

AGENDA
REGULAR BOARD MEETING OF THE
SAN ELIJO JOINT POWERS AUTHORITY
APRIL 18, 2023 AT 8:30 A.M.
SAN ELIJO WATER CAMPUS – BOARD MEETING ROOM
2695 MANCHESTER AVENUE
CARDIFF BY THE SEA, CALIFORNIA

1. CALL TO ORDER
2. ROLL CALL
3. PLEDGE OF ALLEGIANCE
4. ORAL COMMUNICATIONS/PUBLIC COMMENT PERIOD (NON-ACTION ITEM)
5. AWARDS AND RECOGNITION
“Autonomous Underwater Vehicle (AUV) Plume Transport Assessments of the San Elijo and Encina Ocean Outfalls” – 2023 APWA Project of the Year Award and ASCE Outstanding Environmental Engineering Project Award
6. * **CONSENT CALENDAR**
7. * [APPROVAL OF MINUTES FOR MARCH 13, 2023 MEETING](#)
8. * [APPROVAL FOR PAYMENT OF WARRANTS AND MONTHLY INVESTMENT REPORTS](#)
9. * [WASTEWATER TREATMENT REPORT](#)
10. * [RECYCLED WATER REPORT](#)
11. * [REPORTABLE MEETINGS](#)
12. * [SAN ELIJO JOINT POWERS AUTHORITY CONTRACT FOR PROCUREMENT OF FERRIC CHLORIDE, ALUMINUM SULFATE, LIQUID CALCIUM NITRATE, AND SODIUM HYPOCHLORITE FOR FISCAL YEAR 2023-24](#)
13. * [CLEAN WATER SERVICE AGREEMENT AMENDMENT FOR THE 22nd DISTRICT AGRICULTURAL ASSOCIATION](#)
14. * [BIOSOLIDS DEWATERING FACILITY IMPROVEMENT – CONTRACT CHANGE ORDER NO. 1 \(MS-2 UPSIZING\)](#)
15. * [UPDATE OF EMERGENCY REPAIRS TO RECYCLED WATER PIPELINE IN MANCHESTER AVE.](#)

16. * 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

17. [PRESENTATION OF SAN ELIJO JOINT POWERS AUTHORITY FISCAL YEAR 2023-24 RECOMMENDED BUDGET](#)

1. Review the Fiscal Year 2023-24 Recommended Budget; and
2. Discuss and take action as appropriate.

Staff Reference: Director of Finance and Administration

18. [AWARD OF PROFESSIONAL ENGINEERING AND DESIGN SERVICES FOR STORMWATER CAPTURE, REUSE, AND SITE WATER QUALITY IMPROVEMENTS PROJECT](#)

1. Authorize the General Manager to execute Professional Services Agreement with Dudek in an amount not-to-exceed \$268,556 for design of the Stormwater Capture, Reuse, and Site Water Quality Improvements Project with cost shared equally between the Recycled Water Program and Wastewater Program; and
2. Discuss and take action as appropriate.

Staff Reference: General Manager

19. GENERAL MANAGER'S REPORT

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

20. GENERAL COUNSEL'S REPORT

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

21. 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.

22. CLOSED SESSION

None.

23. ADJOURNMENT

The next regularly scheduled San Elijo Joint Powers Authority Board Meeting will be Tuesday, May 16, 2023 at 8:30 a.m.

NOTICE:

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

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

AFFIDAVIT OF POSTING

I, Michael T. Thornton, Secretary of the San Elijo Joint Powers Authority, hereby certify that I posted, or have caused to be posted, a copy of the foregoing agenda on the SEJPA website at www.sejpa.org, and in the following locations:

San Elijo Water Campus (formerly known as San Elijo Water Reclamation Facility),
2695 Manchester Avenue, Cardiff, California
City of Encinitas, 505 South Vulcan Avenue, Encinitas, California
City of Solana Beach, 635 South Highway 101, Solana Beach, California

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

Date: April 13, 2023



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

SAN ELIJO JOINT POWERS AUTHORITY
MINUTES OF THE SPECIAL BOARD MEETING
HELD ON MARCH 13, 2023
AT THE SAN ELIJO WATER CAMPUS

David Zito, Chair

Tony Kranz, Vice Chair

A Special Meeting of the Board of Directors of San Elijo Joint Powers Authority (SEJPA) was held Monday, March 13, 2023, at 8:30 a.m., at the San Elijo Water Campus.

1. CALL TO ORDER

Chair Zito called the meeting to order at 8:35 a.m.

2. ROLL CALL

Directors Present:

David Zito
Tony Kranz
Kristi Becker
Kellie Hinze

Others Present:

General Manager	Michael Thornton
Director of Infrastructure and Sustainability	Tom Falk
Director of Finance and Administration	Amy Chang
Administrative Assistant II	Abby Schlenk

SEJPA Counsel:

Procopio	Kevin Davis
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City of Solana Beach:

Director of Engineering/Public Works	Mohammad "Mo" Sammak
City Manager	Greg Wade

San Dieguito Water District:

General Manager	Isam Hireish
Principal Engineer	Habib Hariri

3. PLEDGE OF ALLEGIANCE

Board Chair, David Zito, led the Pledge of Allegiance.

4. ORAL COMMUNICATION/PUBLIC COMMENT PERIOD

None.

5. AWARDS AND RECOGNITION

None.

6. CONSENT CALENDAR

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

- | | |
|--------------------|---|
| Agenda Item No. 7 | Approval of Minutes for the February 21, 2023 Meeting |
| Agenda Item No. 8 | Approval for Payment of Warrants and Monthly Investment Report |
| Agenda Item No. 9 | Wastewater Treatment Report |
| Agenda Item No. 10 | Recycled Water Report |
| Agenda Item No. 11 | Reportable Meetings |
| Agenda Item No. 12 | Update of Emergency Repairs to Recycled Water Pipeline in Manchester Ave. |
| Agenda Item No. 13 | Notice of Emergency Situation and Award of Construction Contract for Repairs to Recycled Water Pipeline on San Elijo Water Campus |

Motion carried with the following vote of approval:

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

15. CAPITAL PROGRAM BOARD WORKSHOP

General Manager, Michael Thornton, provided background information on the agency's current capital improvement program which is nearing completion. The value of the capital program is nearly \$49.7 million and included the following projects:

- Land Outfall Replacement (completed 2018)
- Headworks & Odor Control Improvements (completed 2019)
- Encinitas Ranch Recycled Water Expansion (completed 2019)
- SCADA and Electrical Upgrades (completed 2020)
- Water Campus Improvements (completed 2021)
- 0.6 Mega Watt PV Solar (completed 2022)
- Biosolids Dewatering Facility Improvements (est. completion 2025)

During the meeting, General Manager Thornton presented Phase 4 of the Capital Improvement Program, which includes four projects that have been evaluated and recommended by staff for construction funding consideration. The projects are at either the concept or final design level and cover a range of areas, including stormwater capture and reuse, sewer pump station modifications, and biological treatment improvements.

Phase 4 of the Capital Improvement Program has an estimated total cost of \$17.4 million and includes the following projects:

1. Stormwater Capture & Reuse
2. Wanket Tank Refurbishment, Pipeline, and RW Valve Replacement
3. Moonlight Beach Sewer Pump Station Modifications
4. Biological Treatment Improvements (NDN & CCT)

General Manager Thornton acknowledged that the proposed program goes beyond the current staffing capacity. To address this, the options of hiring external consultants or using in-house staff for project support were presented to the Board for guidance.

The estimated total cost for these projects is \$17.4 million, and project delivery support costs (in-house staff or consultant) may add up to approximately \$0.9 million, resulting in a total estimated cost of \$18.3 million. To fund these projects, a combination of cash, grants, and financing is expected to be employed. Staff has currently secured approximately \$5.8 million in grant funding and seeking loan options for approximately \$10 million.

Moved by Board Chair Kranz and seconded by Board Member Hinze to:

1. Proceed with the recommended Phase 4 Capital Improvement Program and funding strategy;
2. Discuss and take action as appropriate.

