### **AGENDA**

# SAN ELIJO JOINT POWERS AUTHORITY MONDAY DECEMBER 12, 2016 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

None

- 6. \* CONSENT CALENDAR
- 7. \* APPROVAL OF MINUTES FOR THE NOVEMBER 14, 2016 MEETING
- 8. \* <u>APPROVAL FOR PAYMENT OF WARRANTS AND MONTHLY INVESTMENT</u> REPORTS
- 9. \* <u>SAN ELIJO WATER RECLAMATION FACILITY TREATED EFFLUENT FLOWS MONTHLY REPORT</u>
- 10. \* <u>SAN ELIJO JOINT POWERS AUTHORITY RECYCLED WATER PROGRAM MONTHLY REPORT</u>
- 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. <u>BUILDING IMPROVEMENT PROGRAM</u>
  - 1. Accept and File Building Improvement Program Preliminary Design Report; and
  - 2. Discuss and take action as appropriate.

Staff Reference: General Manager

# 13. <u>2016 YEAR IN REVIEW - RECOGNIZING AGENCY ACHIEVEMENTS AND SUCCESSES</u>

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

Staff Reference: General Manager

#### 14. GENERAL MANAGER'S REPORT

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

### 15. GENERAL COUNSEL'S REPORT

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

#### 16. 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.

# 17. 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".

#### 18. ADJOURNMENT

The next regularly scheduled San Elijo Joint Powers Authority Board Meeting will be Monday, January 9, 2017 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 <a href="https://www.sejpa.org">www.sejpa.org</a>. 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: December 7, 2016

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







# HAPPY HOLIDAYS!

Please join us after the Board meeting for refreshments to share holiday cheer and appreciation for another successful year.

DATE: DECEMBER 12, 2016,

TIME: IMMEDIATELY FOLLOWING THE BOARD

MEETING

LOCATION: EMPLOYEE LUNCH ROOM

SAN ELIJO WATER RECLAMATION FACILITY

2695 MANCHESTER AVENUE

CARDIFF, CA

The Board of Directors meeting begins at 9:00 a.m.

Refreshments will be served.

# SAN ELIJO JOINT POWERS AUTHORITY MINUTES OF THE BOARD MEETING HELD ON NOVEMBER 14, 2016 AT THE SAN ELIJO WATER RECLAMATION FACILITY

Catherine Blakespear, Chair

Ginger Marshall, Vice Chair

A meeting of the Board of Directors of the San Elijo Joint Powers Authority (SEJPA) was held Monday, November 14, 2016, 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 Blakespear called the meeting to order at 9:01 a.m.

## 2. ROLL CALL

Directors Present: Catherine Blakespear

Ginger Marshall Mark Muir David Zito

Directors Absent: None

Others Present:

General Manager Michael Thornton Director of Operations Christopher Trees

Director of Finance & Administration Paul Kinkel
Accounting Technician Carrie Cook
Administrative Assistant/Board Clerk Jennifer Basco

SEJPA Counsel:

Procopio, Cory, Hargreaves & Savitch Traci Stender

City of Solana Beach:

City Manager Greg Wade

# 3. PLEDGE OF ALLEGIANCE

Chair Blakespear 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 Vice Chair Marshall to approve the Consent Calendar.

Motion carried with unanimous vote of approval.

Agenda Item No. 7 Approval of Minutes for the October 10, 2016 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. FISCAL YEAR 2015-16 FINANCIAL AUDIT ACCEPTANCE

Paul Kinkel, Director of Finance and Administration presented the 2015-16 Fiscal Year Audit to the Board of Directors. Mr. Kinkel introduced Ken Pun from The Pun Group to give an overview of the audit findings. Mr. Pun provided his firm's opinion that the financial statements are presented fairly, in all material aspects, and are prepared in accordance with generally accepted accounting principles (GAAP) and the Government Accounting Standards Board (GASB). In addition, Mr. Pun stated that the financial statement disclosures are neutral, consistent, and clear, there were no difficulties or disagreements with staff or management, and there were no corrected or uncorrected misstatements. Mr. Pun briefly outlined his audit approach to the Board of Directors, explained GASB 68 issues, reviewed the financials and statement of cash flows, and then answered Board Member questions.

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

- 1. Accept and file the Fiscal Year 2015-16 Audited Financial Statements for the San Elijo Joint Powers Authority; and
- Accept and file the Fiscal Year 2015-16 SAS 114 Letter.

Motion carried with unanimous vote of approval.

# 13. <u>SAN ELIJO JOINT POWERS AUTHORITY END OF YEAR REVIEW OF THE FISCAL</u> YEAR 2015-16 OPERATING AND DEBT SERVICE EXPENSES

Paul Kinkel, Director of Finance and Administration provided a financial review for Fiscal Year 2015-16. Overall, the SEJPA was below budget by \$260,071 or 4.6% for all programs. Wastewater Treatment, Pump Stations, Ocean Outfall, and Storm Water programs were under budget by \$249,428 or 5.9%. The Reclaimed Water expenditures were \$10,643 or 0.8% under budget. SEJPA also proactively paid \$135,000 to the CalPERS unfunded actuarial liability (UAL). This action is estimated to save the agency approximately \$27,000 in interest expense using a 7.5% discount rate over a 5 year amortization period.

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

# 14. <u>EXTENSION OF SURPLUS RECYCLED WATER AGREEMENT BETWEEN THE SAN ELIJO JOINT POWERS AUTHORITY (SEJPA). THE SAN DIEGUITO WATER DISTRICT (SDWD), AND THE ENCINITAS RANCH GOLF AUTHORITY (ERGA)</u>

General Manager Thornton gave a brief background on the recycled water service to the Encinitas Ranch Golf Course. In 2011, the SEJPA, SDWD, and ERGA entered into an interruptible surplus recycled water service agreement. This allows the SEJPA to control the delivery of recycled water to the ERGA storage ponds, which provides more stable operations of the recycled water distribution system. The golf course has the ability to store large volumes of water onsite within their storage ponds and owns the pump station that provides water pressure to the golf course irrigation systems. This allows the golf course to use the stored water during periods of high demand thus reducing its demand impact to the overall recycled water system. Mr. Thornton stated that the agreement is due to expire on June 30, 2017, and all parties wish to extend service to June 30, 2024. The proposed agreement extension continues delivering a minimum of 200 acre feet of water to the golf course on an annual basis for each of the next 7 years, and provides for an annual cost increase of 4% per year. The agreement extension will provide \$2,044,316 of revenue to the SEJPA over 7 years.

Moved by Board Member Zito and seconded by Vice Chair Marshall to:

1. Authorize the General Manager to execute the proposed Surplus Recycled Water Agreement.

Motion carried with unanimous vote of approval.

# 15. <u>WASTEWATER SERVICE AGREEMENT EXTENSION WITH THE RANCHO SANTA</u> FE COMMUNITY SERVICES DISTRICT

General Manager Thornton stated that the SEJPA has been providing wastewater treatment and disposal services to the Rancho Santa Fe Community Services District (Rancho CSD) for nearly 35 years. The current agreement between SEJPA and Rancho CSD expires in March 2020; and Rancho CSD desires to continue leasing wastewater and ocean outfall capacity from the SEJPA for an additional 20 years. Based on wastewater flow projections by the SEJPA's member agencies, it is feasible and beneficial to SEJPA to continue leasing wastewater and ocean outfall capacity to

Rancho CSD. Mr. Thornton stated that staff has prepared a new lease agreement that is modeled from the recently executed Del Mar Lease Agreement. The most significant change between the existing and proposed agreement is the elimination of the 33% supplement, which is consistent with other SEJPA wastewater and recycled water agreements, where only actual, definable costs incurred are included in the determination of the cost of service provided by the SEJPA. The proposed agreement provides an estimated \$5.0 million of revenue over the 20-year term for wastewater and disposal services.

Moved by Board Member Zito and seconded by Vice Chair Marshall to:

1. Authorize the General Manager to execute the proposed agreement.

Motion carried with unanimous vote of approval.

At this point, the Board Chair skipped to and addressed Agenda Items 18, 19, and 20, before adjourning into Closed Session.

### 16. <u>CLOSED SESSION</u>

The Board of Directors adjourned to closed session at 10:11 a.m., pursuant to Government Code Section 54957, Public Employee Performance Evaluation: General Manager.

The Board of Directors came out of closed session at 10:25 a.m.

# 17. <u>CONSIDERATION OF GENERAL MANAGER COMPENSATION PER CURRENT EMPLOYMENT AGREEMENT</u>

Moved by Board Member Zito and seconded by Vice Chair Marshall to:

- 1. Extend the term of the General Manager Employment Agreement through June 30, 2018; and
- 2. Effective July 1, 2017, increase the General Manager's salary from \$191,318 to \$198,000.

Motion carried with unanimous vote of approval.

# 18. GENERAL MANAGER'S REPORT

General Manager Thornton informed the Board of Directors that a ribbon cutting ceremony for the Village Park Project will be held on November 28, 2016 at Flora Vista Elementary School in Encinitas; and a ground breaking for the North Coast Corridor Program will be held on November 29, 2016 at the San Elijo Lagoon.

# 19. GENERAL COUNSEL'S REPORT

None

# 20. BOARD MEMBER COMMENTS

Board Member Zito inquired when the City of Del Mar is going to be connected; and Chair Blakespear asked about the status of the proposed Caltrans bike path and roundabout.

# 21. <u>ADJOURNMENT</u>

The meeting adjourned at 10:26 a.m. The next Board of Directors meeting will be held on December 12, 2016.

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Respectfully submitted,

Michael T. Thornton, P.E.

