Consulting, APC	Services - Engineering	Project engineering services	7,070.00
31409	Jani-King of CA, Inc.	Services - Janitorial	Janitorial service - March	882.64
31410	King Lee Chemical Co.	Supplies - Chemicals	Liquid antiscalant	962.55
31411	Paul Kinkel	CSRMA Wellness Program	Health and wellness reimbursement	60.00
31412	Konica Minolta	Services - Maintenance	Copier maintenance service	106.45
31413	Casey Larsen	Subsistence - Travel	Mileage reimbursement	29.44
31414	McMaster-Carr Supply Co.	Supplies - Safety	Plumbing supplies and acid resistant gloves	1,328.25
31415	NeWest Construction	Services - Engineering	Shaftless conveyor project	203,965.00
31416	Nobel Systems	Service - IT Support	GIS annual subscription	10,400.00
31417	Oceanside Driveline	Services - Maintenance	U-joint	67.01
31418	Olin Corp - Chlor Alkali	Supplies - Chemicals	Sodium Hypochlorite	2,976.60
31419	Olivenhain Municipal Water District	Rent	Pipe rental payment	3,078.00
31420	Pacific Green Landscape	Services - Landscape	Landscape service - March	1,125.00
31421	P.E.R.S.	Medical Insurance - PERS	Health - April	17,487.39
31422	Public Employees- Retirement	Retirement Plan - PERS	Retirement - 02/28/15 - 03/13/15	15,340.81
31423	Preferred Benefit Insurance	Dental/Vision	Vision - March	293.70
31424	ProBuild	Supplies - Shop & Field	Bungee cords, batteries, and silicone	89.50
31425	Procopio Cory Hargreaves	Services - Legal	General - January and February	6,062.75
31426	Rockwell Solutions	Repair Parts Expense	Pump, impeller, gasket, cutter bar, and nut	13,048.52
31427	San Dieguito Water	Utilities - Water	Recycled water	9,890.39
31428	Santa Fe Irrigation District	Utilities - Water	Recycled water	556.39

SAN ELIJO JOINT POWERS AUTHORITY**PAYMENT OF WARRANTS****15-04****For the Month of March**

Warrant #	Vendor Name	G/L Account	Warrant Description	Amount
31429	Santa Fe Irrigation District	SFID Distribution Pipeline	Pipeline payment - February	955.58
31430	San Diego Gas & Electric	Utilities - Gas & Electric	Gas and electric - 02/05/15 - 03/09/15	2,261.10
31431	Smart & Final	Supplies - Shop & Field	Kitchen supplies	172.44
31432	State Water Resources Control	Dues & Memberships	Wastewater treatment plant operator	230.00
31433	Sun Life Financial	Life Insurance/Disability	Life and disability insurance - March	1,344.94
31434	Tierra Data Inc.	Services - Laboratory	January and February	1,450.00
31435	Unifirst Corporation	Services - Uniforms	Uniform service	518.89
31436	Univar USA Inc.	Supplies - Chemicals	Hydrochloric Acid and Citric Acid	991.57
31437	UPS	Postage/Shipping	Mailing compliance reports	24.94
31438	Underground Service Alert/SC	Services - Alarm	Dig alert - February	90.00
31439	Vantagepoint Transfer Agents	EE Deduction Benefits	457 - ICMA	5,886.70
31440	Vantagepoint Transfer Agents	ICMA Retirement	401a - ICMA	2,634.58
31441	Verizon Wireless	Utilities - Telephone	Cell phone service and equipment	1,010.43
31442	WorkPartners Occupational	Services - Medical	Employee vaccine	80.00
	San Elijo Payroll Account	Payroll	Payroll - 03/06/15	57,902.44
	San Elijo Payroll Account	Payroll	Payroll - 03/20/15	55,863.36
				<u>\$ 528,392.97</u>

SAN ELIJO JOINT POWERS AUTHORITY

PAYMENT OF WARRANTS SUMMARY

**For the Month of March
As of March 31, 2015**

PAYMENT OF WARRANTS		\$ 528,392.97
Reference Number	15-04	

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.



Paul F. Kinkel
Director of Finance & Administration

STATEMENT OF FUNDS AVAILABLE FOR PAYMENT OF WARRANTS
AND INVESTMENT INFORMATION
As of March 31, 2015

FUNDS ON DEPOSIT WITH	AMOUNT
LOCAL AGENCY INVESTMENT FUND <i>(MARCH 2015 YIELD 0.27%)</i>	
RESTRICTED SRF RESERVE	\$ 630,000.00
UNRESTRICTED DEPOSITS	\$ 7,691,169.68
CALIFORNIA BANK AND TRUST <i>(DECEMBER 2014 YIELD 0.01%)</i>	
REGULAR CHECKING	\$ 52,872.79
PAYROLL CHECKING	\$ 5,000.00
 TOTAL RESOURCES	 \$ 8,379,042.47

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 13, 2015

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: SAN ELIJO WATER RECLAMATION FACILITY TREATED EFFLUENT FLOWS –
MONTHLY REPORT

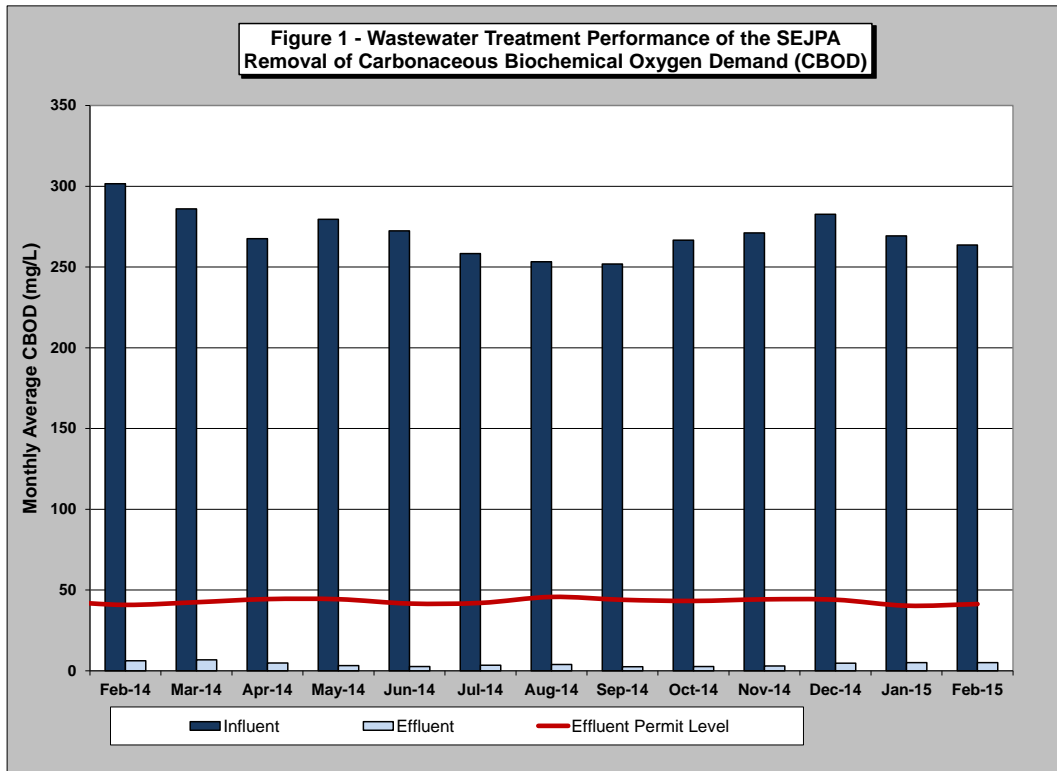
RECOMMENDATION

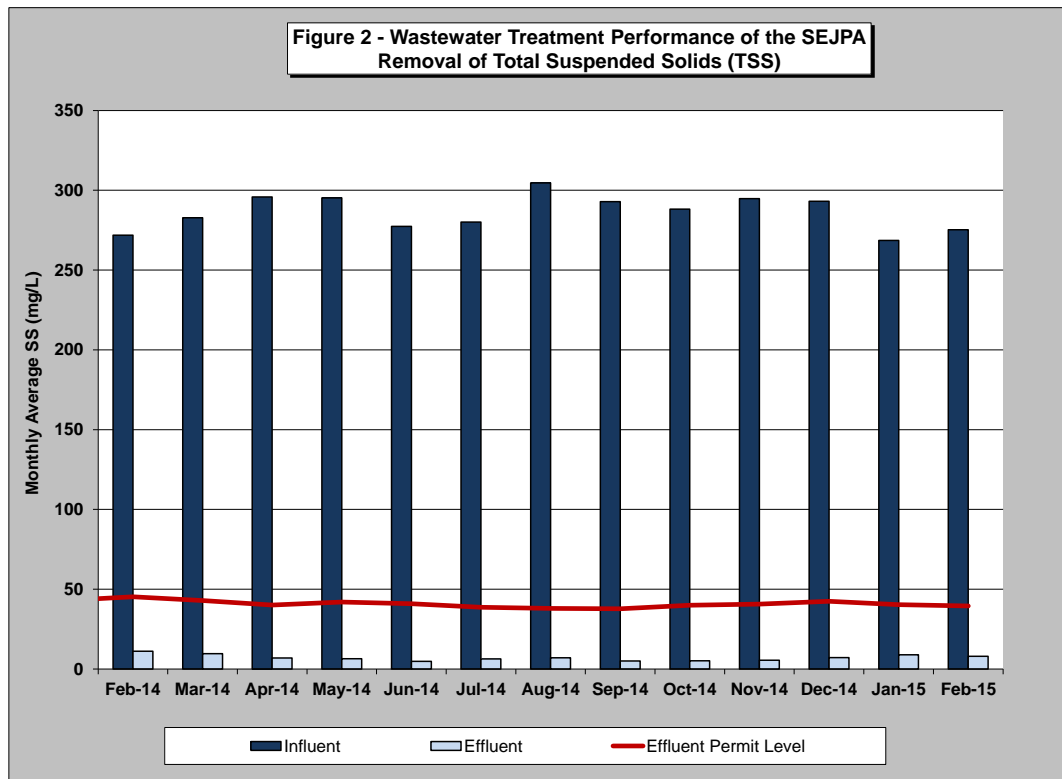
No action required. This memorandum is submitted for information only.