Motion carried with the following vote of approval:

AYES: Zito, Kranz, Becker, Hinze

NOES: None

ABSENT: None

ABSTAIN: None

16. GENERAL MANAGER'S REPORT

General Manager, Michael Thornton, shared that SEJPA hosted two events recently, both with high attendance and active engagement. The WateReuse San Diego Chapter Meeting was hosted on Tuesday, February 28, 2023. The League of Women Voters Meeting was hosted the following week on Tuesday, March 7, 2023. Both events included discussion on water recycling and potable reuse, as well as a tour of the San Elijo Water Campus, led by Director of Infrastructure and Sustainability, Tom Falk.

General Manager Thornton also stated that SEJPA will be hosting an event and tour for the CWEA: AC23 Conference and Expo on Tuesday, April 18, 2023, following the April Board Meeting on the same date.

17. GENERAL COUNSEL'S REPORT

None.

18. BOARD MEMBER COMMENTS

None.

19. CLOSED SESSION

None.

20. ADJOURNMENT

The meeting adjourned at 9:43 a.m. The next Board of Directors meeting is scheduled to be held on Tuesday, April 18, 2023 at 8:30 a.m.

Respectfully submitted,

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

Michael T. Thornton, P.E.
General Manager

SAN ELIJO JOINT POWERS AUTHORITY
PAYMENT OF WARRANTS
23-04
For the Month of March 2023

Warrant #	Vendor Name	G/L Account	Warrant Description	Amount
42036	A-Check Global	Preemployment Screening	New employee	\$ 120.50
42037	Adam Kaye	Services - Professional	Public communications	100.00
42038	Akeso Occupation Health	Services - Medical	Covid-19 test	395.00
42039	AT&T	Utilities - Telephone	Phone service - 01/13/23-02/12/23	634.22
42040	Black & Veatch	Services - Engineering	Dewatering facilities upgrades through 02/03/23	2,860.00
42041	Boot World, Inc.	Uniforms - Boots	Safety boots - O. Navarrete, D. Felix	450.00
42042	Controlled Entry Specialists	Repair Parts Expense	Programming gate fobs	170.00
42043	CWEA	Dues & Memberships	Certificate renewal - M. Henke	110.00
42044	The Reinalt-Thomas Corp.	Repair Parts Expense	Tires	709.17
42045	EDCO Waste & Recycling Service	Utilities - Trash	Feb	467.48
42046	Environmental Express, Inc.	Supplies - Lab	300ml glass BOD bottles	561.51
42047	Evoqua Water Technologies	Supplies - Chem - Odor	Bioxide	12,514.63
42048	Excel Landscape, Inc.	Services - Maintenance	Grounds maintenance service - Jan, Feb	8,404.00
42049	GEM Site Development LLC	Services - Contractors	Emergency repair RW pipelines in Manchester Ave.	39,752.93
42050	Golden Bell Products	Supplies - Shop & Field	Coast PS lift station degreaser	471.41
42051	Golf Carts and More Inc	Capital Outlay	Golf cart	8,080.17
42052	The Hardwood & Hardware Co.	Supplies - Office	Executive conference room	183.87
42053	Hardy Diagnostics	Supplies - Lab	Various supplies	1,089.59
42054	Harrington Industrial Plastics	Repair Parts Expense	Area 1 odor scrubber repair parts	4,146.61
42055	Helix Environmental Planning	Services - Professional	Environmental consulting - Wanket RW Line through 02/19/23	3,142.50
42056	Idexx Distribution, Inc.	Supplies - Lab	WQC - enterococci	549.47
42057	Lee's Lock & Safe	Repair Parts Expense	Padlocks for security	520.86
42058	McMaster-Carr Supply Co.	Repair Parts Expense	Rotary seal	19.44
42059	MetLife - Group Benefits	Dental/Vision	Dental - Mar	2,488.89
42060	Mission Square	ICMA Retirement	ICMA - 401a	10,054.50
42061	Mission Square - 304175	EE Deduction Benefits	ICMA - 457	20,325.89
42062	Napa Auto Parts	Repair Parts Expense	Generator radiator caps	20.45
42063	Cosby Oil Company, Inc	Fuel	Fuel - Feb	819.23
42064	Parada Painting	Services - Maintenance	AWP structure painting	17,556.00
42065	ProBuild Company, LLC	Supplies - Safety, Shop & Field	Various supplies	480.42
42066	Procopio Cory Hargreaves	Services - Legal	General	3,723.00
42067	ReadyRefresh	Supplies - Lab	Kitchen and lab supplies	880.68
42068	RSF Security Systems	Services - Alarm	Code change service, Cellular fire system monitoring, Security	1,835.00
42069	Rusty Wallis, Inc.	Services - Maintenance	Water softener, tank service, salt bags	208.32
42070	San Dieguito Water District	Utilities - Water (Suppl.)	Water	1,137.81
42071	San Dieguito Water District	Utilities - Water	Water	2,133.97
42072	Southcoast Heating & A/C	Services - Maintenance	HVAC repairs	1,129.89
42073	Thatcher Company of California	Supplies - Chemicals	Aluminum sulfate	503.36
42074	Unifirst Corporation	Services - Uniforms	Uniform service	307.29
42075	Underground Service Alert/SC	Services - Alarm	Dig alert, Safe excavation board	120.70
42076	USA Bluebook	Supplies - Lab	Various supplies	2,135.38
42077	VEGA Americas, Inc	Repair Parts Expense	Wash press level sensor	1,518.48
42078	VELLAB	Services - Maintenance	Service laboratory oven, incubator, water bath	792.50
42079	Verizon Wireless	Utilities - Telephone	01/11/23 - 02/10/23	620.17
42080	Void	(blank)	(blank)	-
42081	Void	(blank)	(blank)	-
42082	Volt Management Corp	Services - Temp	Internship program	30,930.94
42083	Benefits Coordinators Corp.	Dental/Vision	Vision - Mar	323.40
42084	VWR International, Inc.	Supplies - Lab	Various supplies	1,715.21
42085	Water Environment Federation	Dues & Memberships	Membership - M. Henke	342.00
42086	Albertsons Companies	Services - Medical	Flu Vaccinations	180.00
42087	Allied Storage Containers	Equipment Rental/Lease	20' and 40' storage containers 03/18/23 - 04/14/23	359.89
42088	Ardurra Group, Inc	Services - Engineering	Wanket tanket refurbish support from 01/01/2023 to 01/31/2023	33,366.85
42089	Asbury Environmental Services	Fees - Disposal	Used oil and oily solids and metal drum disposal	337.57
42090	AT & T	Utilities - Telephone	Alarm service - Feb	411.76
42091	California Water Technologies	Supplies - Chem - Ferric Chlo	Ferric chloride solution	8,387.80
42092	CDM Smith	Services - Engineering	Engineering services 08/07/23 - 02/04/23	1,149.50
42093	Corodata	Rent	Record storage - Feb	114.93
42094	County of San Diego	Fees - Permits	APCD2002-Site-04513	599.00
42095	County of San Diego	Fees - Permits	APCD2002-Site-04514	599.00
42096	County of San Diego	Fees - Permits	APCD2002-Site-04515	1,353.00
42097	County of San Diego	Fees - Permits	APCD2002-Site-04516	1,353.00
42098	CWEA Membership	Dues & Memberships	Certificate renewal - M. Henke	195.00
42099	County of San Diego	Fees - Permits	Olivenhain PS, Surfside Race Pl. cooling tower	632.00
42100	Del Mar Blue Print	Printing	Biosolids bid specs and plans	1,775.64
42101	Westbound Solar 2, LLC	Utilities - Solar Power	Solar - Feb	10,146.29
42102	City of Encinitas	Service - IT Support	Admin network - Oct	8,265.43
42103	City of Encinitas	Service - IT Support	Admin network - Nov	8,265.43
42104	City of Encinitas	Service - IT Support	Admin network - Dec	8,265.43
42105	City of Encinitas	Service - IT Support	Admin network - Jan	8,511.29
42106	City of Encinitas	Service - IT Support	Admin network - Feb	8,511.29
42107	Enthalpy Analytical, LLC	Services - Laboratory	Laboratory toxicity testing services for January 2023	1,050.00
42108	EnvirGreen Electronic Rec	Services - Other	E-waste recycling	189.00
42109	Eurofins Calscience, LLC	Services - Laboratory	Testing water samples	3,637.75
42110	Fisher Scientific	Supplies - Lab	Bottles for coliform samples	564.47
42111	FRS Environmental	Services - Maintenance	Parts washer service	291.00
42112	GHE Repair Service, Inc.	Services - Maintenance	Annual autoclave service	570.00
42113	Unifirst First Aid Corp	Supplies - Safety	First aid supplies	169.38
42114	The Hardwood & Hardware Co.	Supplies - Office	Wood and cabinet supplies	144.74
42115	Hardy Diagnostics	Supplies - Lab	Lauryl tryptose broth, TSA and agar plate	419.96
42116	HASA Inc.	Supplies - Chemicals	Hydrochloric acid	1,578.76
42117	Lawson Products Inc.	Supplies - Shop & Field	Shop and field supplies	1,242.53
42118	Liquid Environmental Solution	Services - Grease & Scum	Pumping service	2,022.00
42119	Marine Taxonomic Services, LTD	Services - Contractors	Intensive WQ Monitoring - Plume Tracking - Feb 2023	2,390.00
42120	McMaster-Carr Supply Co.	Shop Tools and Equip.	Various parts and supplies	5,033.88
42121	Mission Square	ICMA Retirement	ICMA - 401a	6,118.88
42122	Mission Square - 304175	EE Deduction Benefits	ICMA - 457	10,282.74