General Manager

# SAN ELIJO JOINT POWERS AUTHORITY PAYMENT OF WARRANTS 17-12 For the Months of October and November 2016

Warrant #	Vendor Name	G/L Account	Warrant Description	Amount
33625	Abcana Industries	Supplies - Chemicals	Hydrochloric Acid	660.59
33626	Advanced Air & Vacuum	Services - Maintenance	Air compressor service	1,236.19
3627	Aflac	EE Deduction Benefits	Aflac - November	554.76
33628	Ag Tech, LLC	Services - Biosolids Hauling	Biosolids hauling - October	12,140.69
33629	Airgas USA, LLC	Repair Parts Expense	Oxygen industrial liquid	226.98
33630	All American First Aid & Safety	Supplies - Shop & Field	Safety supplies	321.84
33631	American Compressor Company	Repair Parts Expense	Blower left shaft	2,585.15
33632	AT&T	Utilities - Telephone	DSL - 09/20/16 - 10/19/16	106.17
33633	AT&T	Utilities - Telephone	Alarm service - November	402.75
33634	Atlas Pumping Service Inc.	Services - Grease & Scum	Grease and scum pumping	554.88
33635	BankCard Center	Various	Batteries, IT security, meetings, and parts	706.56
33636	Boot World, Inc.	Uniforms - Boots	Safety boots	185.00
33637	Brenntag Pacific, Inc.	Supplies - Chemicals	Citric Acid	1,992.27
33638	County Burner Machinery Corp	Services - Maintenance	Service - Boiler	262.00
33639	Chevron & Texaco Business Card	Fuel	Fuel - October	513.63
33640	City National Bank	Interest Expense - AWT Note	Loan Agreement	74,076.57
33641	Coast Waste Management, Inc.	Services - Grit & Screenings	Roll-off service	1,391.55
33642	Complete Office	Supplies - Office	Office supplies	269.39
33643	Corodata	Rent	Record storage - October	126.39
33644	County of San Diego	Fees - Permits	Facility permit fees	309.00
33645	DC Frost Associates, Inc.	Repair Parts Expense	Bags for Heliclean	505.34
33646	Detection Instruments Corp.	Services - Maintenance	L2 inspection and service	105.49
33647	•	Utilities - Trash	•	237.22
33648	EDCO Waste & Recycling Service	Service - EWA Support	October	1,405.79
	Encina Wastewater Authority		HR resource sharing	•
33649	City of Encinitas	Service - IT Support	Admin network; VPN project	2,971.95
33650	Gabriel Barrientos	Service - IT Support	Remote support	150.00
33651	Global Capacity	Utilities - Internet	T-1 service - December	296.03
33652	Golden State Overnight	Postage/Shipping	Mailing water samples	52.97
33653	George T. Hall Co., Inc.	Repair Parts Expense	Valve	345.89
33654	Home Depot Credit Services	Supplies - Shop & Field	Various operation supplies	190.49
33655	Jennifer Basco	Subsistence - Travel	Mileage	53.43
33656	Kemira Water Solutions, Inc.	Supplies - Chemicals	Ferric Chloride	4,033.80
33657	The Lawton Group	Services - Intern Program	Week worked - 10/24/16 - 10/30/2016	1,080.25
33658	Marine Taxonomic Services, Ltd.	Services - Contractors	Water sampling	598.00
33659	McMaster-Carr Supply Co.	Repair Parts Expense	Fittings, tubes, time delay fuses, and pipes	160.25
33660	Olivenhain Municipal Water District	Rent	Pipeline repayment - October	6,277.50
33661	Pacific Pipeline Supply	Repair Parts Expense	Cast iron valve box and lid	879.12
33662	Pall Corporation	Repair Parts Expense	Parts for membrane	9,045.63
33663	Public Employees - Retirement	Retirement Plan - PERS	Retirement - 10/22/16 - 11/04/16	11,621.52
33664	Polydyne Inc.	Supplies - Chemicals	Clarifloc	11,426.40
33665	Preferred Benefit Insurance	Dental/Vision	Vision	283.70
33666	ProBuild Company, LLC	Supplies - Shop & Field	Watt tube, glasses, and skimmer	59.10
33667	Procopio Cory Hargreaves	Services - Legal	General; Labor and employment	4,360.50
33668	ReadyRefresh	Supplies - Lab	Kitchen and lab supplies	378.76
33669	Roesling Nakamura Terada Architects	Services - Professional	Building pre-design	13,910.50
33670	Rohan & Sons, Inc.	Services - Maintenance	Preventive maintenance service	385.00
33671	Santa Fe Irrigation District	Utilities - Water	Recycled water	373.43
33672	San Dieguito Water District	Utilities - Water	Recycled water	9,652.68
33673	Spiess Construction Co., Inc.	Services - Contractors	Turbo Blower project	136,135.00
33674	SWRCB-DWOCP	Dues & Memberships	Distribution certification	60.00
33675	Sun Life Financial	Life Insurance/Disability	Life and disability insurance - December	1,507.43
33676	Test America	Services - Laboratory	Water sample testing	1,398.00
33677	Unifirst Corporation	Services - Laboratory Services - Uniforms	Uniform service	304.29
	Underground Service Alert/SC	Services - Onliornis Services - Alarm	Dig alert - October	105.00
33678 33670	<del>-</del>		_	
33679	USA Bluebook	Supplies - Shop & Field	Poly tag boxes and low pressure water gauge	155.97 6,489.28
33680	Vantagepoint Transfer Agents	EE Deduction Benefits	ICMA - 457	6,4

# SAN ELIJO JOINT POWERS AUTHORITY PAYMENT OF WARRANTS 17-12 For the Months of October and November 2016

Warrant #	Vendor Name	G/L Account	Warrant Description	Amount
33681	Vantagepoint Transfer Agents	ICMA Retirement	ICMA - 401a	2,904.86
33682	Airgas USA, LLC	Repair Parts Expense	Oxygen industrial liquid and cylinder	299.98
33683	Aquatic Bioassay	Services - Laboratory	NPDES Bioassays - Kelp germination	999.00
33684	AT&T	Utilities - Telephone	Phone service - 10/13/16 - 11/12/16	371.58
33685	Atlas Pumping Service Inc.	Services - Grease & Scum	Grease and scum pumping	277.44
33686	AVIA Partners, Inc.	Services - Medical	Employee's medical service	139.96
33687	American Water Chemicals, Inc.	Supplies - Chemicals	A-110 flocculants and coagulants	6,329.05
33688	Barracuda Networks, Inc.	Utilities - Internet	Network back-up	100.00
33689	Brenntag Pacific, Inc.	Supplies - Chemicals	Sodium Tripolyphosphate and Sodium Hydroxide	2,547.83
33690	CA Assoc. of Sanitary Agencies	Dues & Memberships	Membership - Agency	12,855.00
33691	CWEA Membership	Dues & Memberships	Laboratory Analyst and memberships	437.00
33692	D&H Water Systems	Services; Supplies	Annual analyzers service; acetate buffer	4,445.00
33693	Dudek & Associates	Services - Professional	Recycled water, headworks, SWAP, and blower	33,400.40
33694	Encina Wastewater Authority	Service - EWA Support	Safety resource sharing	226.80
33695	Evantec Lab Supply	Supplies - Lab	Laboratory supplies	263.52
33696	Forte of San Diego	Services - Janitorial	December services and supplies	1,358.65
33697	Grainger, Inc.	Repair Parts Expense	Motor	540.82
33698	Hardy Diagnostics			238.91
33699	• =	Supplies - Lab Services - Intern Program	Laboratory supplies Weeks worked - 10/31/16 - 11/13/16	1,435.50
	The Lawton Group	Services - Intern Program Services - Contractors		,
33700	Marine Taxonomic Services, Ltd.		Water sampling - October and November	683.00
33701	McMaster-Carr Supply Co.	Minor Equip - Shop & Field	Tool lanyard, snap-on cover, rails, clock	284.15
33702	MetLife - Group Benefits	Dental/Vision	Dental - December	1,546.19
33703	Napa Auto Parts	Vehicle Maintenance	Clutch pedal, air filter	68.32
33704	Olin Corp - Chlor Alkali	Supplies - Chemicals	Sodium Hypochlorite	2,754.49
33705	OneSource Distributors, Inc.	Repair Parts Expense	Power supply	671.45
33706	Pacific Green Landscape	Services - Landscape	November	2,975.00
33707	P.E.R.S.	Medical Insurance - PERS	Health - December	19,469.65
33708	Public Employees- Retirement	Retirement Plan - PERS	Retirement - 11/05/16 - 11/18/16	11,624.00
33709	Roesling Nakamura Terada Architects		Building pre-design	6,161.48
33710	Santa Fe Irrigation District	Utilities - Water	Recycled water	86.95
33711	Santa Fe Irrigation District	SFID Distribution Pipeline	Pipeline purchase payment - October	1,350.00
33712	San Diego Gas & Electric	Utilities - Gas & Electric	Gas and electric - 10/04/16 - 11/03/16	56,209.99
33713	Sunbelt Rentals	Equipment Rental/Lease	500KW diesel generator	1,138.26
33714	Technology Integration Group	Services - Maintenance	Copiers	57.11
33715	Test America	Services - Laboratory	Water sample testing	2,014.00
33716	Christopher A. Trees	Subsistence - Travel	Mileage	50.87
33717	Trussell Technologies, Inc.	Services - Engineering	Process engineering and evaluation	714.00
33718	Unifirst Corporation	Services - Uniforms	Uniform service	304.29
33719	UPS	Postage/Shipping	Shipping for parts	251.72
33720	USA Bluebook	Repair Parts Expense	Ball valve, calibration gas, floats, filters	1,159.93
33721	V&A Consulting Engineers	Services - Maintenance	Flume service	4,700.00
33722	Valley Chain & Gear, Inc.	Repair Parts Expense	Parts for odor scrubber	218.15
33723	Vantagepoint Transfer Agents	EE Deduction Benefits	ICMA - 457	6,482.36
33724	Vantagepoint Transfer Agents	ICMA Retirement	ICMA - 401a	2,920.35
33725	Verizon Wireless	Utilities - Telephone	10/11/16 - 11/10/16	247.86
33726	Verizon Wireless	Utilities - Telephone	Cell phone service - 10/08/16 - 11/07/16	814.77
33727	VWR International, Inc.	Minor Equip - Shop & Field	Bacti-cinerator	609.05
	San Elijo Payroll Account	Payroll	Payroll - 11/10/16	64,088.06
	San Elijo Payroll Account	Payroll	Payroll - 11/25/16	61,584.70
		· , · <del>-</del> · ·	-, -:: ==!==! ==	\$ 646,029.52

#### SAN ELIJO JOINT POWERS AUTHORITY

#### PAYMENT OF WARRANTS SUMMARY

# For the Months of October and November 2016 As of November 30, 2016

PAYMENT OF WARRANTS Reference Number

17-12

\$ 646,029.52

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 November 30, 2016

FUNDS ON DEPOSIT WITH	A	MOUNT
LOCAL AGENCY INVESTMENT FUND (OCTOBER 2016 YIELD 0.654%)		
RESTRICTED SRF RESERVE UNRESTRICTED DEPOSITS	\$ \$	630,000.00 6,622,652.82
CALIFORNIA BANK AND TRUST (OCTOBER 2016 YIELD 0.01%)		
REGULAR CHECKING PAYROLL CHECKING	\$ \$	27,654.43 5,000.00
TOTAL RESOURCES	\$	7,285,307.25

\* AGENDA ITEM NO. 9

# SAN ELIJO JOINT POWERS AUTHORITY MEMORANDUM

December 12, 2016

TO: Board of Directors

San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: SAN ELIJO WATER RECLAMATION FACILITY TREATED EFFLUENT FLOWS -

MONTHLY REPORT

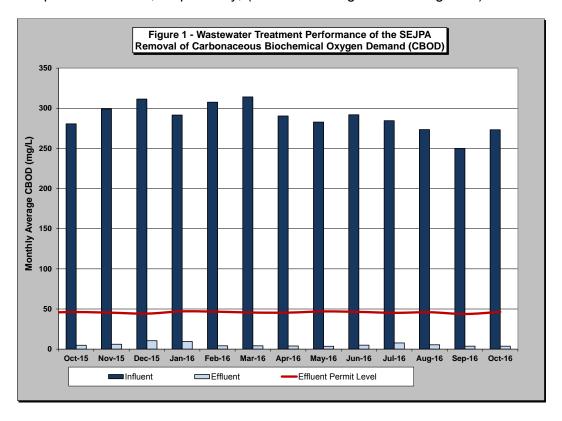
#### RECOMMENDATION

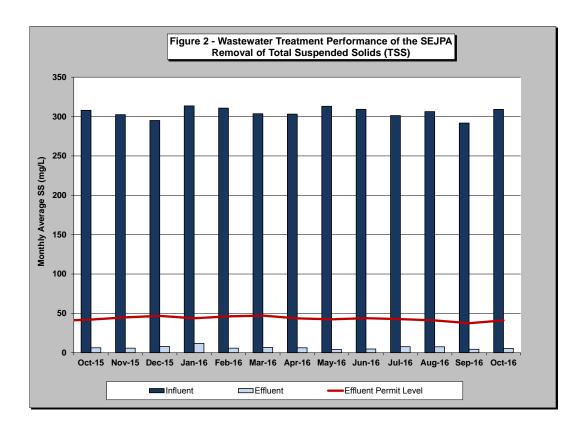
No action required. This memorandum is submitted for information only.

#### 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 October 2016. 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 October, treatment levels for CBOD and TSS were 98.6 and 98.2 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 October. Average daily influent flows were recorded for each Member Agency. Total effluent flow was calculated for the San Elijo Water Reclamation Facility.