DISCUSSION

Monthly Treatment Plant Performance and Evaluation

Wastewater treatment for the San Elijo Joint Powers Authority (SEJPA) met all NPDES ocean effluent limitation requirements for the month of February 2015. 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. For the month of February, treatment levels for CBOD and TSS were 98.1 and 97.1 percent removal, respectively, (as shown in Figure 1 and Figure 2).





Member Agency Flows

Presented below are the influent and effluent flows for the month of February. Average daily influent flows were recorded for each Member Agency. Total effluent flow was calculated for the San Elijo Water Reclamation Facility.

	February	
	<u>Influent (mgd)</u>	<u>Effluent (mgd)*</u>
Cardiff Sanitary Division	1.229	0.757
City of Solana Beach	1.228	0.757
Rancho Santa Fe SID	0.132	0.081
Total San Elijo WRF Flow	2.589	1.595

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

Table 1 (next page) presents the historical average, maximum, and unit influent and effluent flow rates per month for each of the Member Agencies during the past 5 years. It also presents the number of connected Equivalent Dwelling Units (EDUs) for each of the Member Agencies during this same time period.

TABLE 1 - SAN ELIJO WATER RECLAMATION FACILITY MONTHLY REPORT - FLOWS AND EDUS

MONTH	AVERAGE DAILY INFLUENT FLOW RATE (MGD)				AVERAGE DAILY EFFLUENT FLOW RATE (MGD)				CONNECTED EDUs				AVERAGE UNIT INFLUENT FLOW RATE (GAL/EDU/DAY)			
	CSD	RSF CSD	SB	TOTAL PLANT	CSD	RSF CSD	SB	TOTAL PLANT	CSD EDUS	RSF CSD EDUS	SB EDUS	TOTAL EDUS	CSD	RSF	SB	TOTAL PLANT
Feb-10	1.487	0.148	1.382	3.017	1.371	0.136	1.274	2.781	8,197	474	7,728	16,399	181	313	179	184
Mar-10	1.455	0.145	1.398	2.998	1.108	0.110	1.064	2.282	8,198	474	7,728	16,400	177	306	181	183
Apr-10	1.451	0.137	1.391	2.979	1.058	0.100	1.014	2.172	8,198	474	7,728	16,400	177	289	180	182
May-10	1.379	0.128	1.385	2.892	0.672	0.063	0.675	1.410	8,201	474	7,728	16,403	168	270	179	176
Jun-10	1.437	0.122	1.453	3.012	0.650	0.055	0.657	1.362	8,202	474	7,728	16,404	175	258	188	184
Jul-10	1.375	0.119	1.466	2.960	0.694	0.061	0.740	1.495	8,204	475	7,728	16,407	168	251	190	180
Aug-10	1.366	0.125	1.451	2.942	0.585	0.053	0.621	1.259	8,205	475	7,728	16,408	166	263	188	179
Sep-10	1.346	0.114	1.342	2.802	0.627	0.053	0.626	1.306	8,207	475	7,728	16,410	164	240	174	171
Oct-10	1.413	0.123	1.311	2.847	1.177	0.102	1.092	2.371	8,207	477	7,728	16,412	172	258	170	173
Nov-10	1.399	0.117	1.297	2.813	1.090	0.091	1.011	2.192	8,209	478	7,728	16,415	170	245	168	171
Dec-10	1.605	0.215	1.375	3.195	1.417	0.189	1.214	2.820	8,212	478	7,728	16,418	195	450	178	195
Jan-11	1.452	0.158	1.338	2.948	1.272	0.139	1.172	2.583	8,227	478	7,728	16,433	176	331	173	179
Feb-11	1.413	0.156	1.339	2.908	1.176	0.130	1.114	2.420	8,228	480	7,728	16,436	172	325	173	177
Mar-11	1.387	0.208	1.343	2.938	1.186	0.178	1.148	2.512	8,229	480	7,728	16,437	169	434	174	179
Apr-11	1.320	0.181	1.323	2.824	0.867	0.118	0.869	1.854	8,248	482	7,728	16,458	160	376	171	172
May-11	1.327	0.162	1.320	2.809	0.564	0.069	0.561	1.194	8,248	483	7,728	16,459	161	336	171	171
Jun-11	1.343	0.156	1.390	2.889	0.545	0.063	0.564	1.172	8,249	483	7,728	16,460	163	323	180	176
Jul-11	1.293	0.151	1.430	2.874	0.425	0.050	0.470	0.945	8,250	484	7,728	16,462	157	312	185	175
Aug-11	1.292	0.150	1.405	2.847	0.479	0.056	0.521	1.056	8,252	485	7,728	16,465	157	310	182	173
Sep-11	1.262	0.146	1.333	2.741	0.564	0.066	0.596	1.226	8,254	486	7,728	16,468	153	301	172	166
Oct-11	1.260	0.142	1.303	2.705	0.730	0.082	0.755	1.567	8,260	486	7,728	16,474	153	292	169	164
Nov-11	1.338	0.167	1.307	2.812	1.099	0.137	1.074	2.310	8,261	486	7,728	16,475	162	344	169	171
Dec-11	1.299	0.164	1.305	2.768	1.103	0.139	1.108	2.350	8,264	487	7,728	16,479	157	337	169	168
Jan-12	1.291	0.145	1.303	2.739	1.032	0.116	1.042	2.190	8,266	488	7,728	16,482	160	232	169	166
Feb-12	1.259	0.137	1.283	2.679	1.006	0.109	1.025	2.140	8,268	488	7,728	16,484	152	281	166	163
Mar-12	1.313	0.153	1.255	2.721	0.968	0.113	0.925	2.006	8,269	488	7,728	16,485	159	314	162	165
Apr-12	1.348	0.145	1.209	2.702	0.906	0.097	0.813	1.816	8,278	488	7,728	16,494	163	297	156	164
May-12	1.333	0.150	1.211	2.694	0.577	0.065	0.525	1.167	8,280	488	7,728	16,496	161	308	157	163
Jun-12	1.365	0.143	1.237	2.745	0.547	0.057	0.496	1.100	8,284	489	7,728	16,501	165	293	160	166
Jul-12	1.372	0.126	1.296	2.794	0.457	0.042	0.431	0.930	8,289	489	7,728	16,506	166	258	168	169
Aug-12	1.383	0.128	1.291	2.802	0.473	0.044	0.441	0.958	8,290	490	7,728	16,508	167	261	167	170
Sep-12	1.349	0.142	1.220	2.711	0.544	0.058	0.492	1.094	8,291	490	7,728	16,509	163	290	158	164
Oct-12	1.327	0.123	1.203	2.653	0.678	0.063	0.615	1.356	8,294	490	7,728	16,512	160	251	156	161
Nov-12	1.343	0.128	1.181	2.652	0.862	0.082	0.758	1.702	8,299	490	7,728	16,517	162	261	153	161
Dec-12	1.383	0.141	1.197	2.721	1.261	0.129	1.091	2.481	8,300	490	7,728	16,518	167	288	155	165
Jan-13	1.357	0.145	1.215	2.717	1.155	0.124	1.034	2.313	8,300	490	7,728	16,518	163	296	157	164
Feb-13	1.349	0.138	1.201	2.688	1.048	0.108	0.933	2.089	8,301	490	7,728	16,519	163	282	155	163
Mar-13	1.402	0.154	1.235	2.791	0.905	0.100	0.797	1.802	8,302	493	7,728	16,521	169	314	160	169
Apr-13	1.297	0.124	1.237	2.658	0.531	0.051	0.506	1.088	8,304	493	7,728	16,523	156	253	160	161
May-13	1.339	0.126	1.185	2.650	0.376	0.036	0.333	0.745	8,304	493	7,728	16,525	161	256	153	160
Jun-13	1.341	0.126	1.190	2.657	0.269	0.025	0.239	0.533	8,307	493	7,728	16,528	161	256	154	161
Jul-13	1.366	0.144	1.269	2.779	0.482	0.050	0.448	0.980	8,309	493	7,728	16,530	164	292	164	168
Aug-13	1.342	0.168	1.258	2.768	0.380	0.048	0.356	0.784	8,311	494	7,728	16,533	161	340	163	167
Sep-13	1.343	0.117	1.193	2.653	0.403	0.036	0.358	0.797	8,311	494	7,728	16,533	162	237	154	160
Oct-13	1.319	0.132	1.184	2.635	0.629	0.063	0.565	1.257	8,314	494	7,728	16,536	159	267	153	159
Nov-13	1.348	0.133	1.194	2.675	0.932	0.092	0.826	1.850	8,315	494	7,728	16,537	162	270	155	162
Dec-13	1.341	0.134	1.191	2.666	1.030	0.103	0.915	2.048	8,316	494	7,728	16,538	161	272	154	161
Jan-14	1.322	0.135	1.194	2.651	0.851	0.087	0.768	1.706	8,318	495	7,728	16,541	159	273	155	160
Feb-14	1.314	0.127	1.172	2.613	0.954	0.093	0.851	1.898	8,323	495	7,728	16,546	158	257	152	158
Mar-14	1.339	0.134	1.185	2.658	0.858	0.086	0.760	1.704	8,324	496	7,728	16,548	161	270	153	161
Apr-14	1.326	0.128	1.128	2.582	0.449	0.043	0.382	0.874	8,328	498	7,728	16,554	159	257	146	156
May-14	1.353	0.124	1.127	2.604	0.159	0.015	0.132	0.306	8,333	498	7,728	16,559	162	249	146	157
Jun-14	1.341	0.126	1.188	2.655	0.207	0.020	0.183	0.410	8,333	498	7,728	16,559	161	253	154	160
Jul-14	1.271	0.130	1.307	2.708	0.232	0.024	0.239	0.495	8,338	499	7,728	16,565	152	261	169	163
Aug-14	1.228	0.130	1.298	2.656	0.227	0.024	0.239	0.490	8,345	500	7,728	16,573	147	260	168	160
Sep-14	1.215	0.113	1.232	2.560	0.211	0.019	0.214	0.444	8,351	500	7,728	16,579	145	226	159	154
Oct-14	1.204	0.114	1.198	2.516	0.394	0.038	0.392	0.824	8,353	500	7,728	16,581	144	228	155	152
Nov-14	1.237	0.118	1.198	2.553	0.667	0.063	0.646	1.376	8,354	502	7,728	16,584	148	235	155	154
Dec-14	1.323	0.147	1.229	2.699	1.163	0.129	1.081	2.373	8,355	502	7,728	16,585	158	293	159	163
Jan-15	1.253	0.130	1.232	2.615	0.984	0.102	0.967	2.053	8,359	503	7,977	16,838	150	259	154	155
Feb-15	1.229	0.132	1.228	2.589	0.757	0.081	0.757	1.595	8,361	504	7,977	16,841	147	262	154	154