SAN ELIJO JOINT POWERS AUTHORITY
PAYMENT OF WARRANTS
23-04
For the Month of March 2023

Warrant #	Vendor Name	G/L Account	Warrant Description	Amount
42123	Cosby Oil Company, Inc	Fuel	Fuel - Mar	1,197.29
42124	NSI Solutions, Inc.	Supplies - Lab	Various supplies	395.00
42125	Olin Corp - Chlor Alkali	Supplies - Chem - Sodium Hypo	Procurement of Sodium Hypochlorite	7,426.72
42126	Olivenhain Municipal Water Dis	Services - Landscape, Professional, Rent	Wancket Reservoir landscape maintenance, Grant admin - WIIN NEPA and LRP, Pipeline rental repayment - Feb	7,592.12
42127	OneSource Distributors, Inc.	Repair Parts Expense	Fuses	112.08
42128	Pacific Safety Center	Training - Safety	Confined space training - O. Navarrete	275.00
42129	Precision Balance Specialist	Supplies - Lab	Balance cleaning and calibration	380.00
42130	ProBuild Company, LLC	Supplies - Safety, Shop & Field, Office	Various supplies	1,473.74
42131	RCK Controls, Inc.	Services - Professional	Programming of wetwell level sensor	2,506.09
42132	Rusty Wallis, Inc.	Services - Maintenance	Water softener, tank service, salt bags	198.45
42133	Santa Fe Irrigation District	Utilities - Water (Suppl.)	Water	418.94
42134	Santa Fe Irrigation District	SFID Distribution Pipeline	Pipeline purchase payment	1,160.12
42135	Seacliff Mechanical Svc, LLC	Services - Maintenance	HVAC services	2,893.00
42136	Southcoast Heating & A/C	Services - Maintenance	HVAC repairs	1,129.89
42137	Southwest Valve & Equip.	Repair Parts Expense	Grit pump replacement plug valves	10,889.70
42138	Terminix Processing Center	Services - Maintenance	Pest control service	441.00
42139	Thatcher Company of California	Supplies - Chemicals	Aluminum sulfate	6,973.13
42140	Unifirst Corporation	Services - Uniforms, Safety Supplies	Jacket, Uniform service and gloves	823.34
42141	USA Bluebook	Supplies - Lab	Various supplies	1,489.92
42142	VEGA Americas, Inc	Repair Parts Expense	Radar level sensor	1,264.04
42143	Verizon Wireless	Utilities - Telephone	Cell phone - 02/08/23 - 03/07/23	1,003.30
42144	Volt Management Corp	Services - Temp	Internship program	6,933.51
42145	VWR International, Inc.	Supplies - Lab	Various supplies	3,509.39
42146	West Coast Arborists, Inc	Services - Landscape	Tree maintenance services through 12/22/22 - 12/23/22	5,500.00
On-line 761	Aflac	EE Deduction Benefits	Aflac - Mar	630.36
On-line 762	Public Employees- Retirement	Retirement Plan - PERS	Retirement - 01/21/23 - 02/03/23	17,609.50
On-line 763	BankCard Center	Supplies - Safety	Various supplies	12,082.11
On-line 764	BankCard Center	Utilities - Telephone	Various supplies	7,867.97
On-line 765	P.E.R.S.	Medical Insurance - Pers	Health - Apr	31,935.46
On-line 766	Public Employees- Retirement	Retirement Plan - PERS	Retirement - 02/04/23 - 02/17/23	17,067.82
On-line 767	Public Employees- Retirement	Retirement Plan - PERS	Retirement - 02/18/23 - 03/03/23	17,434.39
On-line 768	Public Employees- Retirement	Retirement Plan - PERS	Retirement - 03/04/23 - 03/17/23	18,040.26
On-line 769	San Diego Gas & Electric	Utilities - Gas & Electric	Gas and electric 02/07/23 - 03/08/23	86,436.59
On-line 770	WM Corporate Services, Inc.	Services - Grit & Screenings	10 yard roll of disposal	3,628.77
	San Elijo Payroll Account	Payroll	Payroll - 03/10/2023	91,024.42
	San Elijo Payroll Account	Payroll	Payroll - 03/24/2023	92,504.52
				\$ 788,289.97

SAN ELIJO JOINT POWERS AUTHORITY

PAYMENT OF WARRANTS SUMMARY

**For the Month of March 2023
As of March 31, 2023**

PAYMENT OF WARRANTS		\$ 788,289.97
Reference Number	23-04	

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



Amy Chang
Director of Finance & Administration

STATEMENT OF FUNDS AVAILABLE FOR PAYMENT OF WARRANTS
AND INVESTMENT INFORMATION
As of March 31, 2023

FUNDS ON DEPOSIT WITH	AMOUNT
LOCAL AGENCY INVESTMENT FUND <i>(MARCH 2023 YIELD 2.831%)</i>	
UNRESTRICTED DEPOSITS	\$ 21,082,775.56
CALIFORNIA BANK AND TRUST <i>(MARCH 2023 YIELD 0.01%)</i>	
REGULAR CHECKING	1,944,558.56
PAYROLL CHECKING	5,000.00
PARS - TRUSTEE (POST-EMPLOYMENT BENEFITS TRUST) <i>(FEBRUARY 2023 YIELD -2.38%)</i>	401,738.40
TOTAL RESOURCES	\$ 23,434,072.52

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SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 18, 2023

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: WASTEWATER TREATMENT REPORT

RECOMMENDATION

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

DISCUSSION

Monthly Treatment Plant Performance and Evaluation

Wastewater treatment for the San Elijo Joint Powers Authority (SEJPA) met all National Pollutant Discharge Elimination System (NPDES) ocean effluent limitation requirements for the month of February 2023. The primary indicators of treatment performance include the removal of Total Suspended Solids (TSS) and Carbonaceous Biochemical Oxygen Demand (CBOD). The SEJPA is required to remove a minimum of 85 percent of the TSS and CBOD from the wastewater. Treatment levels for **TSS** and **CBOD** were **98.5** and **98.2** percent removal, respectively, during the month of February.