	October					
	Influent (mgd)	Effluent (mgd)*				
Cardiff Sanitary Division	1.289	0.521				
City of Solana Beach	0.962	0.389				
Rancho Santa Fe SID	0.108	0.043				
Total San Elijo WRF Flow	2.359	0.953				

<sup>\*</sup> 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

Color		AVERAG	E DAILY INFL	UENT FL			E DAILY EFFI						2	AVERAGE UNIT INFLUENT FLOW RATE						
		71.7				7.0 2.0.10	(MGD) CONNECTED EDUS (GAL/EDU							L/EDU/DAY)						
Oct   1,000   0,142   1,000   2,000   0,000	MONTH	CSD	RSE CSD	SB		CSD	RSE CSD	SB						CSD	RSF	SB				
Des-11   1299																				
	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			
Feb-12   1299																				
Mart	1																			
Mart																				
Math		1.333	0.150		2.694	0.577	0.065	0.525	1.167	8,280	488			161	308	157	163			
Mag-12   1383   0.128   1291   2.892   0.473   0.044   0.454   0.958   0.969   4.90   7.728   16.508   167   261   167   170																				
Sep-14   3.49																				
Control   1.327   0.128   1.03																				
No12   3.43   0.128   1.181   2.652   0.86																				
	1																			
Feb-13   1.349	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			
Mar-13   1.402	1																			
May-13   1338																				
												-								
Sept																				
Sep-14   1.343																				
Dech-13   1319   0.132   1.184   2.635   0.629   0.063   0.565   1.277   8.314   494   7.728   16.536   169   267   153   159	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			
No.13   1.48																				
Dec-13   1.344   1.134   1.191   2.666   1.030   0.103   0.915   2.048   8.316   494   7.728   16.541   159   273   155   160   160   150   160   15																				
Ban-14   1322   0.135   1.194   2.651   0.851   0.851   0.878   0.768   1.706   8.318   495   7.728   16.546   159   273   155   150																				
Feb-14   1.314   0.127   1.172   2.613   0.954   0.093   0.851   1.898   8.323   495   7.728   16.549   158   257   152   158   154   1.326   0.128   1.128   2.582   0.489   0.043   0.382   0.760   1.704   8.324   496   7.728   16.549   161   270   153   161   1.466   1.466   1.326   0.128   1.128   2.582   0.449   0.043   0.382   0.744   8.328   498   7.728   16.559   162   249   146   157   1.566   1.341   1.341   0.126   1.188   2.655   2.007   0.020   0.183   0.410   8.333   498   7.728   16.559   162   249   146   157   1.341   1.242   0.130   1.307   2.708   0.222   0.024   0.239   0.495   8.338   499   7.728   16.559   162   249   146   167   1.341   1.242   0.130   1.327   2.566   0.227   0.024   0.239   0.495   8.338   499   7.728   16.559   162   249   146   163   1.484   1.244   1.241   1.241   1.341   1.242   2.560   0.227   0.024   0.239   0.495   8.338   499   7.728   16.559   162   249   146   163   163   1.244   1.241   1.242   1.245   0.113   1.232   2.560   0.211   0.019   0.214   0.444   8.351   500   7.728   16.579   147   260   168   160   163   0.044   0																				
	1																			
May 1-4	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			
Jun-14   1.341   0.126   1.188   2.655   0.207   0.020   0.183   0.410   8.333   498   7.728   16.595   161   2.53   1.54   160   Jul-14   1.271   0.130   1.307   2.708   0.232   0.024   0.239   0.495   8.338   499   7.728   16.595   161   2.53   1.54   160   Jul-14   1.271   0.130   1.298   2.656   0.227   0.024   0.239   0.495   8.338   499   7.728   16.595   161   2.53   1.54   160   Jul-14   1.271   0.130   1.232   2.560   0.211   0.019   0.214   0.444   8.351   500   7.728   16.579   145   2.26   159   154   0.014   0.144   1.198   2.516   0.394   0.038   0.392   0.824   8.353   500   7.728   16.584   144   228   155   152   0.004	Apr-14		0.128			0.449		0.382				-	16,554							
Jul-14   1271   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   1228   0.130   1.298   2.666   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   0.221   0.019   0.214   0.444   8.351   500   7.728   16.579   145   2.26   159   154     Cot-14   1.224   0.114   1.198   2.516   0.394   0.038   0.392   0.824   8.353   500   7.728   16.579   145   2.26   159   154     Dec-14   1.223   0.118   1.198   2.553   0.667   0.063   0.646   1.376   8.355   500   7.728   16.584   148   2.25   155   152     Dec-14   1.232   0.117   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   8.355   502   7.728   16.585   158   293   159   163     Mar-15   1.269   0.135   1.231   2.635   0.583   0.062   0.566   1.211   8.365   504   7.977   16.846   152   2.68   154   155     Apr-15   1.183   0.124   1.196   2.503   0.350   0.036   0.354   0.740   8.366   504   7.977   16.846   144   2.32   144   147     Jun-15   1.287   0.113   1.052   2.452   0.362   0.032   0.296   0.690   8.369   506   7.977   16.846   144   2.32   144   147     Jun-15   1.280   0.115   1.011   2.365   0.362   0.032   0.036   0.354   0.780   0.830   0.866   0.690   8.369   506   7.977   16.846   144   2.32   144   147     Jun-15   1.280   0.110   1.176   2.568   0.392   0.034   0.359   0.785   0.830   0.836   0.800   8.369   506   7.977   16.846   144   2.32   144   147     Sep-15   1.266   0.105   1.001   2.362   0.457   0.038   0.364   0.859   0.837   510   8.003   16.886   148   2.24   132   146     Sep-15   1.266   0.105   1.001   2.365   0.780   0.038   0.364   0.859   0.837   511   8.003   16.886   148   2.24   132   146     Sep-16   1.266   0.105   0.106   0.007   0.681   0.058   0.630   0.680   0.838   0.837   511   8.003   16.889   149   196   124   139     Sep-16   1.266   0.105																				
Aug-14         1.228         0.130         1.298         2.656         0.227         0.024         0.239         0.490         8.345         500         7.728         16,579         145         226         159         154           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           Nov-14         1.237         0.118         1.198         2.553         0.667         0.063         0.646         1.376         8.355         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         8.355         502         7,728         16,585         158         293         159         163           Jan-15         1.280         0.132         1.222         2.615         0.994         0.102         0.967         2.053         8,359         503         7,977         16,841         147         262         154         155           Feb-15																				
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         1.227         0.118         1.198         2.551         0.063         0.646         1.376         8,355         500         7,728         16,581         144         228         155         152           Nov-14         1.237         0.118         1.198         2.553         0.0667         0.063         0.646         1.376         8,355         502         7,728         16,585         158         293         159         163           Jan-15         1.223         0.130         1.223         2.699         1.767         0.967         2.053         8,359         503         7,977         16,841         147         262         154         155           Feb-15         1.229         0.132         1.231         2.635         0.683         0.062         0.566         1.211         8,365         504         7,977         16,841         147         262         154         155           Feb-15         1.229         0.113																				
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           De0-14         1.233         0.147         1.232         2.6915         0.984         0.102         0.967         2.053         8,355         502         7,728         16,585         158         293         159         163           Jan-15         1.233         0.147         1.229         0.035         1.281         0.967         2.053         8,355         503         7,977         16,848         150         229         154         155           Feb-15         1.229         0.132         1.282         0.583         0.062         0.566         1.211         8,361         504         7,977         16,841         147         262         154         156           Apr-15         1.183         0.124	-																			
Dec-14   1.323																				
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     Mar-15   1.269   0.135   1.231   2.635   0.583   0.062   0.566   1.211   8.365   504   7.977   16.841   147   262   268   154   156     Apr-15   1.183   0.124   1.196   2.503   0.350   0.036   0.354   0.740   8.366   504   7.977   16.847   141   246   150   149     May-15   1.209   0.117   1.149   2.475   0.545   0.053   0.518   1.116   8.367   505   7.977   16.848   144   232   144   147     Jun-15   1.287   0.113   1.052   2.452   0.362   0.032   0.296   0.690   8.369   506   7.977   16.852   154   224   132   146     Jul-15   1.282   0.110   1.176   2.568   0.392   0.034   0.359   0.785   8.370   510   8.003   16.883   153   216   147   152     Aug-15   1.264   0.095   1.087   2.446   0.315   0.023   0.271   0.609   8.371   510   8.003   16.884   151   186   136   145     Sep-15   1.256   0.105   1.001   2.362   0.457   0.038   0.364   0.859   8.372   511   8.003   16.885   150   206   125   140     Oct-15   1.243   0.106   1.002   2.351   0.681   0.058   0.549   1.288   8.373   511   8.003   16.885   148   208   125   139     Dec-15   1.266   0.107   1.016   2.389   0.971   0.082   0.780   1.833   8.377   511   8.003   16.881   151   210   127   141     Jan-16   1.245   0.112   1.008   2.365   0.780   0.070   0.631   1.481   8.383   512   8.003   16.891   149   196   124   139     May-16   1.246   0.102   0.990   2.332   0.675   0.055   0.559   1.269   8.389   512   8.003   16.904   148   199   124   139     May-16   1.246   0.102   0.107   0.116   0.235   0.505   0.048   0.409   0.962   8.389   512   8.003   16.904   148   199   124   139     May-16   1.246   0.107   0.107   0.2437   0.667   0.055   0.559   0.529   0.529   1.589   514   8.002   16.905   159   204   126   140      May-16   1.246   0.102   0.107   0.086   0.046   0.442   1.074   8.380	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			
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           Mar-15         1.269         0.135         1.231         2.635         0.583         0.062         0.566         1.211         8,365         504         7,977         16,846         152         268         154         156           Apr-15         1.183         0.124         1.196         2.503         0.350         0.0354         0.740         8,366         504         7,977         16,846         152         268         154         149           May-15         1.209         0.117         1.149         2.475         0.545         0.053         0.518         1.116         8,367         505         7,977         16,848         144         232         144         147           Jul-15         1.287         0.113         1.052         2.452         0.362         0.032         0.296         0.690         8,369         506         7,977         16,848         144         142         224         132         146           Jul-15																				
Mar-15         1.269         0.135         1.231         2.635         0.583         0.062         0.566         1.211         8,365         504         7,977         16,846         152         268         154         156           Apr-15         1.183         0.124         1.196         2.503         0.350         0.036         0.354         0.740         8,366         504         7,977         16,847         141         246         150         149           May-15         1.209         0.117         1.149         2.475         0.545         0.053         0.518         1.116         8,367         505         7,977         16,848         144         232         144         147           Jun-15         1.282         0.110         1.176         2.568         0.392         0.034         0.359         0.785         8,370         510         8,003         16,883         153         216         147         152           Aug-15         1.286         0.105         1.001         2.362         0.457         0.038         0.364         0.859         8,372         511         8,003         16,884         151         186         136         145           Oct-15																				
Apr-15         1.183         0.124         1.196         2.503         0.350         0.036         0.354         0.740         8,366         504         7,977         16,847         141         246         150         149           May-15         1.209         0.117         1.149         2.475         0.545         0.063         0.518         1.116         8,367         505         7,977         16,848         144         232         144         147           Jul-15         1.287         0.113         1.052         2.452         0.362         0.032         0.296         0.690         8,369         506         7,977         16,845         144         232         144         147           Jul-15         1.282         0.110         1.176         2.568         0.392         0.034         0.359         0.785         8,370         510         8,003         16,883         153         216         147         152           Aug-15         1.260         0.105         1.001         2.362         0.457         0.038         0.364         0.859         8,372         511         8,003         16,885         150         206         125         140           Oct-15																				
May-15         1.209         0.117         1.149         2.475         0.545         0.053         0.518         1.116         8,367         505         7,977         16,848         144         232         144         147           Jul-15         1.287         0.113         1.052         2.452         0.362         0.032         0.296         0.690         8,369         506         7,977         16,852         154         224         132         146           Jul-15         1.282         0.110         1.176         2.568         0.392         0.034         0.359         0.785         8,370         510         8,003         16,883         153         216         147         152           Aug-15         1.264         0.095         1.087         2.446         0.315         0.023         0.271         0.609         8,371         510         8,003         16,885         150         206         125         140           Oct-15         1.256         0.105         1.001         2.362         0.457         0.038         0.549         1.288         8,373         511         8,003         16,885         148         208         125         139           Nov-15																				
Jun-15         1.287         0.113         1.052         2.452         0.362         0.032         0.296         0.690         8,369         506         7,977         16,852         154         224         132         146           Jul-15         1.282         0.110         1.176         2.568         0.392         0.034         0.359         0.785         8,370         510         8,003         16,883         153         216         147         152           Aug-15         1.264         0.095         1.087         2.446         0.315         0.023         0.271         0.609         8,371         510         8,003         16,884         151         186         136         145           Sep-15         1.256         0.105         1.001         2.362         0.457         0.038         0.364         0.859         8,372         511         8,003         16,885         150         206         125         140           Oct-15         1.266         0.100         0.994         2.344         0.792         0.063         0.630         1.485         8,376         511         8,003         16,889         149         196         124         139           Dec-15																				
Aug-15         1.264         0.095         1.087         2.446         0.315         0.023         0.271         0.609         8,371         510         8,003         16,884         151         186         136         145           Sep-15         1.256         0.105         1.001         2.362         0.457         0.038         0.364         0.859         8,372         511         8,003         16,885         150         206         125         140           Oct-15         1.243         0.106         1.002         2.351         0.681         0.058         0.549         1.288         8,373         511         8,003         16,886         148         208         125         139           Nov-15         1.250         0.100         0.994         2.344         0.792         0.063         0.630         1.485         8,376         511         8,003         16,889         149         196         124         139           Dec-15         1.266         0.107         1.016         2.389         0.971         0.082         0.780         1.833         8,377         511         8,003         16,891         151         210         127         141           Jan-16		1.287	0.113	1.052	2.452	0.362	0.032	0.296	0.690	8,369	506	7,977		154	224	132	146			
Sep-15         1.256         0.105         1.001         2.362         0.457         0.038         0.364         0.859         8,372         511         8,003         16,885         150         206         125         140           Oct-15         1.243         0.106         1.002         2.351         0.681         0.058         0.549         1.288         8,373         511         8,003         16,886         148         208         125         139           Nov-15         1.250         0.100         0.994         2.344         0.792         0.063         0.630         1.485         8,376         511         8,003         16,889         149         196         124         139           Dec-15         1.266         0.107         1.016         2.389         0.971         0.082         0.780         1.833         8,377         511         8,003         16,891         151         210         127         141           Jan-16         1.342         0.131         1.037         2.510         1.189         0.116         0.918         2.223         8,380         511         8,003         16,897         149         219         126         140           Mar-16	Jul-15		0.110				0.034	0.359	0.785	8,370	510	8,003			216	147	152			
Oct-15         1.243         0.106         1.002         2.351         0.681         0.058         0.549         1.288         8,373         511         8,003         16,886         148         208         125         139           Nov-15         1.250         0.100         0.994         2.344         0.792         0.063         0.630         1.485         8,376         511         8,003         16,889         149         196         124         139           Dec-15         1.266         0.107         1.016         2.389         0.971         0.082         0.780         1.833         8,377         511         8,003         16,891         151         210         127         141           Jan-16         1.342         0.131         1.037         2.510         1.189         0.116         0.918         2.223         8,380         511         8,003         16,894         160         257         130         149           Feb-16         1.245         0.112         1.008         2.365         0.780         0.070         0.661         1.449         8,388         512         8,003         16,997         149         219         126         140           Mar-16																				
Nov-15         1.250         0.100         0.994         2.344         0.792         0.063         0.630         1.485         8,376         511         8,003         16,889         149         196         124         139           Dec-15         1.266         0.107         1.016         2.389         0.971         0.082         0.780         1.833         8,377         511         8,003         16,891         151         210         127         141           Jan-16         1.342         0.131         1.037         2.510         1.189         0.116         0.918         2.223         8,380         511         8,003         16,894         160         257         130         149           Feb-16         1.245         0.112         1.008         2.365         0.780         0.070         0.631         1.481         8,383         512         8,003         16,897         149         219         126         140           Mar-16         1.267         0.116         1.023         2.406         0.763         0.070         0.616         1.449         8,388         512         8,003         16,903         151         227         128         142           Apr-16																				
Dec-15         1.266         0.107         1.016         2.389         0.971         0.082         0.780         1.833         8,377         511         8,003         16,891         151         210         127         141           Jan-16         1.342         0.131         1.037         2.510         1.189         0.116         0.918         2.223         8,380         511         8,003         16,894         160         257         130         149           Feb-16         1.245         0.112         1.008         2.365         0.780         0.070         0.631         1.481         8,383         512         8,003         16,897         149         219         126         140           Mar-16         1.267         0.116         1.023         2.406         0.763         0.070         0.616         1.449         8,388         512         8,003         16,903         151         227         128         142           Apr-16         1.240         0.102         0.990         2.332         0.675         0.055         0.539         1.269         8,389         512         8,003         16,904         148         199         124         138           May-16																				
Jan-16         1.342         0.131         1.037         2.510         1.189         0.116         0.918         2.223         8,380         511         8,003         16,894         160         257         130         149           Feb-16         1.245         0.112         1.008         2.365         0.780         0.070         0.631         1.481         8,383         512         8,003         16,897         149         219         126         140           Mar-16         1.267         0.116         1.023         2.406         0.763         0.070         0.616         1.449         8,388         512         8,003         16,903         151         227         128         142           Apr-16         1.240         0.102         0.990         2.332         0.675         0.055         0.539         1.269         8,389         512         8,003         16,904         148         199         124         138           May-16         1.238         0.117         1.002         2.357         0.505         0.048         0.409         0.962         8,389         512         8,003         16,904         148         299         125         139           Jul-16	1																			
Mar-16         1.267         0.116         1.023         2.406         0.763         0.070         0.616         1.449         8,388         512         8,003         16,903         151         227         128         142           Apr-16         1.240         0.102         0.990         2.332         0.675         0.055         0.539         1.269         8,389         512         8,003         16,904         148         199         124         138           May-16         1.238         0.117         1.002         2.357         0.505         0.048         0.409         0.962         8,389         512         8,003         16,904         148         199         124         138           Jul-16         1.238         0.111         1.055         2.371         0.362         0.033         0.317         0.712         8,390         514         8,003         16,904         148         229         125         139           Jul-16         1.236         0.105         1.008         2.449         0.586         0.046         0.442         1.074         8,392         514         8,020         16,926         159         204         126         144           Aug-16																				
Apr-16         1.240         0.102         0.990         2.332         0.675         0.055         0.539         1.269         8,389         512         8,003         16,904         148         199         124         138           May-16         1.238         0.117         1.002         2.357         0.505         0.048         0.409         0.962         8,389         512         8,003         16,904         148         229         125         139           Jun-16         1.205         0.111         1.055         2.371         0.362         0.033         0.317         0.712         8,390         514         8,003         16,907         144         216         132         140           Jul-16         1.336         0.105         1.008         2.449         0.586         0.046         0.442         1.074         8,392         514         8,020         16,926         159         204         126         145           Aug-16         1.317         0.107         1.007         2.431         0.647         0.053         0.495         1.195         8,393         516         8,020         16,929         157         207         126         144           Sep-16	1							0.631						149		126				
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Aug-16     1.317     0.107     1.007     2.431     0.647     0.053     0.495     1.195     8,393     516     8,020     16,929     157     207     126     144       Sep-16     1.311     0.110     0.975     2.396     0.601     0.050     0.447     1.098     8,394     516     8,020     16,930     156     213     122     142       Oct-16     1.289     0.108     0.962     2.359     0.521     0.043     0.389     0.953     8,397     517     8,020     16,933     154     209     120     139	1																			
Sep-16         1.311         0.110         0.975         2.396         0.601         0.050         0.447         1.098         8,394         516         8,020         16,930         156         213         122         142           Oct-16         1.289         0.108         0.962         2.359         0.521         0.043         0.389         0.953         8,397         517         8,020         16,933         154         209         120         139	1																			
	-																			
CSD: Cardiff Sanitary Division				0.962	2.359	0.521	0.043	0.389	0.953	8,397	517	8,020	16,933	154	209	120	139			