CSD: Cardiff Sanitary Division

RSF CSD: Ranch Santa Fe Community Service District

SB: Solana Beach

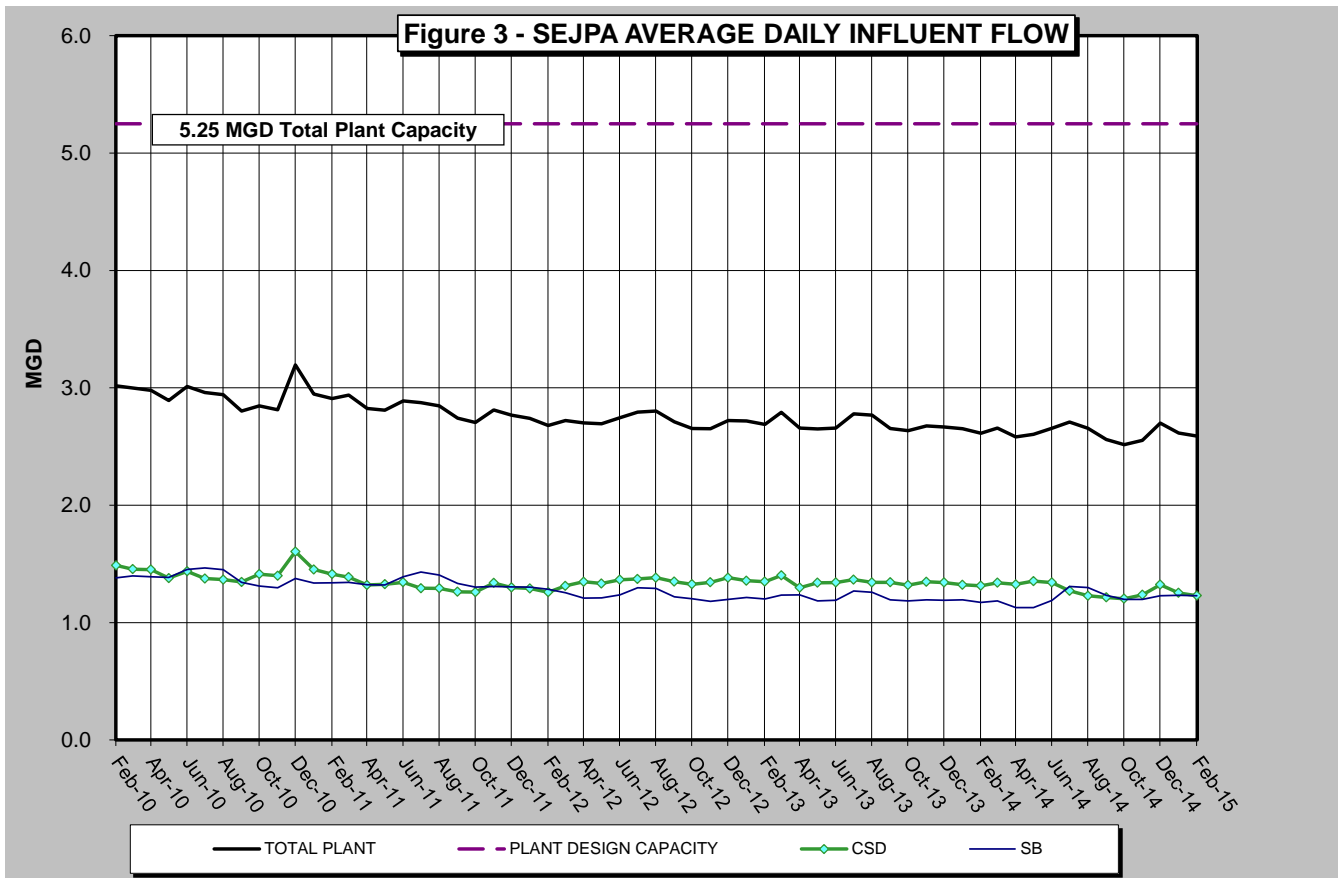
EDU: Equivalent Dwelling Unit

ASSUMPTIONS: SB average flow includes San Elijo Hills flow of 0.131 mgd

SB Connected EDUs includes 300 EDUs for the City of San Diego

EDU Numbers Revised by Dudek for March and April 2013

Figure 3 (below) presents the 5-year historical average daily flows per month for each Member Agency. This is to provide a historical overview of the average treated flow by each agency. As shown in the figure, the average treated flow has been approximately 2.6 million gallons per day (mgd). Also shown in Figure 3 is the total wastewater treatment capacity of the plant, 5.25 mgd, of which each Member Agency has the right to 2.5 mgd, and Rancho Santa Fe Community Service District has the right to 0.25 mgd.



City of Escondido Flows

The average and peak flow rate from the City of Escondido Hale Avenue Resource Recovery Facility, which discharges through the San Elijo Ocean Outfall, is reported below. The following average flow rate and peak flow rate is reported by the City of Escondido for the month of February 2015.

	Flow (mgd)
Escondido (Average flow rate)	9.92
Escondido (Peak flow rate)	18.0

Connected Equivalent Dwelling Units

The City of Solana Beach updated the connected EDUs number that is reported to the SEJPA in January 2015. The number of EDUs connected for each of the Member Agencies is as follows:

	Connected (EDU)
Cardiff Sanitary Division	8,361
Rancho Santa Fe SID	504
City of Solana Beach	7,640
San Diego (to Solana Beach)	337
Total EDUs to System	16,841

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

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SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 13, 2015

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: SAN ELIJO WATER RECLAMATION PROGRAM – MONTHLY REPORT

RECOMMENDATION

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

DISCUSSION

Recycled Water Production

For the month of February 2015, recycled water demand was 79.58 acre-feet (AF), which was met using 79.57 AF of recycled water and 0.01 AF of supplementation with potable water. This is the highest February demand since the program began.

Figure 1 (attached) provides monthly supply demands for recycled water since September 2000. Figure 2 (attached) provides a graphical view of annual recycled water demand spanning fourteen fiscal years. Figure 3 (attached) shows the monthly recycled water demand for each February since the program began.