Exceptional Water Treatment



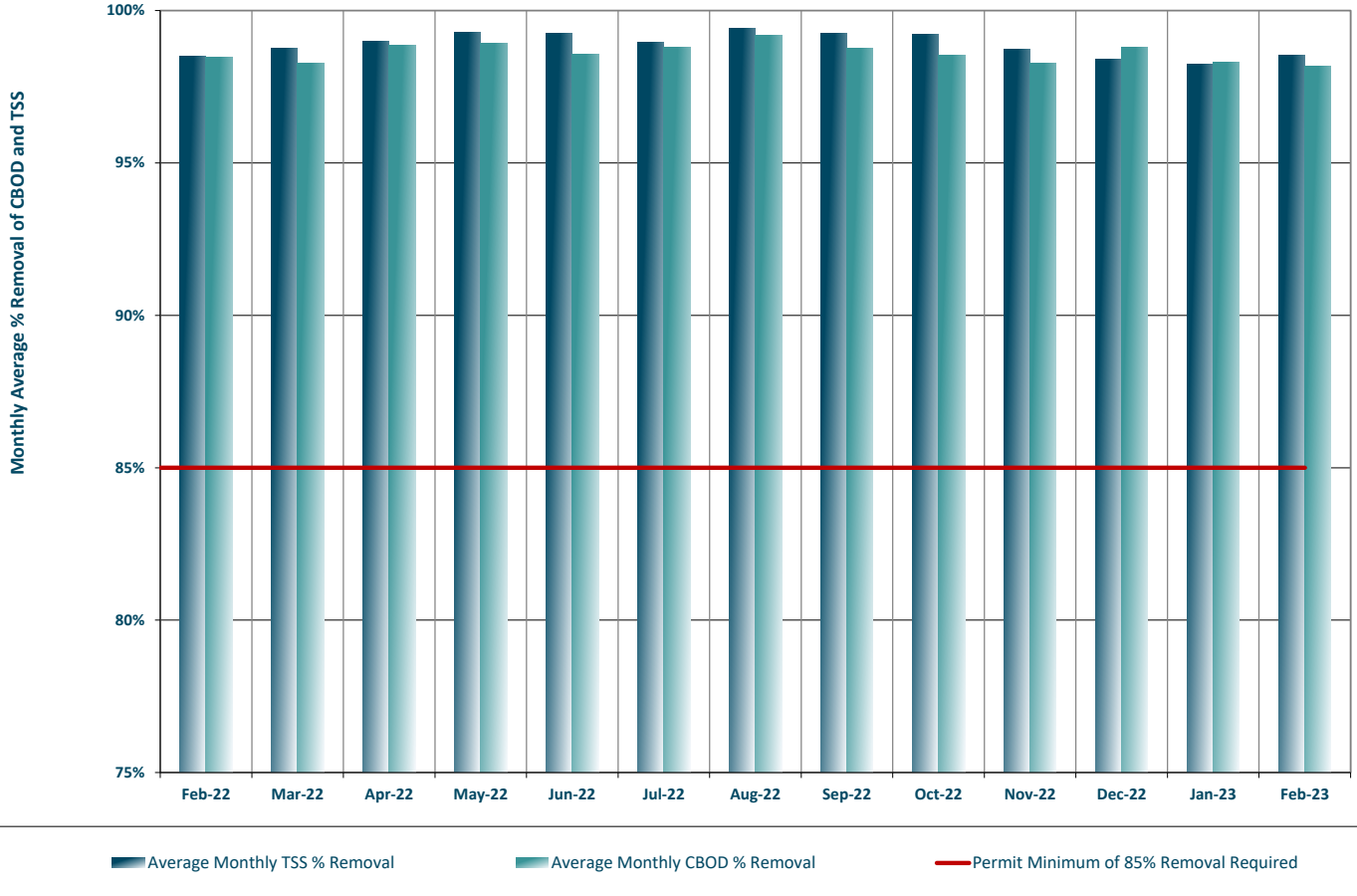
Treatment Removed
98.5% of TSS



Treatment Removed
98.2% of CBOD

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

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



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

FIGURE 2: TREATED EFFLUENT FLOWS REMOVAL OF TSS

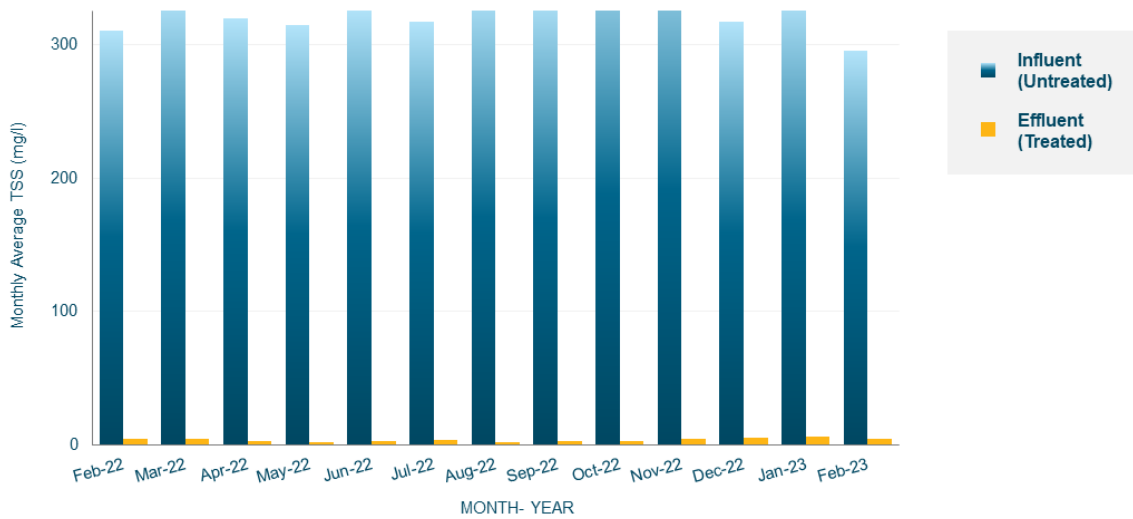
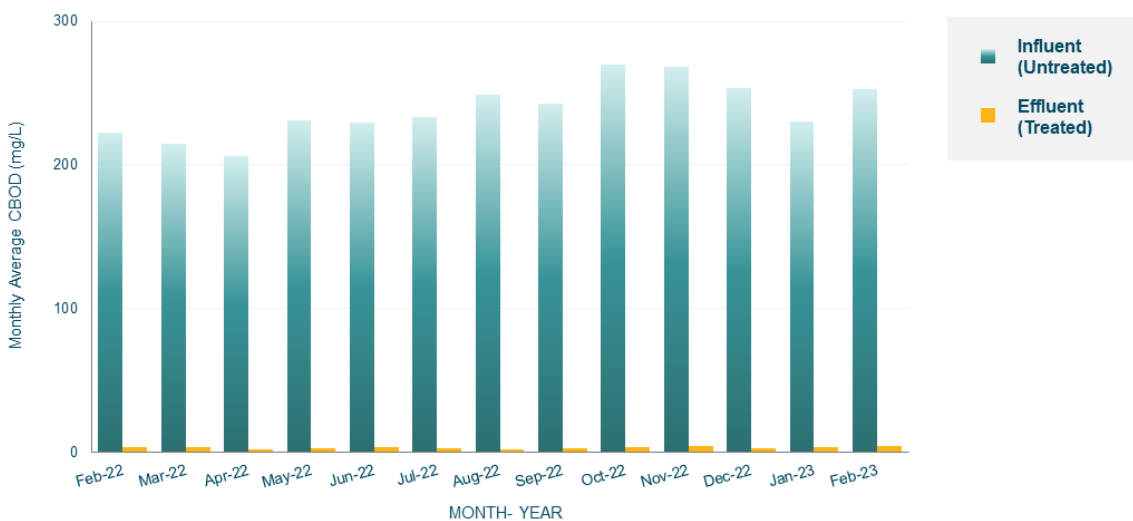


FIGURE 3: TREATED EFFLUENT FLOWS REMOVAL OF CBOD



Member Agency Flows

Table 1 (below) presents the influent and effluent flows for the month of February. Average daily influent flows were recorded for each Member Agency. Total effluent flow was calculated for the San Elijo Water Campus. Approximately 25% of the influent flow was diverted for recycled water use in February.