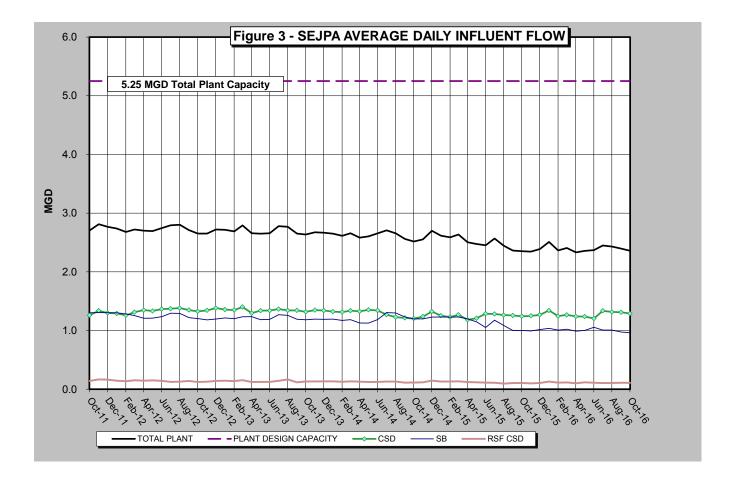
RSF CSD: Ranch Santa Fe Community Service District

SB: Solana Beach

EDU: Equivalent Dwelling Unit

ASSUMPTIONS: 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. 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 leases 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 October 2016.

	Flow (mgd)
Escondido (Average flow rate)	8.52
Escondido (Peak flow rate)	17.4

## Connected Equivalent Dwelling Units

The City of Solana Beach updated the connected EDUs number that is reported to the SEJPA in July 2016. The City of Encinitas and Rancho Santa Fe CSD report their connected EDUs every month. The number of EDUs connected for each of the Member Agencies is as follows:

	Connected (EDU)
Cardiff Sanitary Division	8,397
Rancho Santa Fe SID	517
City of Solana Beach	7,683
San Diego (to Solana Beach)	337
Total EDUs to System	16,933

Respectfully submitted,

Michael T. Thornton, P.E.