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

Figure 1 - MONTHLY RECYCLED WATER DEMAND

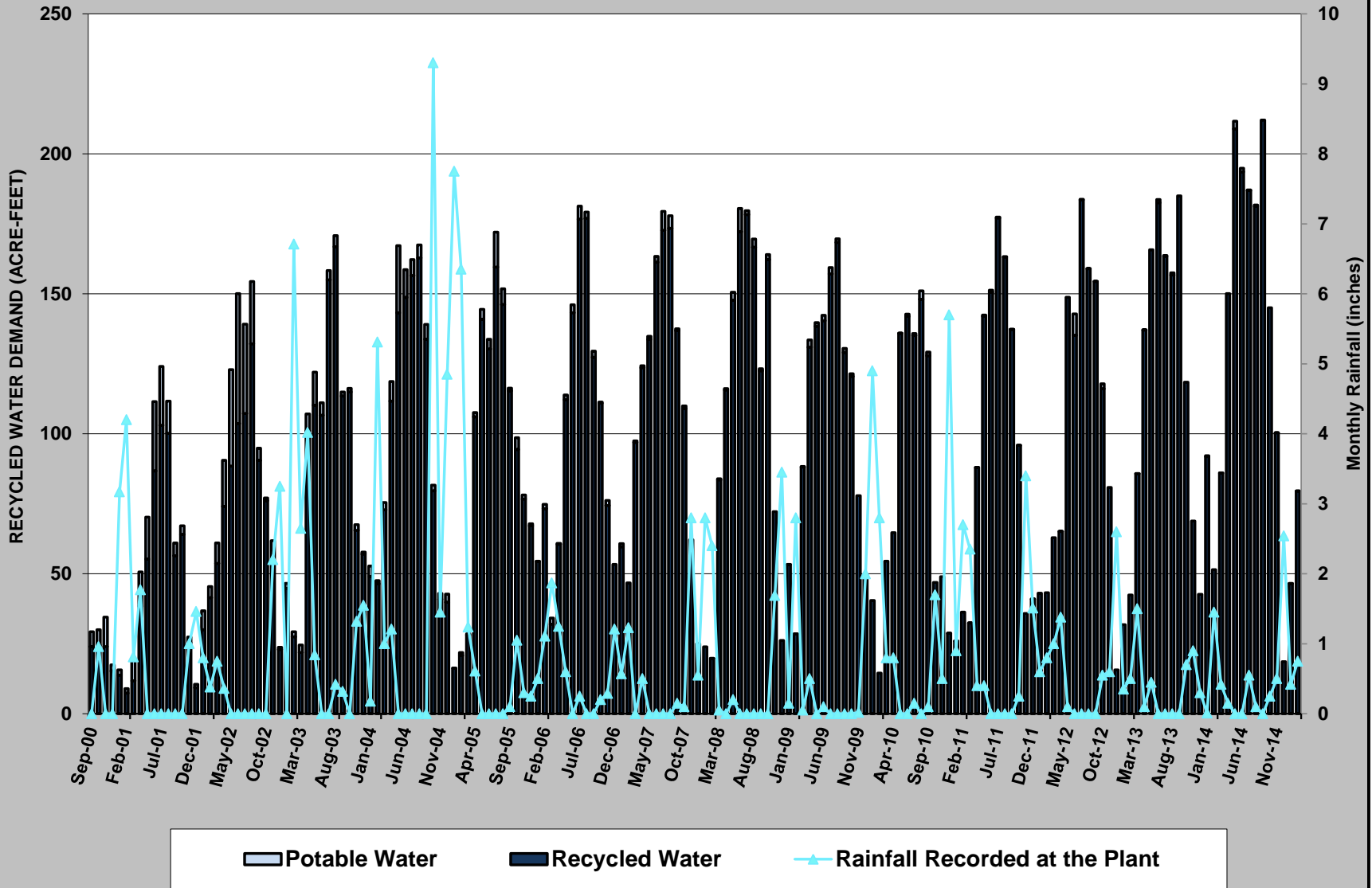


Figure 2 - RECYCLED WATER DEMAND by FISCAL YEAR

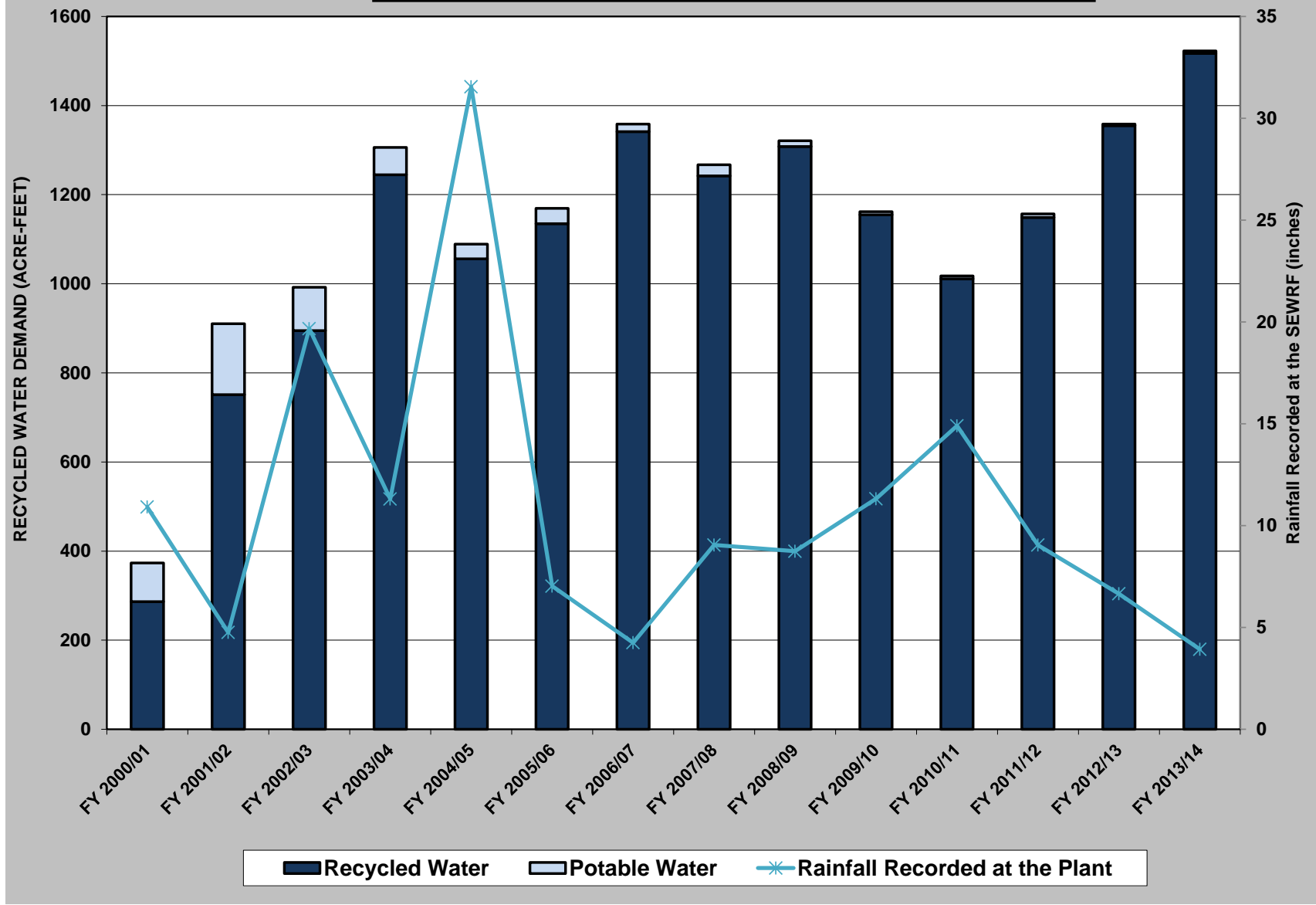
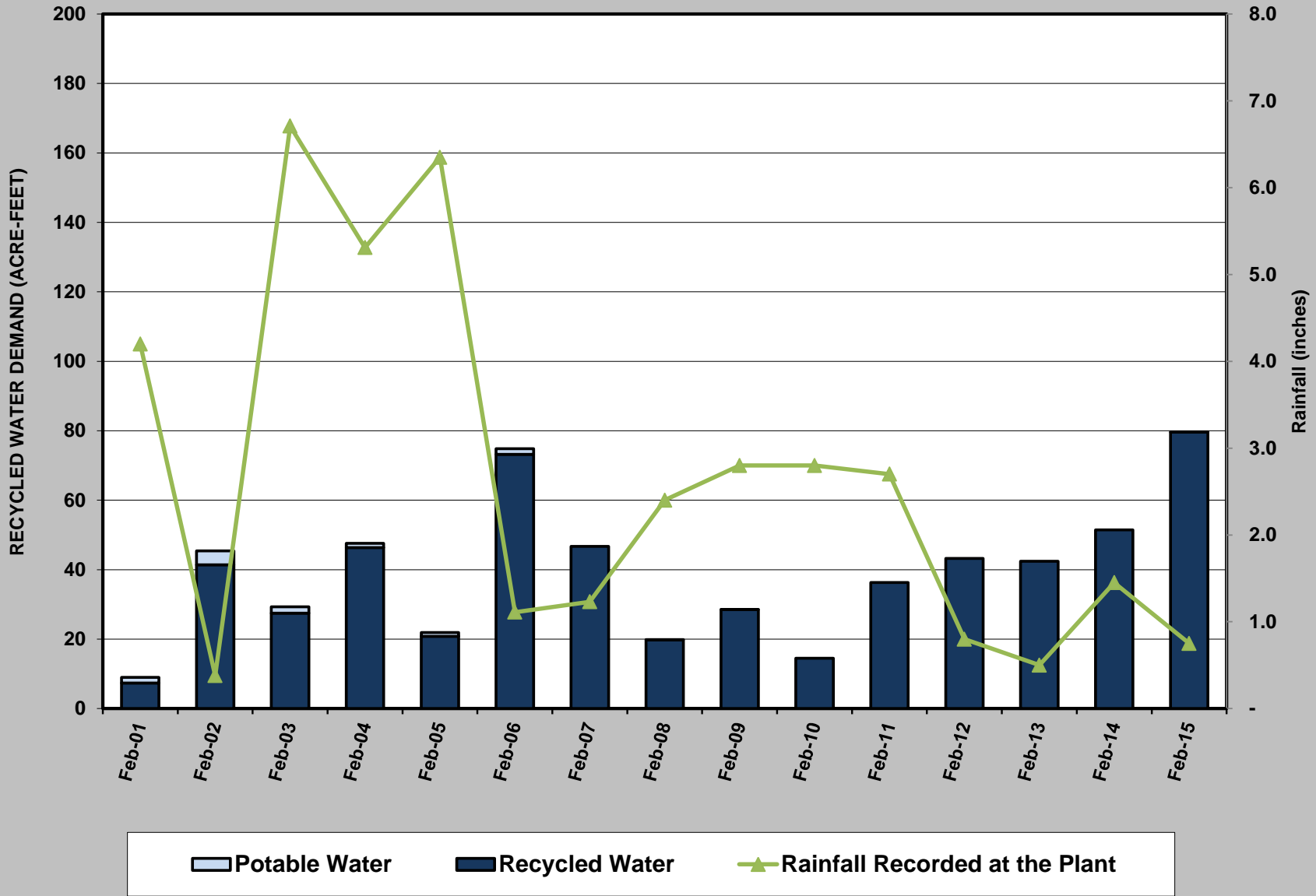


Figure 3 - FEBRUARY RECYCLED WATER DEMAND



SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 13, 2015

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: Director of Finance/Administration

SUBJECT: PRESENTATION OF THE SAN ELIJO JOINT POWERS AUTHORITY FISCAL YEAR 2015-16 RECOMMENDED BUDGET

RECOMMENDATION

It is recommended that the Board of Directors:

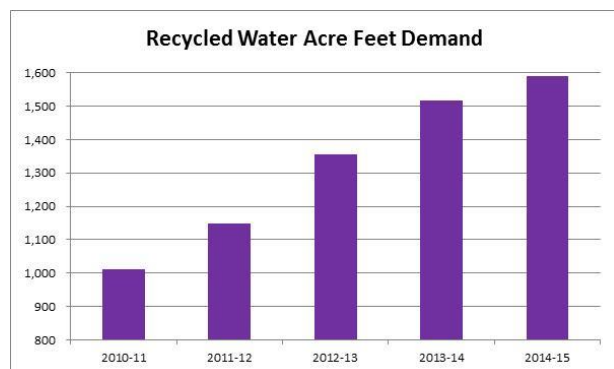
1. Review the Fiscal Year 2015-16 Recommended Budget; and
2. Discuss and take action as appropriate.

DISCUSSION

The Fiscal Year (FY) 2015-16 San Elijo Joint Powers Authority (SEJPA) Recommended Budget has been prepared in accordance with the SEJPA formation agreement and the SEJPA's existing service agreements with other government entities. The budget estimates all expenditures necessary to provide wastewater treatment, waste disposal, water reclamation, laboratory, ocean outfall, and pump station services.

The total recommended Fiscal Year (FY) 2015-16 budget for the Wastewater Treatment Fund (which includes operations and maintenance for wastewater, laboratory, outfall, and pump stations, as well as bond debt for the 2011 SEJPA Revenue Bonds) is \$7,092,021. The total recommended FY 2015-16 operating budget for the Water Reclamation Fund (which includes operations and maintenance, as well as debt service expenses) is \$2,661,776. The FY 2015-16 budget consists of \$5,686,151 operating costs, \$2,470,646 debt service and \$1,597,000 capital projects for a total budget of \$9,753,797.