TABLE 1 – INFLUENT AND EFFLUENT FLOWS IN FEBRUARY

FEBRUARY			
	Influent (mgd)	Recycled Water (mgd)	Effluent (mgd)*
Cardiff Sanitary Division	1.323	0.327	0.996
City of Solana Beach	0.930	0.230	0.700
Rancho Santa Fe SID	0.167	0.040	0.127
City of Del Mar	0.371	0.092	0.279
Total San Elijo Water Campus Flow	2.791	0.689	2.102

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

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

TABLE 2 - SAN ELJO WATER CAMPUS MONTHLY REPORT - FLOWS AND EDUS

MONTH	AVERAGE DAILY INFLUENT FLOW RATE (MGD)					CONNECTED EDUs					AVERAGE UNIT INFLUENT FLOW RATE (GAL/EDU/DAY)				
	CSD	RSF	SB	DM	TOTAL PLANT	CSD	RSF	SB	DM	TOTAL EDUS	CSD	RSF	SB	DM	TOTAL PLANT
Jan-20	1.194	0.163	0.917	0.410	2.684	8,517	571	8,105	2,612	19,805	140	286	113	157	136
Feb-20	1.176	0.146	0.919	0.352	2.593	8,517	571	8,105	2,612	19,805	138	256	113	135	131
Mar-20	1.432	0.185	0.907	0.389	2.913	8,519	572	8,105	2,612	19,808	168	324	112	149	147
Apr-20	1.720	0.231	0.912	0.377	3.240	8,522	572	8,105	2,612	19,811	202	404	113	153	164
May-20	1.293	0.158	0.853	0.304	2.608	8,523	573	8,105	2,612	19,813	152	276	105	133	132
Jun-20	1.251	0.164	0.897	0.434	2.746	8,534	576	8,105	2,612	19,826	147	285	111	179	139
Jul-20	1.231	0.157	0.937	0.548	2.873	8,535	576	8,110	2,616	19,837	144	273	116	222	145
Aug-20	1.226	0.156	0.950	0.478	2.810	8,540	577	8,110	2,616	19,843	144	271	117	194	142
Sep-20	1.225	0.151	0.956	0.362	2.694	8,540	578	8,110	2,616	19,844	143	261	118	146	136
Oct-20	1.197	0.142	0.940	0.316	2.595	8,543	579	8,110	2,616	19,848	140	245	116	128	131
Nov-20	1.200	0.142	0.927	0.341	2.610	8,543	579	8,110	2,616	19,848	140	245	114	138	131
Dec-20	1.217	0.141	0.893	0.304	2.555	8,543	579	8,110	2,616	19,848	142	244	110	123	129
Jan-21	1.238	0.150	0.909	0.323	2.620	8,543	579	8,110	2,616	19,848	145	259	112	129	132
Feb-21	1.224	0.151	0.926	0.306	2.607	8,548	579	8,110	2,616	19,853	143	261	114	121	131
Mar-21	1.291	0.160	0.968	0.332	2.751	8,548	579	8,110	2,616	19,853	151	277	119	131	139
Apr-21	1.232	0.160	0.925	0.320	2.637	8,552	579	8,110	2,616	19,857	144	277	114	129	133
May-21	1.189	0.157	0.932	0.323	2.601	8,552	579	8,110	2,616	19,857	139	271	115	130	131
Jun-21	1.218	0.148	0.938	0.358	2.662	8,554	579	8,110	2,616	19,859	142	256	116	145	134
Jul-21	1.183	0.144	0.972	0.435	2.734	8,554	579	8,124	2,616	19,873	138	249	120	178	138
Aug-21	1.178	0.150	0.966	0.480	2.774	8,556	579	8,124	2,616	19,875	138	259	119	196	140
Sep-21	1.153	0.129	0.948	0.353	2.583	8,557	579	8,124	2,616	19,876	135	223	117	144	130
Oct-21	1.225	0.126	0.885	0.329	2.565	8,557	579	8,124	2,616	19,876	143	218	109	139	129
Nov-21	1.156	0.131	0.911	0.329	2.527	8,557	581	8,124	2,616	19,878	135	226	112	135	127
Dec-21	1.264	0.145	0.913	0.310	2.632	8,557	581	8,124	2,616	19,878	148	250	112	127	132
Jan-22	1.174	0.140	0.906	0.357	2.577	8,557	581	8,124	2,616	19,878	137	241	112	145	130
Feb-22	1.113	0.158	0.929	0.300	2.500	8,557	581	8,124	2,616	19,878	130	272	114	120	126
Mar-22	1.176	0.142	0.946	0.307	2.571	8,557	581	8,124	2,616	19,878	137	245	116	123	129
Apr-22	1.134	0.140	0.875	0.315	2.464	8,557	582	8,124	2,616	19,879	133	241	108	129	124
May-22	1.146	0.140	0.877	0.301	2.464	8,557	582	8,124	2,616	19,879	134	241	108	123	124
Jun-22	1.133	0.138	0.921	0.452	2.644	8,557	583	8,124	2,616	19,880	132	237	113	184	133
Jul-22	1.124	0.129	0.948	0.438	2.639	8,557	583	8,142	2,616	19,898	131	221	116	179	133
Aug-22	1.163	0.133	0.929	0.448	2.673	8,557	583	8,142	2,616	19,898	136	228	114	185	134
Sep-22	1.139	0.125	0.904	0.381	2.549	8,557	584	8,142	2,616	19,899	133	214	111	158	128
Oct-22	1.083	0.128	0.890	0.295	2.396	8,557	584	8,142	2,616	19,899	127	219	109	122	120
Nov-22	1.205	0.124	0.879	0.336	2.544	8,557	585	8,142	2,616	19,900	141	212	108	138	128
Dec-22	1.186	0.133	0.906	0.374	2.599	8,557	585	8,142	2,616	19,900	139	228	111	151	131
Jan-23	1.630	0.200	0.979	0.379	3.188	8,557	585	8,142	2,616	19,900	190	342	120	153	160
Feb-23	1.323	0.167	0.930	0.371	2.791	8,557	585	8,142	2,616	19,900	155	286	114	149	140