General Manager

AGENDA ITEM NO. 10

# SAN ELIJO JOINT POWERS AUTHORITY MEMORANDUM

December 12, 2016

TO: Board of Directors

San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: SAN ELIJO RECYCLED WATER PROGRAM – MONTHLY REPORT

## **RECOMMENDATION**

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

#### DISCUSSION

Recycled Water Production

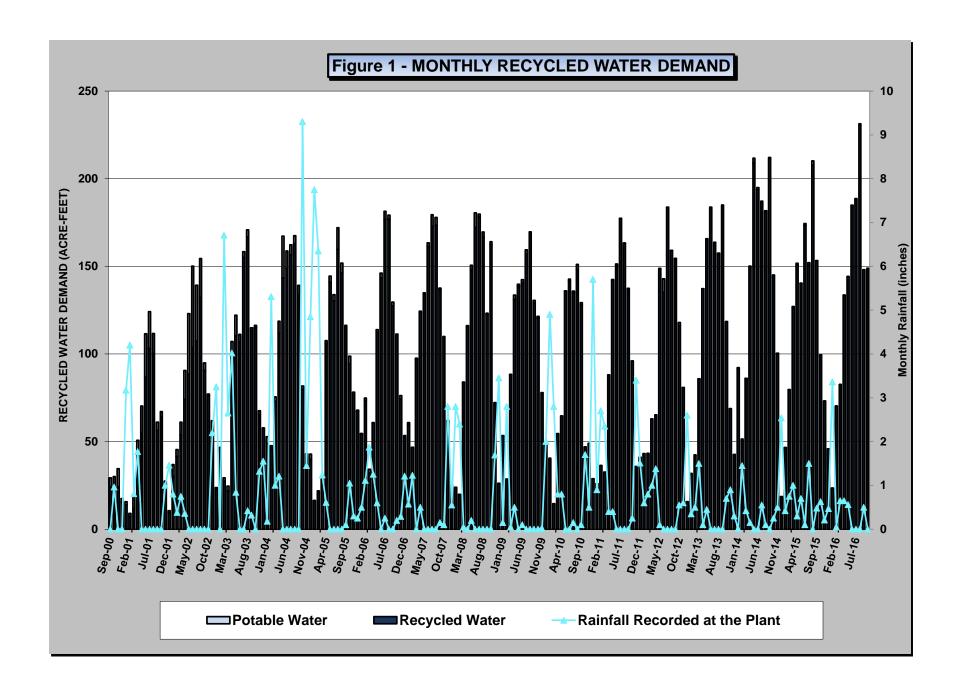
For the month of October 2016, recycled water demand was 148.88 acre-feet (AF), which was met using 148.88 AF of recycled water and 0.00 AF of supplementation with potable water. The distribution system was designed to use potable water during peak demand days.

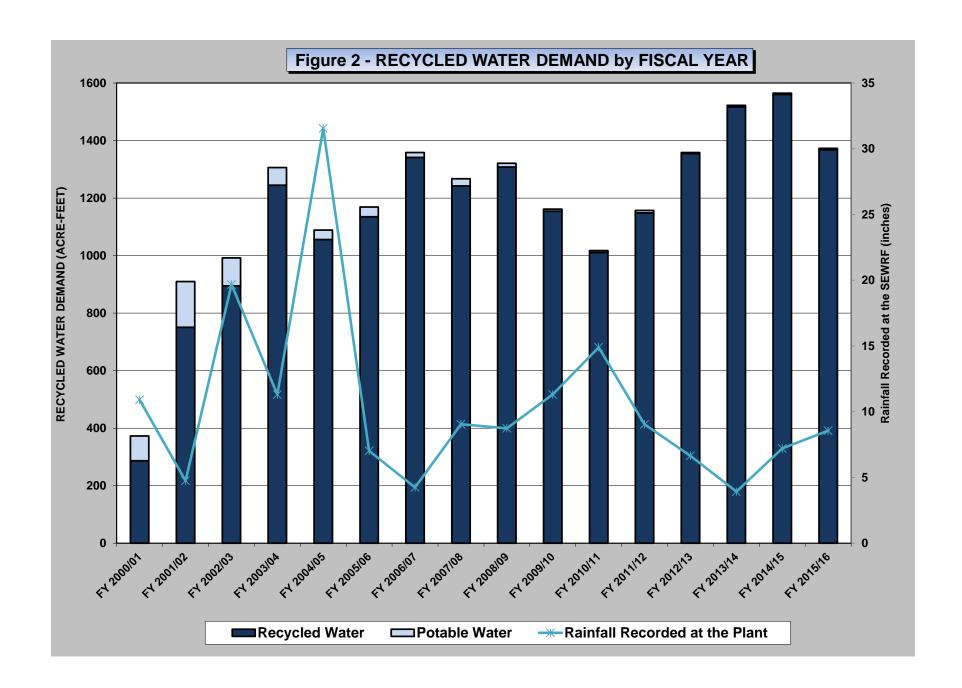
Figure 1 (attached) provides monthly supply demands for recycled water since September 2000. Figure 2 (attached) provides a graphical view of annual recycled water demand spanning sixteen fiscal years. Figure 3 (attached) shows the monthly recycled water demand for each October since the program began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

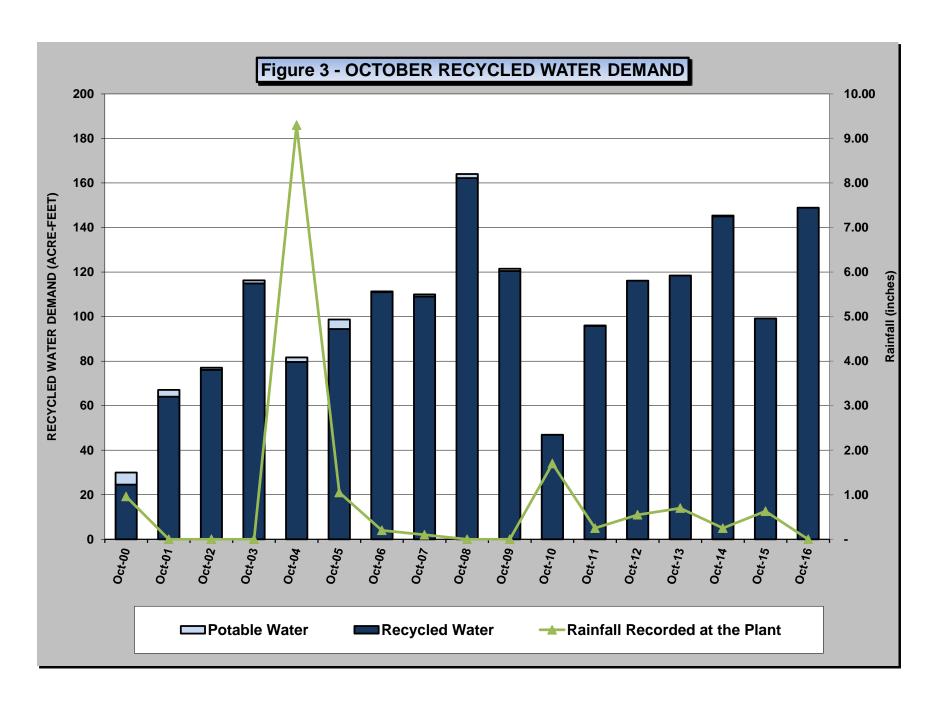
Respectfully submitted,

Michael T. Thornton, P.E.

General Manager







# SAN ELIJO JOINT POWERS AUTHORITY MEMORANDUM

December 12, 2016

TO: Board of Directors

San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: BUILDING IMPROVEMENT PROGRAM

#### **RECOMMENDATION**

It is recommended that the Board of Directors:

- 1. Accept and File Building Improvement Program Preliminary Design Report; and
- 2. Discuss and take action as appropriate.

## BACKGROUND

In 2015, the San Elijo Joint Powers Authority (SEJPA) completed a detailed assessment of the equipment, buildings, and capital assets at the San Elijo Water Reclamation Facility (SEWRF). These findings were documented in the 2015 Facility Plan, which provided recommendations for capital projects over the next 10 years.

The Facility Plan identified significant deficiencies with the Administration and Operations buildings, which included seismic, fire suppression, ADA access, and other code issues. In addition, both buildings are nearing the end of useful life and lack necessary workspace for the current workforce.

The SEJPA initiated a Building Improvement Program (BIP) to develop options to replace or modernize the existing buildings. SEJPA retained the services of Roesling Nakamura Terada Architects, Inc. (RNT Architects) to develop a Building Needs Assessment to evaluate existing facilities against current building standards, identify site constraints, and assess workspace requirements.

RNT Architects prepared a Building Alternatives Analysis to identify and examine potential building alternatives that would meet SEJPA building needs. This evaluation identified the optimal location for the building at the entrance to the facility, which significantly improves access control, site security, and delineates public and restricted areas. Staff presented the draft BIP report at the September and December 2015 Board meetings.

The Board provided the following comments:

- Develop a project that is financially responsible.
- Focus on immediate needs with consideration for future demands.
- Minimize building size and cost where feasible to provide the best value.
- Provide adaptability to future conditions.
- Evaluate consolidation opportunities with the Encina Wastewater Authority (EWA).

With this direction, RNT Architects and Staff evaluated and further refined the BIP recommendations. On July 12, 2016, a special meeting with SEJPA and EWA was convened to consider consolidating administrative and laboratory functions between the agencies, which would have reduced the building size and scope at the SEWRF. However the motion to consolidate these functions between the agencies did not receive approval to proceed.

At the September 2016 SEJPA Board meeting, Staff presented an evaluation of the remaining preferred building options. The evaluation considered project cost, ability to address liability and risk issues, adaptability to meet future needs and opportunities, and compatibility with the North Coast Corridor transportation projects. The recommended building option is to construct a single building located near the site entrance that consolidates the Administration, Operations, and Laboratory functions; and replaces the existing Operations Building with a pre-engineered maintenance shop. The Board approved this recommendation and authorized the General Manager to obtain professional service proposals for completing final design and permitting.

## **DISCUSSION**

Based on the approved building alternative (September 2016 Board meeting), RNT Architects completed the preliminary design report for the BIP. This report provides the basis for the final design of the building project. It documents site constraints, existing utility locations, building code and permitting requirements, and proposed regional transportation projects, all of which helps shape the final design. Furthermore, it analyzes the existing and potential future work flow and space requirements, which influence the size and configuration of the proposed buildings. Finally, project goals and objectives were critical elements to the development of the preliminary design, creating a framework for the decision making process.

Preliminary Design Goals and Objectives:

- Meet current building code and ADA access requirements.
- Create clear delineation between public and restricted areas.
- Improve site security and access control.
- Utilize design and construction standards required for "Essential Service Buildings".
- Improve operational efficiency and minimize project cost.
- Develop adaptable facilities to meet future needs including potable reuse.
- Seek opportunities to integrate with the community (bike path, nature center parking, and public education).

Figure 1 provides the site layout for the selected building alternative.



Figure 1. Selected building alternative for the San Elijo Water Reclamation Facility.

The preliminary design report also provides conceptual design elements that will be further refined during the final design and permitting process. These items include conceptual building shape and floor plans, building massing and architecture, and landscaping and storm water management designs.

Upon Board acceptance of the preliminary design report, this document will be provided to the architectural firms proposing on the final design and permitting phase of the project. It is anticipated that final design proposals will be received in mid-January 2017, with interviews of the top rated firms occuring by the end of the month, and contract award recommendations to the SEJPA Board in Febuary 2017. The proposed project timeline is presented in Figure 2.

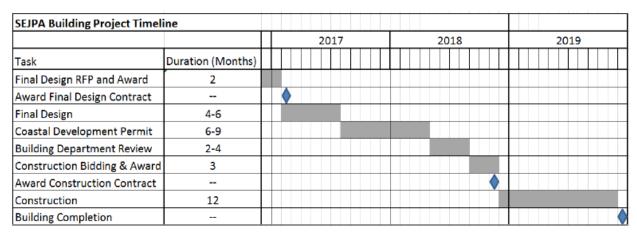


Figure 2. Proposed project timeline.