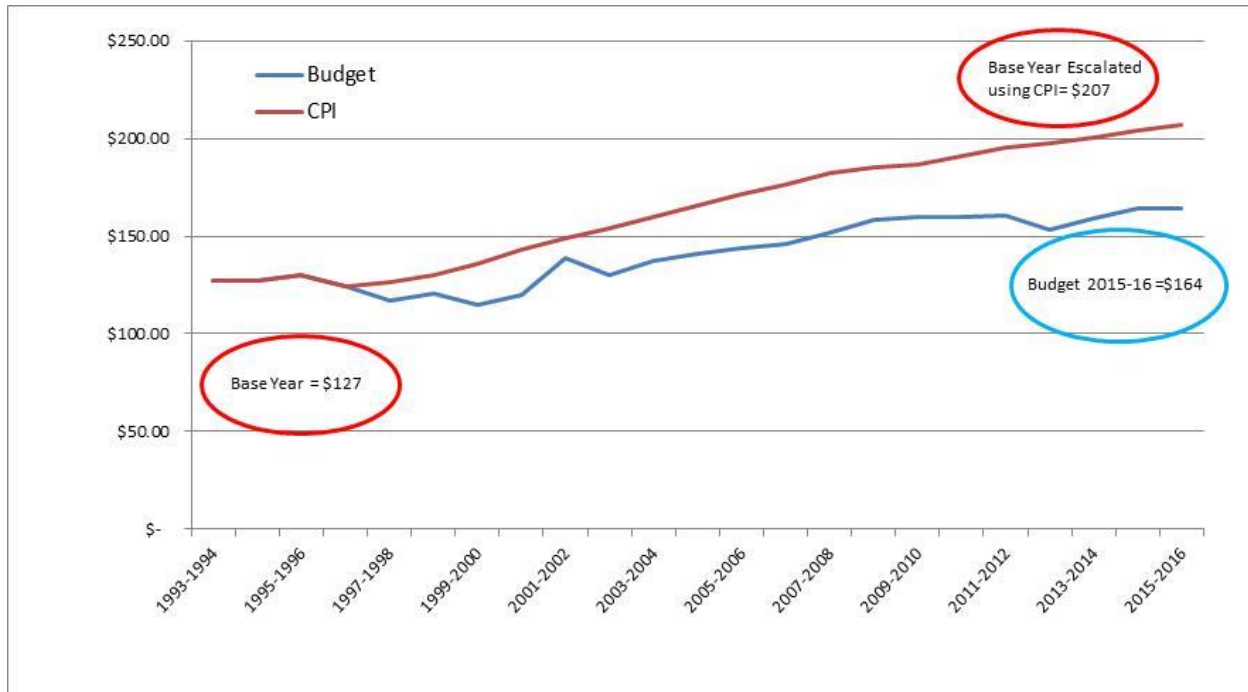
SEJPA management has reviewed in detail all aspects of operations to control costs without impacting the agency's ability to perform its vital functions. The proposed operating cost budget for all programs will increase by approximately \$362,158, of which the Recycled Water Program has the largest single impact with an increase of \$248,994. This increase is primarily due to higher variable costs related to



increased water sales and planning efforts to expand the Recycled Water Program regionally. Wastewater Treatment is budgeted to increase \$62,036 or 2.5 percent as a result of \$23,066 anticipated energy cost increases and \$40,000 for miscellaneous repair projects. Ocean Outfall decreased \$47,075 primarily as a result of the completion of the intensive monitoring program. In addition, the SEJPA contracted with the City of Solana Beach to service two of the City's generators at a budgeted cost of \$9,137 and the City of Del Mar to maintain and service the 21st Street pump station at a cost of \$74,981. All other programs have increased \$14,085 or 1.3 percent.

The cost for wastewater treatment and disposal services for the Member Agencies are allocated based on use, indicated by measured flows or level of effort, as appropriate. Flows are averaged over a 12 month period and vary from year to year, impacting the level of participation for each agency. On the basis of 16,332 connected equivalent dwelling units (EDU's), wastewater treatment and disposal services will cost an average of \$164.32 per EDU. This represents an increase of \$0.20 or 0.1 percent from a year ago. Below is a graph showing the historic cost per EDU for the Member Agencies compared to the escalated rate using the San Diego CIP index.

Historic SEJPA Wastewater Cost vs CPI



Recycled water revenues are budgeted to increase by approximately \$279,741 or 12.1 percent from the current year budget. It is anticipated that sales volume will be approximately 1,530 acre-feet (AF) in the upcoming fiscal year, which is an increase of 189 AF from the previous year budget. The program is projected to generate \$2.59 million in recycled water revenues for FY 2015-16. The total recommended FY 2015-16 operating budget which includes operating costs, debt service and capital costs is \$2.66 million. Operating costs increased by \$248,994 and is comprised of \$25,608 for labor, \$13,500 for infrastructure rental, \$10,907 for maintenance, \$12,000 for Temporary personnel, \$90,272 for electrical costs, and \$25,000 for water. Engineering cost is planned to increase by \$40,000 for system modeling, optimization, and studies. Professional services are expected to increase \$11,800 for grant and strategic planning.

The SEJPA Capital Improvement Program includes both new and ongoing projects for improvements to the wastewater treatment, ocean outfall, and the water reclamation programs. Most of these projects were identified in the Facility Plan prepared in 2007 and updated in the 2015 Facility Plan. The capital improvement programs are budgeted at \$997,000, \$300,000, and \$300,000 for wastewater treatment, ocean outfall, and water reclamation programs respectively for a total of \$1,597,000.

The wastewater treatment program capital projects include Preliminary Treatment Upgrades, Building Improvements, Biosolids Building Reserves, Digester Rehabilitation Upgrades, and Miscellaneous Projects. Preliminary Treatment consists of modification and/or replacement of headworks and grit chamber components. Building Improvements consist of, but not limited to code deficiencies, security, seismic improvements, and operational issues related to the Administration Building. The Biosolids Building Reserve consists of projects related to processing sludge. Energy Efficiency Improvements is related to efficiency or energy creation projects at the SEJPA facility.

The Ocean Outfall Reserve consists of projects to address the replacement of the land outfall portion and reballasting of the ocean portion.

The Water Reclamation capital improvements are related to conveyance and storage of recycled water in addition to projects related to potable reuse. The conveyance portion of the project consists of relocating pipelines in the Caltrans' freeway widening project, and extending pipelines to increase recycled water use and to conserve potable water. As a result of the severe drought in California, a potable reuse study is being funded to identify required improvements for delivering purified water to the Badger Filtration Water Treatment Plant.

Debt service for the SEJPA is budgeted at \$2,470,646, which is approximately the same as last fiscal year. This minor decrease is attributable to the 2011 Refunding Bonds scheduled payments. The annual debt service consists of the following:

- 2011 Revenue Bond payment of \$1,472,818 (Secondary Treatment Upgrades Project, 1991)
- State Revolving Fund loan payment of \$834,675 (Water Reclamation Facility Project, 2000)
- Advanced Water Purification (AWP) loan payment of \$148,153 (constructed in 2013)
- SFID pipeline acquisition of \$15,000 (3rd year)

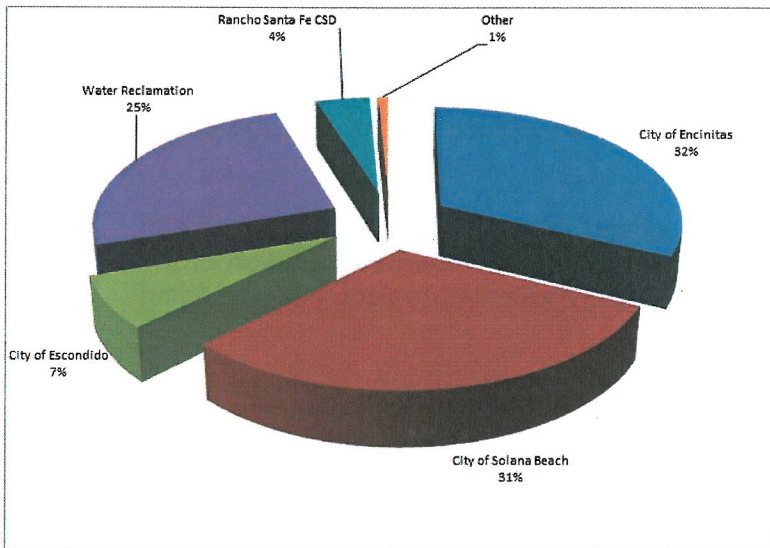
Further information for the FY 2015-16 recommended budget is discussed in detail in the budget document, along with information regarding the contribution requirements of the various agencies served by the SEJPA.

SUMMARY

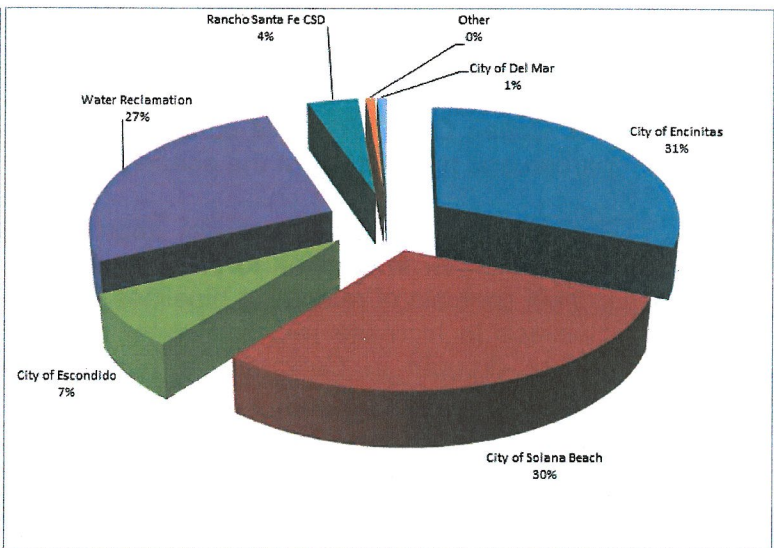
The total recommended FY 2015-16 budget for the Wastewater Services is \$7,092,021. The Recycled Water Program total recommended FY 2015-16 budget is \$2,661,776 which is paid for by the customers of the program. The SEJPA receives revenues from seven primary sources, with the three largest customers being the City of Encinitas, the City of Solana Beach, and the Recycled Water Program, which are expected to provide \$2,991,526, \$2,881,168, and \$2,593,403, respectively. The graph below shows the revenue source percentages for FY 2014-15 and FY 2015-16.