CSD: Cardiff Sanitary Division

RSF: Ranch Santa Fe Community Service District

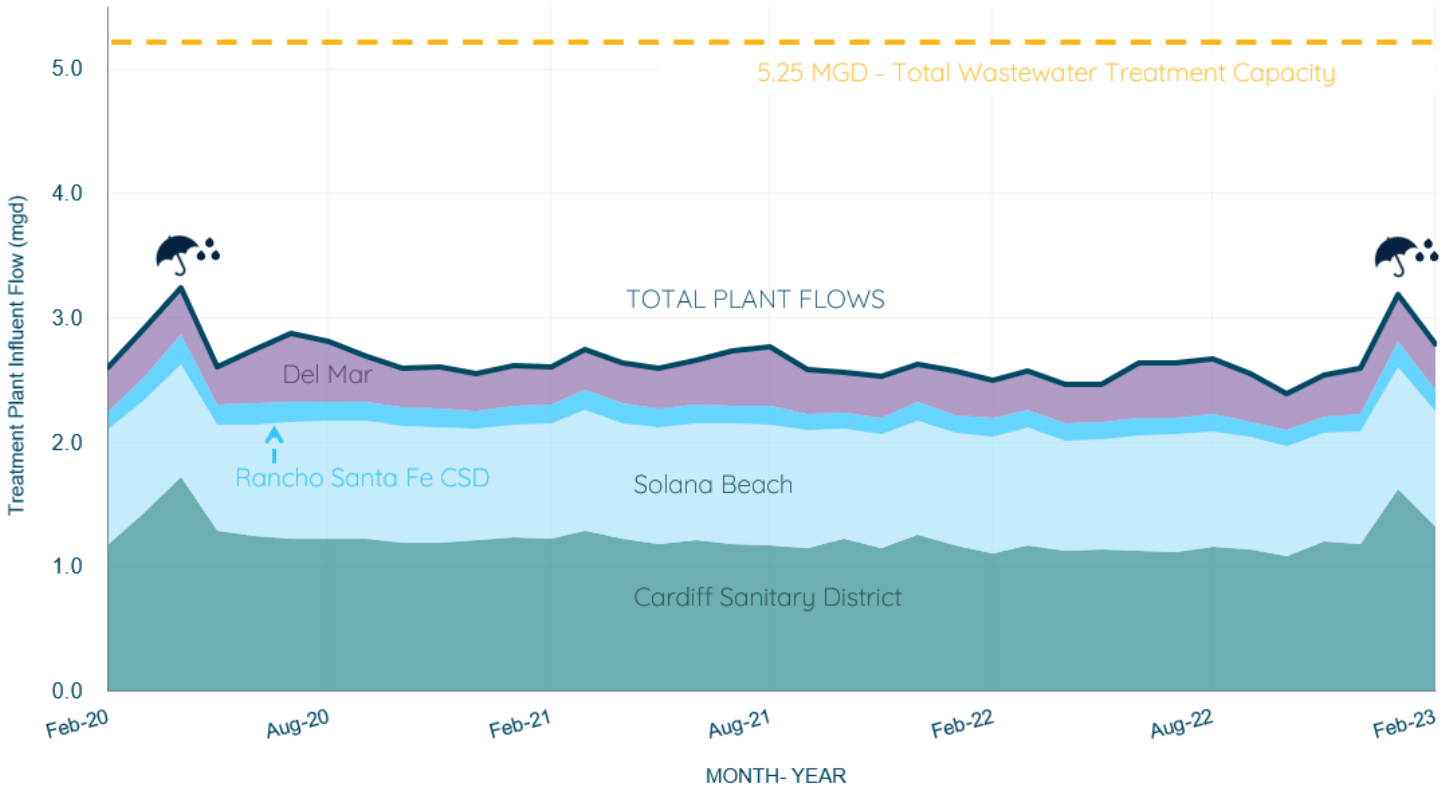
SB: Solana Beach

DM: City of Del Mar

EDU: Equivalent Dwelling Unit

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

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



City of Escondido Flows

The average and peak flow rate for the month of February 2023 from the City of Escondido's Hale Avenue Resource Recovery Facility, which discharges through the San Elijo Ocean Outfall, is reported below in Table 3.

TABLE 3 - CITY OF ESCONDIDO FLOWS

	Flow (mgd)
Escondido (Average flow rate)	10.3
Escondido (Peak flow rate)	17.7

Connected Equivalent Dwelling Units

The Cities of Encinitas, Solana Beach and Del Mar updated the number of connected EDUs that are reported to the SEJPA in July 2022. The Rancho Santa Fe CSD update their connected EDUs report every month. The number of EDUs connected for each of the Member Agencies and lease agencies is reported in Table 4 below.

TABLE 4 - CONNECTED EDUs BY AGENCY

	Connected (EDU)
Cardiff Sanitary Division	8,557
Rancho Santa Fe SID	585
City of Solana Beach	7,806
San Diego (to Solana Beach)	337
City of Del Mar	2,616
Total EDUs to System	19,900

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

*

AGENDA ITEM NO. 10

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 18, 2023

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: RECYCLED WATER REPORT

RECOMMENDATION

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

DISCUSSION

Recycled Water Production

For the month of February 2023, recycled water demand was 33.2 acre-feet (AF), which was met using 31.5 AF of recycled water and supplemented with 1.7 AF of potable water. Potable water was added to the system during a water line leak repair between the treatment system and south system storage tank. February demand was 53.1% below budget expectations of 71 AF due to heavy rain. However, the total water production of 1,082 AF for the first eight months of FY 2022-23 was above budget by 2.6%.

Figure 1 (attached) provides a graphical view of annual recycled water demand spanning the last 10 fiscal years, with the overlay of annual rainfall. Since the recycled water program primarily serves outdoor irrigation, annual demand is reduced during wet periods and increases during times of drought. Figure 2 (attached) shows the monthly recycled water demand for each February for the last ten years to provide a year-over-year comparison. Figure 3 (attached) compares budget versus actual recycled water sales for FY 2022-23.