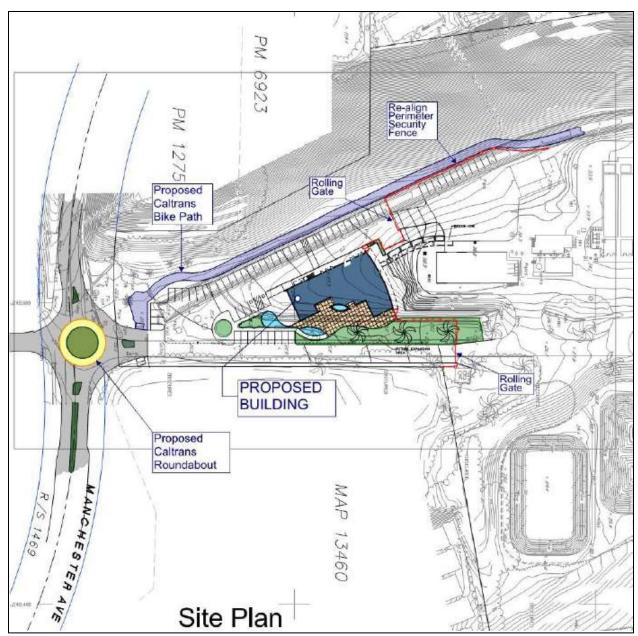


Figure 3. Preliminary design of site entrance including integration with proposed Caltrans North Coastal Corridor improvements.

# **FINANCIAL IMPACT**

The preliminary design provides an estimated building project cost of \$7.4 Million. By the end of this fiscal year, the SEJPA will have collected \$785,000 in capital funding for the project. The agency has committed \$81,488 to date for architectural and environmental professional services. The remaining project costs are proposed to be financed either through a State Revolving Fund (SRF) loan or tax-free municipal bonds. This planned capital expenditure is incorporated into the member agencies' sewer rates and will not cause an unplanned increase. SEJPA will also seek to partner with Caltrans and other agencies to fund and build some of the proposed site improvements including the regional bike path. In addition, SEJPA will examine

opportunities to combine planned internal capital projects to streamline project administration and delivery to optimize construction scheduling and minimize overall costs.

It is recommended that the Board of Directors:

- 1. Accept and File Building Improvement Program Preliminary Design Report; and
- 2. Discuss and take action as appropriate.

Respectfully submitted,

Michael T. Thornton, P.E.

General Manager

Attachment 1: Draft San Elijo Joint Powers Authority Building Improvement Program - Preliminary Design Report (without exhibits). The complete report is posted on our website at: http://www.sejpa.org/index.php?parent\_id=51&page\_id=54.

# **ATTACHMENT 1**



# **DRAFT**

# BUILDING IMPROVEMENT PROGRAM PRELIMINARY DESIGN REPORT



December 12, 2016

Prepared by:

ROESLING NAKAMURA TERADA ARCHITECTS, INC.
363 Fifth Avenue, Suite 202
San Diego, CA 92101
(619) 233-1023

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# **EXHIBITS**

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# **DRAWINGS**

- C-0.1 Existing Utilities Site Plan
- C-1.0 Utility Site Plan
- AS-1.0 Overall Site Plan
- AS-2.0 Site Plan
- A-1.0 Floor Plan Level 1
- A-2.0 Floor Plan Level 2
- A-3.0 Building Massing Study
- ES-1.0 Electrical Site Plan

# **APPENDICES**

- A Existing NPDES Permit SWPPP Site Plan
- B Interior Room Matrices
- C Geotechnical Report
- D City of Encinitas Staff Advisory Committee Meeting Notes
- E SEJPA Staff Report dated September 12, 2016

# 1. EXECUTIVE SUMMARY

In 2015, the San Elijo Joint Powers Authority (SEJPA) contracted with Roesling Nakamura Terada Architects (RNT) to provide conceptual and preliminary design services to evaluate the need for new and/or remodeled buildings at the San Elijo Water Reclamation Facility located at 2695 Manchester Avenue, Cardiff by the Sea, CA.

Based on previous engineering evaluations, the Operations and Administration buildings were identified as requiring substantial improvements or replacement. RNT began its investigative process by reviewing existing facility engineering reports, construction drawings, and site conditions. RNT conducted site visits to confirm building deficiencies identified in the 2015 Facility Plan and review recommended improvements.

RNT conducted several design meetings with SEJPA staff to develop project goals and objectives, discuss and document site constraints, prepare programming elements for the buildings, and identify opportunities for creating efficiencies and cost savings. Through this planning process, the following project goals and objectives were identified:

- Meet current building code and ADA access requirements.
- Create clear delineation between public and restricted areas.
- Improve site security and access control.
- Utilize design and construction standards required for "Essential Service Buildings".\*
- Improve operational efficiency and minimize project cost.
- Develop adaptable facilities to meet future needs including potable reuse.
- Seek opportunities to integrate with community (bike path, nature center parking, public education).

The project team developed multiple building alternatives that addressed the goals and objectives of the project to varying degrees. After consideration and review, three building options remained that best met the project goals and objectives. In order to select the preferred alternative, a final evaluation of the remaining options was conducted using the following selection criteria: Cost to Construct, Risk Reduction, Adaptability to Meet Future Needs, and Compatibility with Community and North Coast Corridor projects. See **Appendix E** for staff report, September 12, 2016 for additional details on this evaluation process.

The outcome of the final evaluation included the following recommendations:

- Demolish existing Administration and Operations structures.
- Combine administration and operation functions into one building, (estimated size of 11,600 sf to 13,400 sf).
- Construct new Administration & Operation building as two-story structure, minimizing building footprint and space requirements.
- Improve access and security by siting the new Administration & Operation building near the facility entrance.
- Construct new pre-engineered metal shop building with an estimated size of 1.500 sf to 1.800 sf.
- Create barriers to unauthorized entry to restricted areas.
- Improve operational efficiency by co-locating staff in one building.
- Increase connectivity with the public and nature center (overflow parking and educational opportunities).
- Integrate with proposed North Coast Corridor bike path and transportation improvements.
- Estimated cost: \$7.4M for a 12,000 sf building (plus or minus 15%).

\*In 1986, the California Legislature determined that buildings providing essential services should be capable of providing those services to the public after a disaster. Their intent in this regard was defined in legislation known as the Essential Services Buildings Seismic Safety Act of 1986 and includes requirements that such buildings shall be "designed and constructed to minimize fire hazards and to resist the forces of earthquakes, gravity and winds."

The preferred building program alternative is illustrated in Exhibit A – Conceptual Site Program. The preliminary budget estimate of \$7.4M includes design, permitting, and construction and is further detailed in Section 7.0. The preliminary design building site plan is illustrated in Exhibit B and the anticipated project timeline and next steps are shown below in Exhibit C.



Exhibit A – Conceptual Site Program

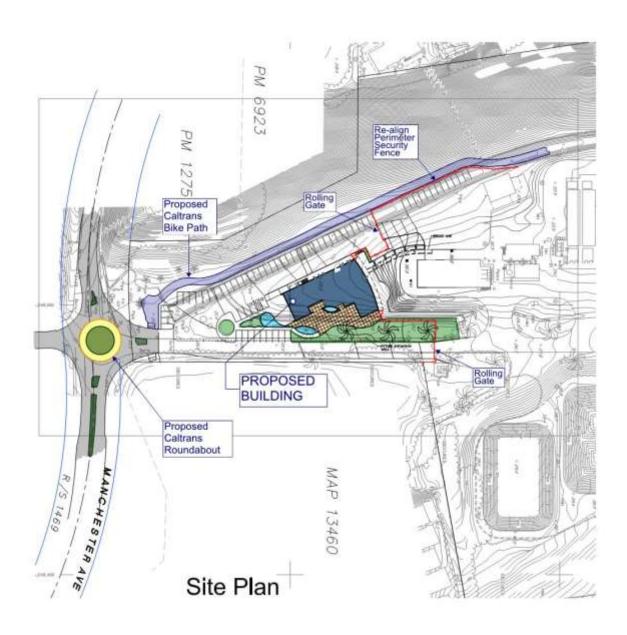


Exhibit B - Preliminary Design - Administration & Operation Building

<b>SEJPA Building Project Timel</b>	ine												П					
- XX XX			2017				L	2018					2019					
Task	Duration (Months)																	
Final Design RFP and Award	2							ŤΤ	Ti	TI		T		TT			7	
Award Final Design Contract	##	•	Ш										П	П				
Final Design	4-6					Ш				Ш	Ш		П	Ш				
Coastal Development Permit	6-9		Ш															
Building Department Review	2-4					Ш								Ш				
Construction Bidding & Award	3													П				
Award Construction Contract	#											•				Tr.		Ш
Construction	12					П						[]]						
Building Completion												1.		П				

Exhibit C – Project Timeline

# 2. Introduction

The San Elijo Joint Powers Authority (SEJPA) owns and operates the San Elijo Water Reclamation Facility (SEWRF) in Cardiff-by-the-Sea, California which provides wastewater treatment and disposal services to the Cities of Encinitas, Solana Beach, Del Mar, and portions of Rancho Santa Fe. SEJPA also owns and operates a recycled water utility that includes 19 miles of distribution pipelines, three storage reservoirs, and that serves four water purveyors (San Dieguito Water District, Santa Fe Irrigation District, City of Del Mar, and Olivenhain Municipal Water District).

Support buildings at the SEWRF include an Operations Building (originally constructed in 1965) and an Administration Building, which is a temporary portable trailer, placed onsite in 2000. These buildings provide working space for the 22 employees who perform administration, engineering, analytical laboratory analyses, operations, and maintenance and capital projects required to safely and efficiently treat and recycle wastewater for beneficial reuse.

The Operations Building is 51 years old and has evolved from numerous piecemeal additions over the years. The building is outdated and inefficient with numerous Structural, Fire/Life safety and Accessibility deficiencies. Similar issues were noted with the modular trailer that was added for Administration staff in 2000.

Additionally, the location of the existing Operation and Administration buildings could be considered a safety and security liability to the SEJPA. This is due to the current facility configuration that requires the public, vendors, and contractors to enter the operating portions of the treatment facility in order to check in at the administration building. Industry standards for water and wastewater facilities are to restrict public access from the operational areas of the facility. Implementing such standards would require the new Administration and Operations building to be located at the entrance of the water reclamation facility. Locating the building at the front of the campus would greatly improve site access control and security. This would reduce risk and liability to the SEJPA, while improving the agency's visibility and accessibility to the public. Furthermore, placing the Operations and Administration building at the front could allow for public parking for the adjacent Nature Center and the proposed regional bike path, providing an added benefit to the community.

# 3.0 Programming

Working with the SEJPA staff through a series of meetings and workshops, comprehensive programming was performed for the facility. Programming looked at holistically at site and facility operations to optimize working efficiency within departments, as well as throughout the overall site.

# 3.1 **PROGRAMMING - SITE**

A key component to the Building Improvement Program (BIP) was establishing staff and facility needs; identifying building code, permitting requirements, and site constraints; and creating opportunities for improving security, safety, and community interface. Key issues included:

- Site Security: Provide a secure perimeter to the treatment facility with controlled access.
- Employee Safety and Security: Provide a secure and safe working environment.
- Public Safety: Provide a safe and accessible public facility.
- Efficiencies: Develop site plan to create optimal work spaces and efficiencies.
- Flexibility: Develop adaptable building improvements to meet future needs and opportunities.
- Community Interface:
  - Evaluate opportunities for public parking at the front of the campus for community use.
  - Educational opportunities and uses.

From the BIP analysis of multiple options and operational scenarios, a preferred scheme with the Administration Building at the front of the campus emerged (Exhibit A – Conceptual Site Program).

# 3.2 Programming - Building

A detailed inventory of administration and operational spatial needs was developed as part of the BIP. The evaluations included projections for future program elements to build in long term flexibility. The inventory categories are as follows:

- Administration: Includes administrative staff offices and auxiliary spaces including Board facilities, reception, conference, staff work areas, storage, and appurtenances.
- **Operations**: Includes staff office space, control room, and auxiliary program areas including locker rooms, training, technical work areas, and appurtenances.
- Laboratory: Includes laboratory, office area, and auxiliary spaces.
- **Support:** Includes technology support, custodial, storage, and equipment rooms.