Revenue Source Percentage

FY 2014-15



FY 2015-16



The May 11, 2015 Board Agenda will include a budget discussion item for the Board to publically discuss any changes or comments on the recommended budget. The budget will be brought to the June 8, 2015 meeting for Board approval.

It is therefore recommended that the Board of Directors:

1. Review the Fiscal Year 2015-16 Recommended Budget; and
2. Discuss and take action as appropriate.

Respectfully submitted,

Paul F. Kinkel
Director of Finance/Administration

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 13, 2015

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: CONSIDER APPROVAL OF PARTNERSHIP WITH THE CITY OF SOLANA
BEACH FOR DESIGN OF RECYCLED WATER PIPELINES

RECOMMENDATION

It is recommended that the Board of Directors:

1. Authorize the General Manager to execute an agreement for an amount not to exceed \$23,770 to fund engineering costs associated with recycled water pipelines; and
2. Discuss and take action as appropriate.

BACKGROUND

The San Elijo Joint Powers Authority (SEJPA) owns recycled water distribution pipelines within the City of Solana Beach. In partnership with the Santa Fe Irrigation District, the SEJPA provides recycled water for landscape irrigation and industrial uses to customers within Solana Beach. Currently, recycled water distribution pipelines are only located in part of the city. To increase its sustainability, Solana Beach is exploring the possibilities of extending the recycled waterlines west to the 101 Highway corridor. Last month, the Solana Beach City Council reviewed the project preliminary design and approved moving forward with negotiating a fee for final design.

DISCUSSION

The SEJPA is interested in partnering with the City on the development of this project. The project may ultimately serve 90 acre feet or more per year, but will likely be constructed in phases based on available funding and local developer participation. The proposed first phase will focus on constructing the backbone pipeline from Stevens Avenue along Via De La Valle to Highway 101, and converting existing potable water irrigation meters to recycled water. Sites to be included in the first phase will be the Coastal Rail Trail and the streetscape landscaping on Highway 101, as well as businesses and HOAs adjacent to the proposed pipeline. This first phase may convert 20-40 acre-feet per year of potable water use to recycled water, which would be highly desirable as the California drought worsens.



Figure E-1 illustrates the potential project area under consideration.

FINANCIAL IMPACT

The City of Solana Beach will be the project leader and be responsible for the engineering and construction contracts. As a project partner, the SEJPA is proposing to cost share for the development of the final design for an amount of \$23,770. Adequate funds are available for this project from the Recycled Water Pipeline Assessment Project. Staff is also working with the City and the Santa Fe Irrigation District to develop a multi-agency grant proposal to assist in funding construction costs.

It is therefore recommended that the Board of Directors:

1. Authorize the General Manager to execute an agreement for an amount not to exceed \$23,770 to fund engineering costs associated with recycled water pipelines; and
2. Discuss and take action as appropriate.

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 13, 2015

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: PRESENTATION ON THE NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM (NPDES) PERMIT RENEWAL

RECOMMENDATION

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

BACKGROUND

California Regional Water Quality Control Board (Regional Board) Order No. R9-2010-0087 (NPDES PERMIT NO. CA0107999) established requirements for the San Elijo Joint Powers Authority (SEJPA) to discharge treated municipal wastewater from the San Elijo Water Reclamation Facility to the San Elijo Ocean Outfall. This Order incorporated both state and federal water quality requirements and has a scheduled renewal frequency of every 5 years. Order No. R9-2010-0087 became effective on October 28, 2010 and will expire on October 27, 2015. According to requirements of the permit, the SEJPA must file a Report of Waste Discharge in accordance with Title 23 of the California Code of Regulations, no later than 180 days in advance of the expiration date, as application for issuance of new waste discharge requirements and the monitoring and reporting program.

DISCUSSION

The Report of Waste Discharge will describe the treatment and discharge facilities, characterize the historical and projected quality of effluent, describe how the discharge meets California Ocean Plan water quality objectives including REC-1 standards, address the State anti-degradation policy for changes in mass emissions of pollutants, include sludge handling details, and contain the necessary federal application forms.

The SEJPA has contracted with Michael Welch, Ph.D., P.E. to prepare the Report of Waste Discharge, due on April 27, 2015. A draft report has been prepared and is available for review in the office.

FINANCIAL IMPACT

Professional Services to prepare the Report of Waste Discharge was included in the FY 2014-15 budget and the draft report was prepared within the budgeted amount.

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
MEMORANDUM

April 13, 2015

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: 2015 FACILITY PLAN FOR THE SAN ELIJO WATER RECLAMATION
FACILITY

RECOMMENDATION

It is recommended that the Board of Directors:

1. Accept and file the 2015 Facility Plan for the San Elijo Water Reclamation Facility; and
2. Discuss and take action as appropriate.

BACKGROUND

The San Elijo Water Pollution Control Facility and the San Elijo Ocean Outfall were originally constructed in 1965. At that time, the water pollution control facility provided primary treatment that discharged through the 4,000 foot-long ocean outfall. Since its original construction, the treatment facility has experienced many minor improvement projects and two major facility upgrades. The first major upgrade project was to meet Clean Water Act standards, which was commenced in 1989 and completed in 1991. The second major upgrade project was the construction of the Recycled Water Utility, which included treatment, storage, and distribution facilities. This project commenced in 1998 and was completed in 2000. With its completion, the facility was renamed the San Elijo Water Reclamation Facility. In 2013, the SEJPA completed the Advanced Water Purification Facility to augment the existing treatment system and improve water quality. The facility has a rated wastewater treatment capacity of 5.25 million gallons per day (MGD) and a recycled water treatment capacity of 3.02 MGD.

Since its initial construction in 1965, the ocean outfall has also experienced both minor and major improvements. In 1974, the ocean outfall was extended an additional 4,000 feet with the inclusion of the City of Escondido as an outfall partner. Also, about once a decade, new ballast rock is placed around the outfall pipe to support and protect the structure. The outfall has a rated discharge capacity of 25.5 MGD and is jointly owned by the SEJPA and the City of Escondido, where the SEJPA is the managing authority of the outfall.

In 2007, the SEJPA retained Carollo Engineers to prepare a wastewater facilities master plan. The 2007 facility plan, which primarily focused on the wastewater treatment facilities, is

a planning document with specific guidance and direction on asset management, facility planning, and capital improvement plan (CIP) budgeting. The plan identified short-term (5-year) capital projects that addressed immediate facility needs or projects that provided substantial process improvement or return on investment. Long-term (20-year) projects were identified for process efficiency, facility replacement needs, resource recovery opportunities, and future regulatory compliance requirements.

In March 2014 the SEJPA Board authorized an update to the Facility Plan that will serve as an asset management tool providing guidance for asset replacement decisions and serving as the foundation of the SEJPA's CIP program for the next 10 years. The original SEJPA CIP program was based on the 2007 Facility Master Plan. Many of the short-term projects have been constructed and some long-term projects are now required. Conducting a detailed facility review, as proposed in the 2015 Facility Plan, provides a basis for the necessity of new capital projects and for project prioritization.

DISCUSSION

Carollo Engineers completed the evaluation of the San Elijo Water Reclamation Facility located at 2695 Manchester Avenue, Cardiff by the Sea, California. The results of the evaluation and the engineer's recommendations were documented in the 2015 Facility Plan, which was submitted to the SEJPA Board for public review on February 9, 2015. The Facility Plan includes the wastewater treatment, recycled water treatment, and ocean outfall systems. Remote wastewater and recycled water facilities were not included in the 2015 Facility Plan. Elements of the Facility Plan include condition assessment and engineering evaluation of the facilities, regulatory compliance analysis, risk assessment for facility failure, project recommendations, capital project prioritization, budgetary cost estimates, and projected capital outlay for fiscal years 2015 – 2025.

Prioritized Capital Project List

Potential Project/ Process Area	Estimated Project Cost (\$M)*
Land Outfall Replacement	\$6.27
Administration/Operation Building & Seismic Upgrades	\$7.00
Preliminary Treatment Upgrades	\$2.37
Electrical Upgrades	\$0.71
Dewatering Upgrades	\$1.79
Digester Improvements	\$1.66
Aeration Upgrades & Return Flow Upgrades	\$0.88
DAF Upgrades & Co-Thickening	\$0.44
SCADA	\$1.08
Secondary Upgrades	\$1.21
Site Improvements & Security	\$3.77
Tertiary Upgrades	\$0.77
Reuse Storage	\$3.88
Solar	\$0.20
Odor Control Improvements	\$0.21
Class A Biosolids	\$2.00
Cogeneration	\$2.66
Estimated Total CIP Project Cost	\$36.90

*The cost estimates used to budget CIP projects are provided as a "budget estimate" as defined by the American Association of Cost Engineers (AACE). A budget estimate means that the expected accuracy range is accepted as somewhere between -20% to +30% of the actual cost.

The Facility Plan provides the following information on each recommended capital project:

- Background
- Project Need & Drivers
- Recommendations
- Alternatives
- Project Cost Estimate

Based on discussions with Carollo Engineers, approximately \$20 million in capital projects are recommended in the first five years of the proposed 10-year CIP. These projects include:

- Land Outfall Replacement
- Administration/Operation Building & Seismic Upgrades
- Preliminary Treatment Upgrades
- Electrical Upgrades
- Dewatering Upgrades
- Aeration Upgrades & Return Flow Upgrades
- SCADA (Phase 1)
- Site Improvements & Security (Phase 1)

For the SCADA and Site Improvements & Security Projects, staff is considering developing these projects in phases. In addition, staff is in discussion with Caltrans on a community bike path that could provide some of the recommended site and security improvements, thus allowing the SEJPA to avoid some project costs. Depending on the customers served by the project elements, the funding source for the project will be wastewater, recycled water, ocean outfall, or a combination of these programs.

For the three most critical projects identified, the following efforts have been taken or are underway:

Land Outfall Replacement: The SEJPA Board has awarded an engineering contract with Kennedy/Jenks Consultant to prepare the preliminary design for replacing or lining the land outfall. The draft report for the preliminary design is expected in May 2015. Funding source for this project is the Ocean Outfall Program.