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

FIGURE 1: RECYCLED WATER DEMAND AND RAINFALL COMPARISON

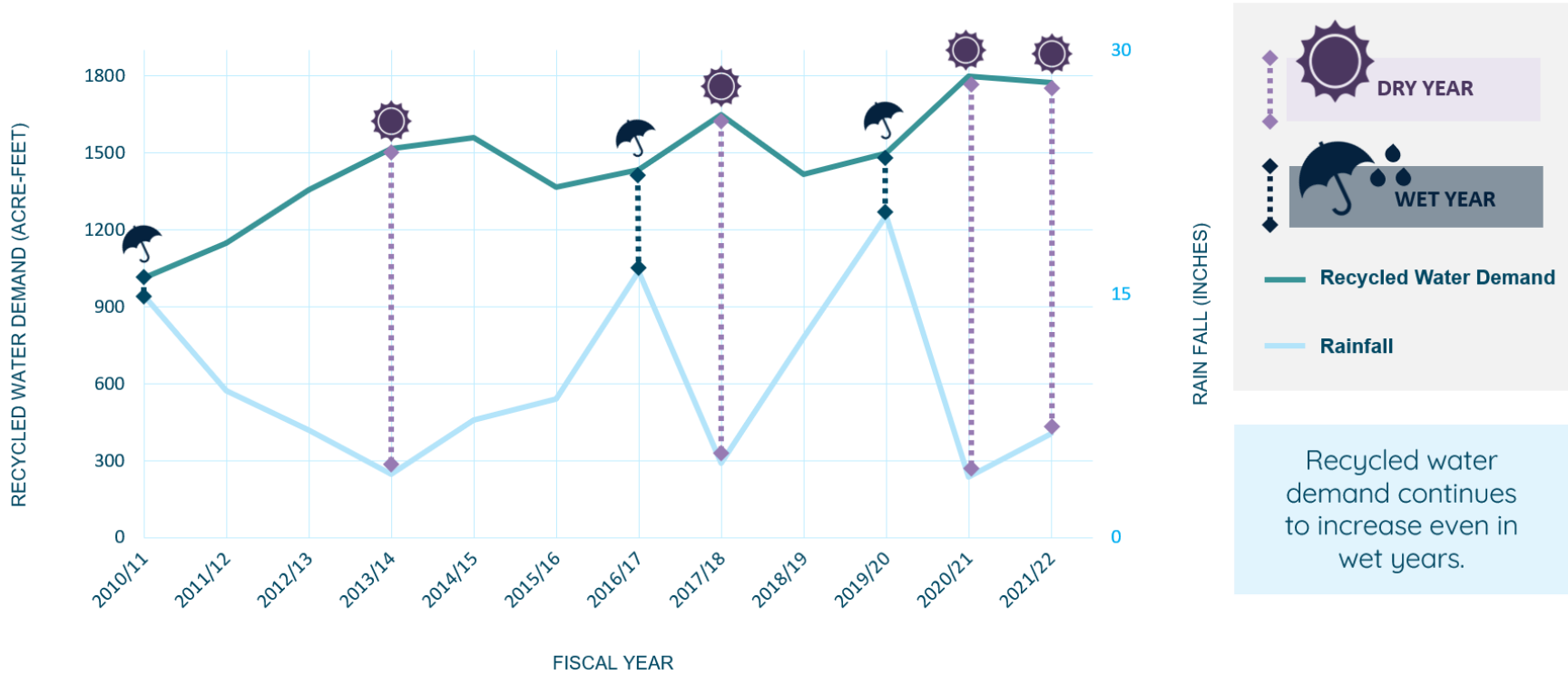


FIGURE 2: FEBRUARY RECYCLED WATER DEMAND

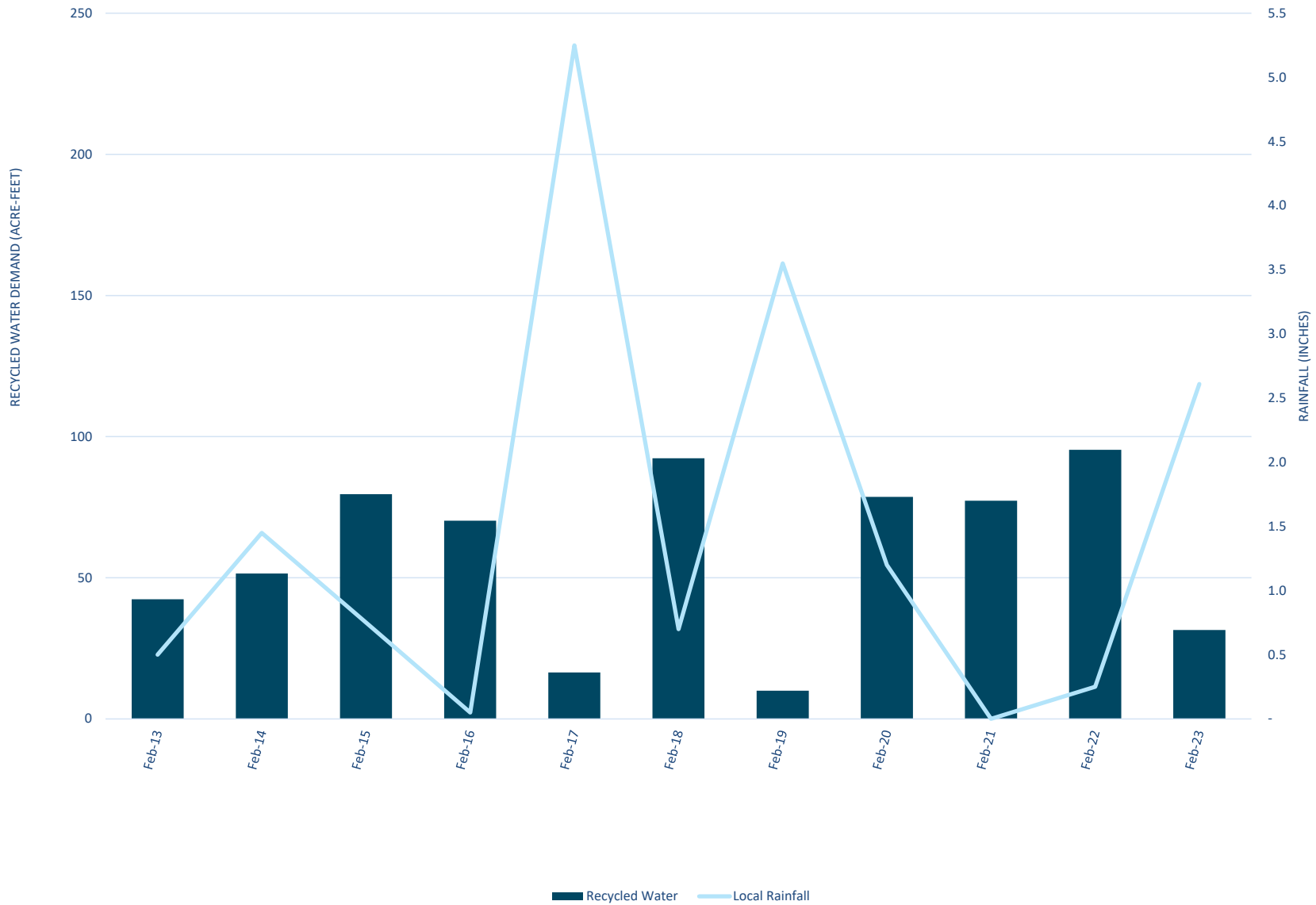
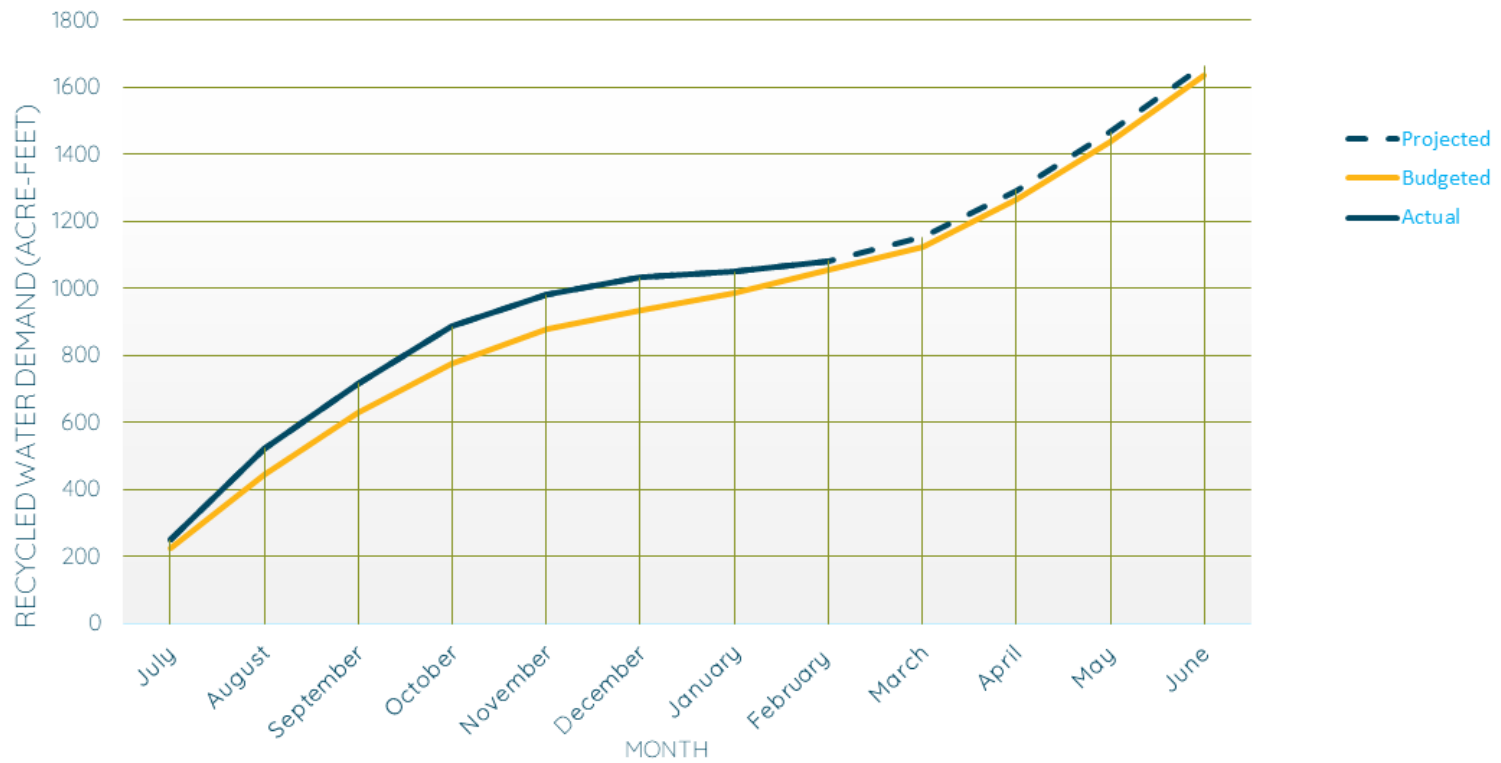


FIGURE 3: FY2022/23 CUMULATIVE DEMAND VS BUDGET



*

AGENDA ITEM NO. 11

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 18, 2023

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: REPORTABLE MEETINGS

RECOMMENDATION

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

BACKGROUND

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

DISCUSSION

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

1. Meeting to review Board Meeting Agenda with Board Chair Zito on March 8, 2023.

FINANCIAL IMPACT

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

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 18, 2023

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: SAN ELIJO JOINT POWERS AUTHORITY CONTRACT FOR PROCUREMENT OF FERRIC CHLORIDE, ALUMINUM SULFATE, LIQUID CALCIUM NITRATE, AND SODIUM HYPOCHLORITE FOR FISCAL YEAR 2023-24

RECOMMENDATION

It is recommended that the Board of Directors:

1. Authorize the General Manager to enter into an agreement with California Water Technologies, LLC for the procurement of ferric chloride for an amount not-to-exceed \$123,200;
2. Authorize the General Manager to enter into an agreement with Thatcher Company of Nevada, Inc. for the procurement of aluminum sulfate for an amount not-to-exceed \$77,500;
3. Authorize the General Manager to amend the agreement with Evoqua Water Technologies, LLC for the procurement of liquid calcium nitrate for an amount not-to-exceed \$100,450;
4. Authorize the General Manager to amend the agreement with Olin Corporation for the procurement of sodium hypochlorite for an amount not-to-exceed \$229,500; and
5. Discuss and take action as appropriate.