Room Designation	Proposed Square Footage
Administration	
Reception	120
Waiting/Lobby	350
General Manager	250
Director of Finance/Administration	200

Administrative Assistant	120
Accounting Technician	120
Flex/Future Office	120
Conference Room	250
Plan Room	180
Workroom/Files	300
Break Room	370
Board Room	1100
Board Conference Room	180
Storage Room	150
Men's Restroom	200
Women's Restroom	200
Showers	160
Subtotal	4370

Room Designation	Proposed Square Footage
Operations	·
Director of Operations	200
Associate Engineer	150
Water Reclamation Specialist	150
Chief Plant Operator	150
Lead Operator 1	80
Lead Operator 2	80
Lead Operator 3	80
Operator 1	60
Operator 2	60
Operator 3	60
Operator 4	60
Intern	60

Control Room	250	
Mechanical Systems Supervisor	150	
Lead Mechanic	80	
Mechanic 1	60	
Mechanic 2	60	
Intern	60	
Tech Library	120	
Men's Restroom	150	
Women's Restroom	150	
Men's Lockers	350	
Women's Lockers	150	
Subtotal	2770	

Room Designation	Proposed Square Footage
Laboratory	
Senior Lab Analyst	150
Lab Analyst 1	80
Lab Analyst 2	80
Source Control Specialist	120
Laboratory	1500
Microbiology Room	150
Chemical Storage	150
Subtotal	2230

9

Room Designation	Proposed Square Footage
Support	
SCADA Manager	180
Systems Integrator	120
SCADA Closet	80
IT/Data	80
Mechanical	80
Electrical	80
Custodial	80
Subtotal	700

Overall Program Summary	
Administration	4370
Operations	2770
Laboratory	2230
Support	700
Subtotal	10070
Circulation Net/Gross (19%)	1920
Total	11,990
	(12,000)

## 3.3 ADJACENCIES

Working with the SEJPA staff through a series of programming meetings, location of staff and staff adjacencies have been identified. In general, the first floor of the building will include public spaces for reception and lobby, the Board Room, and restrooms. Access restricted areas on the first floor will include work areas for the operators and mechanics, operations control room, and locker and restroom facilities. The second floor will contain the administrative and technical staff, the laboratory, and the break room. Adjacency diagrams for the floors are shown below in Exhibit D.

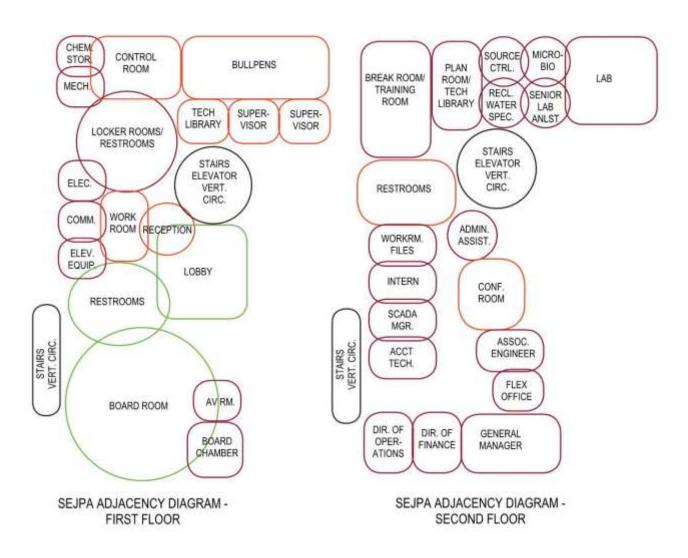


Exhibit D - Adjacency Diagrams

## 3.4 ADAPTABILITY

SEJPA recognizes that the water treatment and reclamation industry is in a dramatic period of change. Local water supply and reliability is a key focus for many local water purveyors and for the State, in general. These changes, coupled with advancements in water treatment technology and science, are pushing the boundaries for water purification and potable reuse. Implementing these programs will likely require the need for added staff and/or program spaces. The building footprint allows for a two-story addition of approximately 3,000 to 4,000 square feet of area at the northwest portion of the building. See Building Floor Plan Drawings **AS-1.0** and **AS-2.0**.

## 4.0 SITE REQUIREMENTS

The BIP identified the front of the campus as the ideal location for the Administration & Operations building. Preliminary design for the site establishes the building location, roadways and parking, and general locations for hardscape and landscaping. In addition to the programming goals, site design considerations include:

- Building orientation that optimizes public accessibility and site security.
- Building layout that minimizes space requirements.
- Located with minimal conflict with existing utilities.
- Entrance Enhancement: Caltrans is planning to install a Roundabout on Manchester Avenue at the SEJPA and Nature Center entrance. The site design takes into account the future alignment of this improvement for integration of the new driveway approach.
- Open Culvert Conversion to Underground Box Culvert: To maximize site area at the front of the campus, the open trapezoidal box culvert along the west side of the property is proposed be enclosed in an underground box culvert.
- Bridge Access from 2<sup>nd</sup> Floor to Site: Taking advantage of the grade change at the front of the facility, a bridge from the 2<sup>nd</sup> floor of the Administration & Operations building to the plant area is proposed.

## 4.1 **EXISTING UTILITIES**

Existing utilities at the front of the campus have been mapped and are shown on Drawing C-0.1.

With the exception of a 10" sewer force main, the proposed building area is free of active utilities. The one known active sewer force main utility is scheduled for relocation as part of the SEJPA Land Outfall Replacement project, which will occur ahead of the building project.

## 4.2 PRELIMINARY SITE PLAN

The proposed Overall Site Plan is shown on Drawing **AS-1.0**. The proposed Preliminary Site Plan, including the conceptual grading, for the front are of the campus is shown on Drawing **AS-2.0**.

## 4.3 PRELIMINARY UTILITY PLAN

The proposed Preliminary Utility Plan depicts the routing of water, sewer, gas, storm drain, electrical and communications is shown on Drawing **C-1.0**.

## 4.4 STORM WATER MANAGEMENT

As a publicly owned treatment plant, SEJPA has a National Pollutant Discharge Elimination System (NPDES) permit for Industrial General Permit compliance issued by the California State Water Resources Board, NPDES Permit No. CAS000001. A site plan of the facilities associated with this permit is shown in **Appendix A**. This permit will require modification to address the building improvements at the front of the campus and the inclusion of storm water attenuation and treatment systems associated with this project.

SEJPA will comply with local jurisdiction development requirements enforced by the City of Encinitas to reduce storm water pollution. The City requires land owners to implement a variety of Best Management Practices (BMP's) to capture and/or treat runoff prior to leaving the property. SEJPA may consider the use of bioswales, attenuation ponds, and other BMP's including flow diversion to the treatment plant as part of a comprehensive storm water management strategy.

## 4.5 LANDSCAPE DESIGN

Site landscaping will preserve the mature trees and build the landscaping palette around their presence. Plantings will focus on drought tolerant landscaping, including succulents and smaller palm varieties to complement the existing established larger palm trees. Groundcovers will include areas of decomposed granite with compositional plantings and ornamental boulders. Bioswales may be incorporated with grasses, plantings and drainage matrix that is suited for on-site water infiltration and retention.

Drought tolerant plantings, where approachable from site walkways will include name signage placards, as interpretive elements to teach the community about plant varieties suitable for Southern California's semi-arid climate.

## 5.0 BUILDING REQUIREMENTS

New building facilities will be designed to public institutional quality standards, with an expected life span of at least 50 years. Building design shall focus on providing a safe and productive working environment, with modern workplace designs.

All applicable Codes and regulations by the authorities having jurisdiction shall be applied to the building design. This includes the City of Encinitas Proposition A building height limitations of 30-feet above existing grade.

The building design, while not requiring a LEED certification, will incorporate sustainable features to the greatest extent practical. This includes recycled content for building materials, regionally sourced materials, cool roofing, low-VOC adhesives and paints, enhanced building envelope insulation, high performance glazing, low-flow plumbing fixtures, on-demand hot water heating, high-efficiency HVAC equipment, LED lighting, and automatic daylight harvesting controls. Non-combustible building components will be used to the greatest extent practical. Roof-top PV panels and electric vehicle charging stations will also be considered as optional project elements.

## 5.1 BUILDING DATA & CODE ANALYSIS

Area:	Approximately 12,000 square feet
Number of Stories:	2
Occupancy Type:	B/A (Business/Assembly)
Construction Type	VB (Structural elements, exterior walls and interior walls are of any materials permitted by the Code, Non-rated)
Fire Sprinklers:	Yes

## 5.2 CONCEPTUAL BUILDING FLOOR PLANS

The building will occupy an approximately 25,000 square foot building pad area at the front of the facility. See Drawing **A1.0** for the Preliminary First Floor Plan and **A2.0** for the Preliminary Second Floor Plan.

## 5.3 Conceptual Building Massing

Building massing will be composed of a two-story volume to maximize the available site area. Form will be articulated to respond to internal program. Roof lines will be low-slope, predominately screened behind low parapet walls in order to comply with the 30-foot Proposition A height limit. At this preliminary stage, building finishes and fenestration have not been articulated. The massing shown is intended to give a general idea of the size and form of the building. The final definition of the building finishes, fenestration, and roof lines will be developed in the subsequent design phases. See Drawing **A-3.0** for Conceptual Building Massing.

## 5.4 ARCHITECTURAL REQUIREMENTS

Architectural requirements for the various building components are as follows:

<u>Floors at Grade</u>: Reinforced concrete slab on grade at first floor. (*Note: See geotechnical report for additional requirements. First floor slab may be required to be a structural mat slab or post-tensioned due to soils conditions). Slab design shall incorporate vapor reduction strategies, including a low water/cement mix design (less than 0.45), a capillary break (pea gravel) underlayment below a heavy-duty multi-layer 15 mil vapor barrier (I.E. Stegowrap).* 

<u>Elevated Floors:</u> Composite deck consisting of reinforced lightweight concrete fill placed on spannable metal decking. Concrete mix design shall incorporate vapor reduction strategies, including water reducing admixtures.

Exterior Walls: Perimeter walls may include a combination of the following:

- Concrete masonry units.
- Cast-in-place concrete.
- Metal siding over non-bearing metal studs.
- Exterior plaster over non-bearing metal studs.

Exterior walls shall include enhanced envelope insulation. This includes:

Concrete masonry and concrete: R-10 rigid insulation at metal stud furred interior side of walls.

 Metal Siding & Exterior Plaster: R-19 batt insulation at metal stud gravity, with thermal break R-5 rigid insulation over exterior weather barrier and wall sheathing.

Roofs: Roof coverings may be a combination of the following:

- Low Slope (1/2:12 to 1:12): Modified bitumen roofing (MBR) with "cool roof" coating. Minimum slope in the drainage direction shall be ½:12, with drainage crickets installed to provide a minimum slope at cricket valleys of at least 1/4:12. MBR roof areas shall terminate at parapets which extend at least 12 inches above the roof deck.
- Medium to High Slope (greater than 1:12): Standing seam metal roofing with "cool roof" fluoropolymer finish

<u>Windows & Glazing</u>: Dark-bronze anodized aluminum storefront system with energy efficient tinted solar-ban insulated dual glazing. Glazing will be tempered throughout.

#### Interiors:

Partitions: Light gage metal stud framing (20 gage min.) with gypsum wallboard each side, insulated for sound isolation.

#### Acoustics:

- Interior partitions between offices and other acoustically-sensitive areas shall have an STC rating of at least 50.
- Ductwork terminations at registers shall be acoustically lined. Ductwork at Board Room will be oversized to reduce air velocity and noise.
- Board Room will have acoustical treatment at walls and ceilings to mitigate reverberation time.

For information regarding interior finishes, see **Appendix B** - Interior Room Matrices.