Administration/Operation Building & Seismic Upgrades: Staff is working with the firm Roesling Nakamura Terada Architects, to develop a transition plan to address the most critical Americans with Disabilities Act (ADA) code issues as well as to develop a building needs assessment report. The building report will provide further clarification on options for refurbishing existing buildings and potential new buildings. Funding source for this project is the combination of the Wastewater, Recycled Water, and Ocean Outfall Programs.

Preliminary Treatment Upgrades: Staff has requested engineering proposals for preparing the preliminary design for the Preliminary Treatment Upgrades Project. The selection of the preferred engineering firm is expected by May 2015. Funding source for this project is the Wastewater Program.

These initial steps will develop into the basis for the recommended final scope of work of each project. The final scope of work for the individual projects will then be presented to the SEJPA Board at a future Board meeting for discussion and approval consideration.

FINANCIAL IMPACT

The Facility Plan outlines a list of prioritized projects that total nearly \$37 million over the next 10 years. Discussions are ongoing with regard to cash flow and timing of the projects to avoid rate stress and provide stable rates to the member agencies. The SEJPA has funding for preparing the planning and engineering efforts for many of the projects identified. A financial plan will be brought to the Board for discussion within 90 days.

It is therefore recommended that the Board of Directors:

1. Accept and file the 2015 Facility Plan for the San Elijo Water Reclamation Facility; and
2. Discuss and take action as appropriate.

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

Attachment: 2015 Facility Plan Executive Summary

1.1 INTRODUCTION

The purpose of this Facility Plan Update is to provide the San Elijo Joint Powers Authority (SEJPA) with a planning document that identifies and prioritizes potential improvements at the San Elijo Water Campus. The Water Campus consists of the San Elijo Water Reclamation Facility (SEWRF) including secondary treatment, tertiary treatment, and solids handling facilities for the incoming raw wastewater. Projects have been identified based on a comprehensive condition assessment of the installed assets at the SEWRF, a review of regulatory issues and potential changes, as well as potential process enhancements. The recommended projects have been reviewed with respect to cost and prioritized according to goals and standards set by SEJPA. Additional work has been performed to update the Wastewater Asset Management (WAM) database previously prepared for SEJPA.

1.2 REGULATORY REVIEW

As a part of this project, current and potential future regulations associated with wastewater and air quality issues were reviewed as they relate to the SEWRF. A detailed discussion is contained in Section 3. The construction and layout of the Administration and Operations Buildings were reviewed against the current building code with deficiencies noted.

1.3 SEWRF CONDITION ASSESSMENT

The condition assessment was performed over a two-day site visit by a team of process, structural, and electrical engineers and assisted by SEJPA staff. The assessment included visual observation of the installed assets as well as known deficiencies identified by staff. Additional meetings were held to review space needs and inspect the Administration and Operations Building with architects.

The WAM database was updated with new assets as noted through the condition assessment and a review of record drawings. The WAM database is used to track asset condition, field notes, photos, and condition rankings, remaining useful life estimates, criticality, vulnerability and overall risk. Risk scores are calculated as the product of criticality and vulnerability where vulnerability is the likelihood of failure and criticality is defined as the consequence of failure. Vulnerability is a function of the asset condition and remaining useful life. Criticality is a weighted score with each asset graded according to health and safety, economics, environmental, and community effects. High risk assets were identified for rehab or replacements and were grouped into larger capital improvement program (CIP) projects for additional evaluation and project cost estimating. The list of CIP projects are provided in Table 1.1. The table includes project scope, major drivers, and the estimated project cost.

Table 1.1 CIP Projects Summary

Project No.	Process Area	Project Components	Driver	Cost (\$ million)
1	Land Outfall Replacement	<ul style="list-style-type: none"> • Replace the Land Outfall beneath the San Elijo Lagoon. 	<ul style="list-style-type: none"> • Risk • Safety • Condition 	\$6.27
2	Buildings & Seismic Improvements	<p><u>Architectural/Structural</u></p> <ul style="list-style-type: none"> • New Administration Building, located near to plant entrance • New and/or Rehabilitated Operations Space • Provide seismic retrofit of roof-to-wall connections for the following: <ul style="list-style-type: none"> ○ Operations Building ○ Cogeneration Building ○ Chlorine Building 	<ul style="list-style-type: none"> • Code Compliance • Risk • Safety • Condition 	\$7.00
3	Preliminary Treatment Upgrades	<p><u>Mechanical</u></p> <ul style="list-style-type: none"> • Install three mechanical bar screens. • Install duty/standby compactors • Install new screenings conveyor • Replace inlet gate and scum gate in Primary Sedimentation Basin No. 3 <p><u>Structural</u></p> <ul style="list-style-type: none"> • Repair and reline screenings channels • Add freeboard to channels • Repair and reline grit influent, grit bypass, and grit effluent channels • Replace channel covers • Replace grit chamber covers • Repair corrosion in Primary Sedimentation Basin No. 3 • Install fall arrest system 	<ul style="list-style-type: none"> • Condition • Risk • Reduced Labor • Process Improvement • Safety 	\$2.37

Table 1.1 CIP Projects Summary

Project No.	Process Area	Project Components	Driver	Cost (\$ million)
4	Electrical	<u>Electrical</u> <ul style="list-style-type: none"> • Replace Switchboard MS-2 in Cogeneration Bldg • Replace Odor Control Panel in Headworks • Complete and update Arc Flash Study and install AF labels on all panels 	<ul style="list-style-type: none"> • Condition • Safety • Risk 	\$0.71
5	Dewatering Upgrades	<u>Mechanical</u> <ul style="list-style-type: none"> • Replace Belt Filter Presses • Replace feed pumps <u>Structural</u> <ul style="list-style-type: none"> • Evaluate and retrofit and repair hopper • Repair mezzanine and roof decking <u>Electrical</u> <ul style="list-style-type: none"> • Replace electrical equipment and controls 	<ul style="list-style-type: none"> • Condition • Safety • Reduced Labor • Process Improvements 	\$1.79
6	Digester Improvements	<u>Mechanical</u> <ul style="list-style-type: none"> • Replace Sludge Circulation Pumps Nos. 2 , 3, and 5 • Replace heat exchangers • Consider heat exchanger replacement <u>Structural</u> <ul style="list-style-type: none"> • Replace Digester No 2 floating cover • Concrete repair and lining in Digester No. 2 • Repair seals around cover in Digester No. 3 • Repair joint between cover and walls in Digester No. 4 • Perform more detailed inspection and repair of cracks on Digesters 2, 3, and 4. 	<ul style="list-style-type: none"> • Condition • Redundancy • Reduced Labor • Process Improvements 	\$1.66

Table 1.1 CIP Projects Summary

Project No.	Process Area	Project Components	Driver	Cost (\$ million)
7	Aeration & Return Flow Upgrades	<u>Mechanical</u> <ul style="list-style-type: none"> • Install mixing in anoxic zones. • Install high efficiency blowers • Replace drain pump, provide shelf spare • Diffusers • Permanent Baffles • Install Return Flow Pump No. 4 • Replace discharge piping, all pumps. • Replace pump rails, all pumps. • Install fall arrest system 	<ul style="list-style-type: none"> • Process Improvement • Energy Efficiency • Redundancy • Condition • Safety 	\$0.88
8	DAF Upgrades	<u>Mechanical</u> <ul style="list-style-type: none"> • Replace Pumps (3 total) • Replace DAF No. 2 Drive • Install Pressurization Pump No. 2 on DAF No. 2 • Implement co-thickening <u>Structural</u> <ul style="list-style-type: none"> • Coat mechanisms 	<ul style="list-style-type: none"> • Condition • Reduced Labor • Process Improvement • Energy Efficiency 	\$0.44
9	SCADA	<u>Electrical</u> <ul style="list-style-type: none"> • Transition to single platform • Update SCADA software • Install SCADA system hardware (servers, historians, network attached storage, etc.) • Add missing equipment signals, alarms, etc. • Update Control Room workstation 	<ul style="list-style-type: none"> • Condition • Risk • Operations Improvements 	\$1.08

Table 1.1 CIP Projects Summary

Project No.	Process Area	Project Components	Driver	Cost (\$ million)
10	Secondary Upgrades	<p><u>Mechanical</u></p> <ul style="list-style-type: none"> • Replace scum troughs and reinstall at correct elevation. • Remove RAS Pump Nos. 1 and 2 • Install VFD on scum pump • Add mixing to RAS/WAS wet well • Install fall arrest system <p><u>Structural</u></p> <ul style="list-style-type: none"> • Repair and reline concrete in effluent boxes, RAS channel and effluent channel • Replace weir troughs and inlet baffles 	<ul style="list-style-type: none"> • Condition • Process Improvement • Reduced Labor • Safety 	\$1.21
11	Site Improvements & Security	<p><u>Civil</u></p> <ul style="list-style-type: none"> • Replace open storm channels with storm pipes, or culverts to improve site access and use. • Replace site asphalt <p><u>Structural</u></p> <ul style="list-style-type: none"> • Improve fencing for proper height and climbing deterrents • Install climbing deterrent on block wall at gate • Improve video surveillance at critical areas • Consider intrusion alarms at major assets 	<ul style="list-style-type: none"> • Site Improvements • Public Access • Community • Safety • Risk 	\$3.77
12	Tertiary Upgrades	<p><u>Mechanical</u></p> <ul style="list-style-type: none"> • Replace Reclamation Pumps Nos. 1-3 • Install Reclamation Pump No. 4 • Automate Valves • Install additional RO Membranes <p><u>Structural</u></p> <ul style="list-style-type: none"> • Install baffles in CCB 	<ul style="list-style-type: none"> • Process Improvement • Additional disinfection capacity 	\$0.77

Table 1.1 CIP Projects Summary

Project No.	Process Area	Project Components	Driver	Cost (\$ million)
13	Reuse Storage	<u>Mechanical</u> <ul style="list-style-type: none"> Install Reuse Pump Station <u>Structural</u> <ul style="list-style-type: none"> Modify FEB's for storage of reuse water 	<ul style="list-style-type: none"> Increase on-site storage Operations Improvements 	\$3.88
14	Solar Upgrades, Phase II	<u>Electrical</u> <ul style="list-style-type: none"> Install solar field 	<ul style="list-style-type: none"> Energy Efficiency 	\$0.20
15	Odor Control Improvements	<u>Mechanical</u> <ul style="list-style-type: none"> Replace Scrubber No. 1 Recirculation Pumps Nos. 1 and 2 <u>Structural</u> <ul style="list-style-type: none"> Replace Hypochlorite Storage Tank No. 2 Replace Caustic Storage Tank No. 2 Replace Caustic Storage Tank No. 1 <u>Electrical</u> <ul style="list-style-type: none"> Add SCADA alarms for Recirculation Pumps 	<ul style="list-style-type: none"> Condition Process Improvement 	\$0.21
16	Class A Biosolids	<u>Mechanical</u> <ul style="list-style-type: none"> Produce Class A Biosolids using solar drying, heat drying, or three-phase digestion 	<ul style="list-style-type: none"> Process Improvements 	\$2.00
17	Cogeneration	<u>Mechanical</u> <ul style="list-style-type: none"> Install cogeneration system 	<ul style="list-style-type: none"> Process Improvement Energy Efficiency 	\$2.66
10-YEAR TOTAL CIP PROJECT COST:				\$36.90

1.4 CIP PROJECT PRIORITIZED LIST

The CIP Projects were prioritized using a “triple-bottom line” approach to evaluate and weight each project against the others for three main factors:

- Financial (30%): Implement cost effective projects and solutions. Maximize economic benefits for customers through cost-effective operations.
- Environmental (35%): Meet or exceed permit limits and minimize reportable offenses. Improve habitat and minimize impacts to the local and global environment.
- Social (35%): Maintain a high standard of work safety and protection and maximize community benefits through improved aesthetics and recreational uses.

The prioritized project list is shown on Table 1.2. The list provides each project’s score according to the triple-bottom-line comparison and the project cost. The triple bottom line comparison tables are provided in Appendix B. Section 6 provides additional justification and evaluation of the top rated projects.

Table 1.2 **Prioritized Project List**

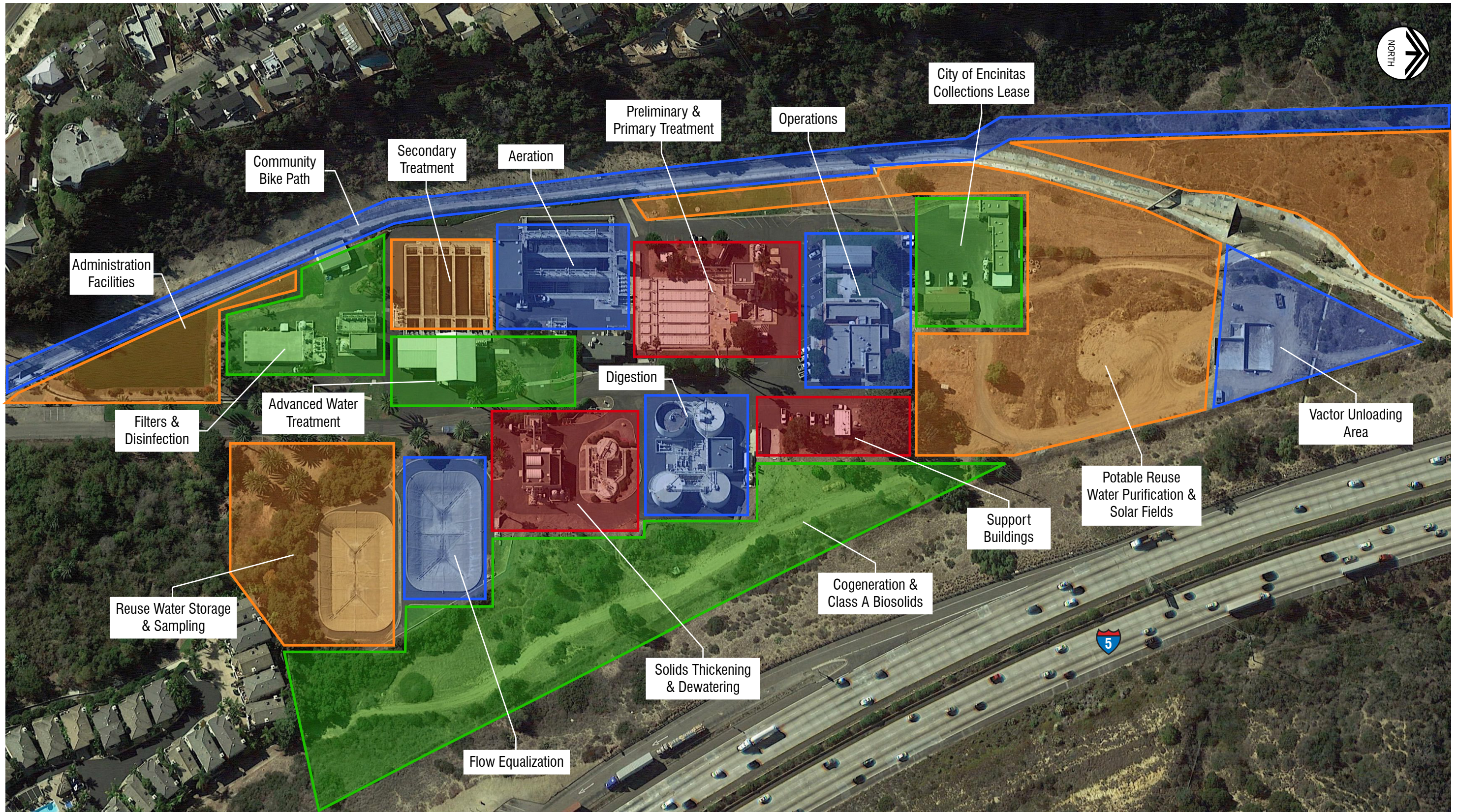
Weight	35%	35%	30%		
Potential Project/ Process Area	Social	Environmental	Financial	Total	Project Cost (\$M)
Land Outfall Replacement	4.55	4.9	4.2	13.65	\$6.27
Administration & Operations Buildings & Seismic Upgrades	4.9	4.55	3.9	13.35	\$7.00
Preliminary Treatment Upgrades	4.2	4.2	3.6	12	\$2.37
Electrical Upgrades	3.5	3.15	2.7	9.35	\$0.71
Dewatering Upgrades	2.45	3.15	3.3	8.9	\$1.79
Digester Improvements	3.5	2.1	1.8	7.4	\$1.66
Aeration Upgrades & Return Flow Upgrades	2.45	2.1	2.4	6.95	\$0.88
DAF Upgrades & Co- Thickening	2.45	1.75	2.4	6.6	\$0.44
SCADA	2.45	1.75	2.1	6.3	\$1.08
Secondary Upgrades	1.75	2.8	0.9	5.45	\$1.21
Site Improvements & Security	2.8	1.4	1.2	5.4	\$3.77
Tertiary Upgrades	2.1	1.75	1.5	5.35	\$0.77
Reuse Storage	1.75	1.75	1.2	4.7	\$3.88
Solar Phase II	1.4	1.4	1.8	4.6	\$0.20
Odor Control Improvements	0.7	1.4	0.6	2.7	\$0.21
Class A Biosolids	0.35	1.05	0	1.4	\$2.00
Cogeneration	0	0	0.6	0.6	\$2.66
TOTAL CIP PROJECT COST					\$36.90

1.5 SITE MASTER PLAN

The San Elijo Water Campus site master plan is shown on Figure 1.1. The plan identifies process areas and CIP improvements throughout the SEWRF site. The plan also identifies potential future use for currently unused space. This includes the possibility of a brackish water or water reuse facility in the northern portion of the plant. The plan is meant to identify current and future land use around the SEWRF site.

1.6 IMPLEMENTATION SCHEDULE

Figure 1.2 provides the suggested 10-year implementation schedule. The schedule is shown according to SEJPA's fiscal calendar. Projects are spread-out in an attempt to keep the annual expenditure from fluctuating excessively. The first few years of the schedule have a higher capital expenditure due to the cost and critical nature of the first few projects – the Administration Building, the Land Outfall Replacement, Electrical Upgrades, and Preliminary Treatment Upgrades. After the first three years, the annual expenditure reduces to between \$2.0 and \$4.0 million per year.



SAN ELIJO WATER CAMPUS SITE MASTER PLAN

FIGURE 1.1

SAN ELIJO JOINT POWERS AUTHORITY
FACILITY PLAN UPDATE

Project	Capital Cost	Fiscal Year									
		15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
Land Outfall Replacement	\$6.27	\$2.51	\$2.51	\$1.25							
Buildings & Seismic Upgrades	\$7.00	\$2.80	\$2.80	\$1.40							
Preliminary Treatment Upgrades	\$2.37	\$1.19	\$1.19								
Electrical Upgrades	\$0.71	\$0.36	\$0.36								
Dewatering Upgrades	\$1.79		\$0.72	\$1.07							
Digester Improvements	\$1.66			\$0.83	\$0.83						
Aeration Upgrades & Return Flow Upgrades	\$0.88			\$0.22	\$0.44	\$0.22					
DAF Upgrades & Co-Thickening	\$0.44				\$0.22	\$0.22					
SCADA	\$1.08				\$0.54	\$0.54					
Secondary Upgrades	\$1.21				\$0.30	\$0.61	\$0.30				
Site Improvements & Security	\$3.77	\$0.05				\$1.86	\$1.86				
Tertiary Upgrades	\$0.77					\$0.19	\$0.38	\$0.19			
Reuse Storage	\$3.88						\$0.97	\$1.94	\$0.97		
Solar Phase II	\$0.20							\$0.12	\$0.08		
Odor Control Improvements	\$0.21							\$0.05	\$0.10	\$0.05	
Class A Biosolids	\$2.00								\$1.00	\$1.00	
Cogeneration	\$2.66									\$1.33	\$1.33
TOTAL CIP COST	\$36.9	\$6.90	\$7.57	\$4.78	\$2.34	\$3.64	\$3.52	\$2.30	\$2.15	\$2.38	\$1.33

CIP PROJECT IMPLEMENTATION SCHEDULE

FIGURE 1.2

SAN ELIJO JOINT POWERS AUTHORITY
FACILITY PLAN UPDATE



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