## 5.5 STRUCTURAL REQUIREMENTS

Structural requirements for the various building components are as follows:

<u>Foundations</u>: A geotechnical report for the site area has been prepared by Stoney-Miller Consultants, Inc. and is included in this report. See **Appendix C**. The Geotechnical Report has identified the existing soils at the building area are potentially liquefiable and have a high water table. Ground improvements will be required in conjunction with the foundation design. Foundation recommendations will be developed in the subsequent design phase. Preliminary indications are that the building will utilize a mat slab foundation.

Walls: Walls and vertical supporting elements include:

- Concrete masonry unit walls.
- Cast-In-Place concrete walls.
- Structural steel frames with non-bearing metal stud framing.

<u>Elevated Floor Structure</u>: Floors will consist of composite deck comprised of metal decking with reinforced lightweight concrete fill, supported by steel bar joist trusses at 4 feet on-center.

Roof Structure: Roof structure will consist of metal decking supported by steel bar joist trusses at 8 feet on-center.

<u>Seismic Design</u>: Lateral resisting elements will consist of concrete masonry and/or concrete shear walls, metal stud shear panel walls, structural steel braced-frames in combination with horizontal composite deck floor diaphragm and metal deck roof diaphragm.

## 5.6 MECHANICAL REQUIREMENTS

HVAC system shall be designed to meet or exceed the following:

- Title 24 energy regulations.
- Latest adopted edition of the California Mechanical Code.
- ASHRAE recommendations for this type of facility.

**Exterior Design Conditions** 

California Climate Zone	7
Location:	Encinitas, California
Latitude	33.02
Elevation	25 ft

Design Conditions based on ASHRAE Climate Data for the SEJPA region, with 0.4% data for summer and 99.6% data for winter.

Summer	Design Temperature	Winter	Design Temperature
Dry Bulb	84 degrees F	Dry Bulb	45 degrees F
Wet Bulb	68 degrees F		
Daily Range			

#### Interior Space Temperature

Space	Temp (F)	RH (%)
Administration Areas, Private Offices, and Open Office Areas	72+/- 2	35-65% (not controlled)
Board Room	72+/- 2	35-65% (not controlled)
Computer & Network Equipment Rooms	72+/- 2	No requirements

<u>HVAC</u>: After reviewing the various HVAC systems available for this building type, SEJPA has decided on using a Variable Refrigerant Flow (VRF) system. The decision is based on weighing several factors, including:

- Comfort: Controllability of multiple zones.
- Energy efficiency.

Reduced building height by reducing ductwork and eliminating rooftop equipment.

The Locker Room areas for the facility will require special design consideration to provide temperature control while sufficient air changes to minimize odor and moisture issues. Heat exchange units should be considered in the exhaust/intake air set up.

The Laboratory space will also require special design considerations to accommodate the separate exhaust system for the fume hood.

Acoustically sensitive areas, including the Board Room will require special considerations including acoustically lined ductwork and acoustically lined diffusers.

Controls: Digital, web-based energy management system, capable of remotely adjusting set points.

#### Plumbing:

Fixture requirements include:

- Institutional grade fixtures throughout.
- Low-flow faucets and flush valves throughout.
- Porcelain fixtures for water closets, urinals and sinks at restrooms.
- Flush valves at all water closets and urinals.
- Stainless steel sinks at Break Room and Kitchenettes.
- Epoxy sinks integral to countertops at Laboratory.
- Self-closing faucets at restroom sinks.

#### Water System:

- All domestic water piping shall be Type L copper with lead-free solder.
- All hot water piping shall be insulated.
- Hot water shall be provided by a commercial grade hot water heater, feeding a looped system with a recirculating pump.

#### Sewer System:

- All below grade piping shall be schedule 40 PVC with solvent-welded joints.
- All above grade piping shall be no hub cast iron (for sound isolation).

### 5.7 ELECTRICAL REQUIREMENTS

The electrical service to support the new Administration and Operations building will be coupled electrical infrastructure upgrade for the facility. Currently, the SEJPA campus has a 1600 Amp, 480 Volt main service, "MS-2" which feeds various substations throughout the facility. The nearest substation to the Administration and Operations building is "MCC-L", which is an 800 Amp, 480 Volt panel. These components of the facility's electrical backbone will be replaced as part of an Electrical Infrastructure project. The new facilities will remain in the same location, but will be upgraded to current Code and technology standards. See Drawing **ES-1.0** for Electrical Site Plan.

The Administration and Operations building will be fed from the upgraded MCC-L panel. It is anticipated that a 600 Amp/480 volt service will be provided to the Administration and Operations building. This service will meet current needs as well as have room for future expansion. This panel will provide power as follows:

- Direct connection for elevator and the HVAC equipment.
- Sub-feed to a 480/277 volt panel for lighting.

- Sub-feed to transformer to stepped down 120/208-3ph power panel (225-400Amp).
- Sub-feed from 120/208-3ph power panel to smaller panels (100-125A).

Actual anticipated loads and panel sizes will be determined as the project moves forward in more detailed design phases.

The Administration and Operations building will be connected to the emergency generator that provides backup power the SEJPA facility.

### **Equipment:**

To take advantage of power efficiency, equipment such HVAC and the elevator will be 480 volt to the greatest extent possible.

#### Lighting:

- Similar to the equipment, lighting fixtures will be 277 volt to the greater power efficiency.
- Lighting will conform to the CEC Building Energy Efficiency Standards, Title 24 (California Green Building Standards Code).
- Interior light fixture will be LED type, with integral driver and provisions for dimming.
- Interior LED lighting will be 4000K, with 85 CRI.
- Lighting controls will include daylight sensing automatic dimming controls.
- Exterior lighting will be LED fixtures with 100% cut-off lighting distribution.
- Exterior lighting will provide a minimum one (1) footcandle of illumination at sidewalks, pathways and
  parking areas during hours of darkness. A site photometric plan will be generated to verify minimum
  footcandles are met over the entire site.

#### Receptacles:

- Convenience outlets will be NEMA 5-20R, nylon face for 120 volt outlets. GFCI outlets will be provided at kitchens, locker rooms, restrooms and custodial spaces.
- A maximum of four outlets will be connected to a 20 amp circuit.
- Dedicated outlets will be provided at refrigerators, microwaves, coffee machines, vending machines, garbage disposals, copy machines, and similar appliances.

## 5.8 COMMUNICATIONS & LOW-VOLTAGE

Data: This system will include the following:

- Main Distribution Frame, with T-1 fiber connectivity to the service provider, in air-conditioned space.
- Structured Cat 6a cabling throughout, with network connectivity to all spaces.
- Wireless access points at group spaces such as the Board Room, Break Room and the Lobby.
- Cat 6A will provide hard-wired connectivity throughout the building.

Phone: The phone system will be voice over IP run through the data system.

<u>Audiovisual</u>: The SEJPA Board room will include a modern audiovisual system. Functionality and the associated components will be determined at a subsequent design phase. Components and functionality will include:

- Motorized, drop down screens at front and back of room.
- Dual, motorized dropdown projectors, with synchronized projection to screens at front and back of the room.
- Speakers for surround sound throughout Board Room.

- Audio-visual system with remote control for all screen, projection, and functions.
- Built-in microphones at Board dais and lectern.

Conference rooms and the Break Room/Training Room will have projection capacity using short throw projectors onto integral interactive projection screens.

<u>SCADA:</u> SEJPA is planning for a facility-wide SCADA upgrade project. Head-end and monitoring will be accessed from the Administration & Operations building. Head-end equipment will be located in a secure office space adjoining the facility's SCADA Manager's office. Monitoring of the Plant equipment will occur within the Control Room.

<u>Security:</u> Access to the private portions of the building will be controlled via a Card-key security system. Additionally, the facility will include intrusion monitoring via door contacts and motion sensors, with remote monitoring from an outside security vendor.

<u>Fire Alarm:</u> The facility will have a fully-automatic fire alarm system, with smoke and heat detectors, audio-visual devices, and monitoring for the fire sprinkler system. The system will include battery back-up and comply with the latest adopted edition of NFPA 101, Life Safety Code.

## 6.0 Permitting Requirements (City Of Encinitas)

The SEJPA facility is located within the City of Encinitas jurisdiction, and local approval will go through their Planning and Building department. The Agency attended a Staff Advisory Committee (SAC) meeting with the City. The notes from that meeting are attached in **Appendix D**. Although the scope has been adjusted slightly from that which was documented in the meeting, the process will require a **Coastal Development Permit**, and will be followed by submittals and approvals for a **Site Development Permit** (**Grading & Utilities**) and a **Building Permit**.

## 6.1 COASTAL DEVELOPMENT PERMIT

The Coastal Development Permit (CDP) through the City of Encinitas Planning Department is required in order to submit a building project to the Development Services for a Building Permit. The application will require the following schematic plans:

- Site Plan/Preliminary Grading Plan.
- Floor Plans.
- Roof Plans.
- Elevations, including Colored Elevations of all elevations.
- Landscape Plans.
- Slope analysis.
- Lighting Plan.
- Color photos of entire site, structures and adjoining properties.

The following technical studies will also be required:

- Drainage Study.
- Priority Development Project Stormwater Quality Management Plan.

It is anticipated that this process will take between 4 to 6 months.

## 6.2 SITE DEVELOPMENT PERMIT

Upon approval of the CDP, a Site Development Permit will need to be obtained from the City of Encinitas for grading and site utility work. This will include:

- Grading & Drainage Plan.
- Paving Plan.
- Horizontal Control Plan.
- Utility Site Plan.

It is estimated that this process will take between 3 to 4 months.

## 6.3 BUILDING PERMIT

Upon approval of the CDP and in conjunction with the Site Development, Construction Plans for a Building Permit issuance will need to be obtained from the City of Encinitas. This will include all plans, elevations, sections and detailing to verify Code compliance and provide adequate instructions for constructing the building and site.

It is estimated that this process will take between 3 to 4 months.

## 7.0 PROJECT BUDGET SUMMARY

Conceptual Project Budget				
	Area	Unit	Unit Cost	Total
Construct 2-Story Admin Bldg	12,000	SF	\$350	4,200,000
Demolish Operations Building & Admin Trailer	8,000	SF	\$10	80,000
Construct Pre-engineered Shop Bldg (+ Toilet Rm. & Office)	1,600	SF	\$150	240,000
Minor Sitework at Shop Building	1	LS	\$50,000	50,000
Sitework at Front Entry	1	LS	\$500,000	500,000
				5,070,000
Contingency (20%)				1,014,000
Total				6,084,000
Soft Costs - Design				
A/E Design (7%)				425,880
Discretionary Permitting/Environmental				75,000
Plan Review & Building Permit				100,000
CM - Predesign (Constructability + Cost Est) (2.5%)				152,100
				752,980
Soft Costs - Construction				
A/E Construction Administration (2%)				121,680
CM (4%)				243,360
Testing & Inspection (3%)				182,520
				590,760
Grand Total				7,427,740

# SAN ELIJO JOINT POWERS AUTHORITY MEMORANDUM

December 12, 2016

TO: Board of Directors

San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: 2016 YEAR IN REVIEW - RECOGNIZING AGENCY ACHIEVEMENTS AND

SUCCESSES

#### **RECOMMENDATION**

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

#### **DISCUSSION**

The San Elijo Joint Powers Authority (SEJPA) is responsible for providing wastewater treatment and disposal; recycled water production, storage, and delivery; operation and maintenance of Member Agency remote facilities; and ocean outfall management. It is the goal of the SEJPA to provide these services using the most sustainable, efficient, and cost-effective approach. The General Manager will provide a brief PowerPoint presentation highlighting notable achievements and successes by the agency for calendar year 2016.

Respectfully submitted,

Michael T. Thornton, P.E.

General Manager