BACKGROUND

Each year the San Elijo Joint Powers Authority (SEJPA) solicits bids for chemicals used in the treatment of wastewater and the production of recycled water in accordance with the procurement policy. Certain chemicals may have contract amounts above the General Manager’s signing authority of \$50,000 and require Board approval.

San Elijo Joint Powers Authority (SEJPA) adds liquid calcium nitrate to the collection system to interrupt the biological process that leads to septicity. Adding calcium nitrate to the collection system reduces odors and corrosion within the collection system, pump stations, and the treatment facility. Ferric chloride is added to the wastewater treatment process at the primary setting tanks and the anaerobic digesters to enhance solid setting and reduce hydrogen sulfide production in the digesters. Aluminum sulfate is used prior to sand filtration to aid coagulation and filterability of the recycled water. Sodium Hypochlorite is used for disinfection of recycled water and in the facility's odor control system.

DISCUSSION

In January 2023, staff advertised and publicly bid via Planet Bids, the purchase of ferric chloride, and aluminum sulfate. Liquid calcium nitrate and sodium hypochlorite are entering the first year of two optional one-year terms with a provision for mutually agreeable cost increases. For the next fiscal year, based on the bids received and the needs of SEJPA, the contract amounts for ferric chloride, and aluminum sulfate, liquid calcium nitrate, and sodium hypochlorite are greater than the \$50,000 General Manager limit, and require Board approval. Each of the two new chemical contract terms is for one year, with the option of two additional one-year terms.

Ferric Chloride

The bid for the purchase of 125 dry tons of ferric chloride is to be delivered in 3,000 to 5,000-gallon shipments. Two vendors submitted a bid response. The bid results are shown in Table 1 below. The bid submitted by California Water Technologies, LLC (CWT) has been reviewed for completeness and meets requirements. CWT is the current provider of Ferric Chloride to SEJPA, and their service to date has met expectations. The cost per dry ton for this bid is 34% more than the current agreement due to inflation and the price of chlorine used to make the product.

Table 1 – Bid Results – Ferric Chloride

Vendor	Cost per Dry Ton	Dry Tons	Total Price
California Water Technologies, LLC	\$1,153.00	125	\$144,125
Brenntag Pacific, Inc.	\$2,025.24	125	\$253,155
Univar Solutions USA, Inc.	Declined to bid		

Aluminum Sulfate

The bid for the purchase of 125 liquid tons of aluminum sulfate is to be delivered in 3,000-gallon shipments. Two vendors submitted a bid response (shown in Table 2). The bid submitted by Thatcher Company of Nevada, Inc. (Thatcher) has been reviewed for completeness and meets requirements. Thatcher was previously a provider of aluminum sulfate to SEJPA, and their service met expectations. The cost per dry ton for this bid is 6% more compared to the current agreement due to inflation.

Table 2 – Bid Results – Aluminum Sulfate

Vendor	Cost per Liquid Ton	Liquid Tons	Total Price
Thatcher Company of Nevada, Inc.	\$620.00	125	\$77,500
Univar Solutions USA, Inc.	Declined to bid		

Liquid Calcium Nitrate

In March 2022, staff advertised and publicly bid via Planet Bids, the purchase of calcium nitrate as a turn-key system, including double-walled chemical storage tanks and dosing equipment. Evoqua Water Technologies, LLC (Evoqua) is the current provider of liquid calcium nitrate to SEJPA, and their service to date has met expectations. The initial contract term was for one year, with the option of two additional one-year terms. Evoqua has requested a price adjustment beginning July 1, 2023 to \$4.03 per gallon, a 39% increase. This increase is anticipated due to inflation and higher overall chemical prices in the marketplace.

Table 3 – Amendment – Liquid Calcium Nitrate

Vendor	Cost per Liquid Ton	Gallon	Total Price
Evoqua Water Technologies, LLC	\$4.03	24,926	\$100,450

Sodium Hypochlorite

SEJPA presented a bid solicitation in May 2022 for Sodium Hypochlorite, which was advertised electronically on Planet Bids and bids were received on April 14, 2022. A contract for procurement of sodium hypochlorite was approved by the Board at the May 17, 2022 meeting for a one year term with the option of two additional one-year terms. The lowest responsive and responsible bidder at that time was Olin Corporation and they have submitted a request for revised pricing for the second year of the contract at \$2.29 per gallon for FY 2023-24. This is a 53% increase in price over the first year due to inflation, which is in line with current chemical pricing outlined in the requested adjustment (attachment 4).

Table 4 – Amendment – Sodium Hypochlorite

Vendor	Cost per Liquid Ton	Gallon	Total Price
Olin Corporation	\$2.29	100,218	\$229,500

FISCAL IMPACT

The lowest responsive and responsible bid for ferric chloride was submitted by CWT for \$1,153 per dry ton per gallon. The FY 2023-24 Recommended Budget includes \$123,200 for ferric chloride purchases based on dose optimization and historic use.

The lowest responsive and responsible bid for aluminum sulfate was submitted by Thatcher for \$620 per liquid ton. The FY 2023-24 Recommended Budget will include \$77,500 for aluminum sulfate purchases.

The requested price adjustment for calcium nitrate that was submitted by Evoqua for \$4.03 per gallon is similar to other chemical price increases. The FY 2023-24 Recommended Budget will include \$100,450 for liquid calcium nitrate purchases.

The requested price adjustment for sodium hypochlorite that was submitted by Olin Corporation for \$2.29 per gallon is similar to other pricing being bid throughout the State. The FY 2023-24 Recommended Budget will include \$229,500 for sodium hypochlorite purchases.

It is therefore recommended that the Board of Directors:

1. Authorize the General Manager to enter into an agreement with California Water

Technologies, LLC for the procurement of ferric chloride for an amount not-to-exceed \$123,200;

2. Authorize the General Manager to enter into an agreement with Thatcher Company of Nevada, Inc. for the procurement of aluminum sulfate for an amount not-to-exceed \$77,500;
3. Authorize the General Manager to amend the agreement with Evoqua Water Technologies, LLC for the procurement of liquid calcium nitrate for an amount not-to-exceed \$100,450;
4. Authorize the General Manager to amend the agreement with Olin Corporation for the procurement of sodium hypochlorite for an amount not-to-exceed \$229,500; and
5. Discuss and take action as appropriate.

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

Attachment 1: Bid Form – California Water Technologies, LLC

Attachment 2: Bid Form – Thatcher Company of Nevada, Inc.

Attachment 3: 2023-24 Second Annual Term Pricing Letter - Evoqua Water Technologies, LLC

Attachment 4: 2023-24 Second Annual Term Pricing Letter - Olin Corporation

Attachment 1

**SAN ELIJO JOINT POWERS AUTHORITY
BID SUBMISSION FORM**

**FOR PROVISION OF FERRIC CHLORIDE
BID SPECIFICATION SE 2023 FC**

TO BE EXECUTED BY BIDDER AND SUBMITTED

TO: Michael T. Thornton, General Manager
San Elijo Joint Powers Authority
2695 Manchester Avenue
Cardiff-by-the-Sea, CA 92007

Dated: February 16, 2023

This bid, as presented herein, is irrevocable and may not be withdrawn for a period of sixty (60) calendar days after the date set for the opening of bids, except in accordance with the withdrawal of bid provisions in the request for bids.

Provision of approved liquid Ferric Chloride, as outlined in the detailed specification, to the San Elijo Water Campus for the period of July 1, 2023 to June 30, 2024, with the option of two (2) additional one (1) year terms at the request of the San Elijo Joint Powers Authority. Additional years would be at the same price as the first year.

<u>OPTION NO.</u>	<u>APPROXIMATE QUANTITY</u>	<u>ITEM DESCRIPTION WITH PRICES WRITTEN IN WORDS</u>	<u>TOTAL FIGURES</u>
1	Approximately 125 dry tons	Pre-approved or proven equal ferric chloride in 3,000 to 5,000 gallons shipments upon request of the Chief Plant Operator. All prices quoted are F.O.B. destination. Freight and full Insurance shall be paid by the bidder to the destination. Price per dry ton including shipping, setup charges and tax: <u>One Thousand One Hundred Fifty-Three Dollars and Zero Cents</u> (In Words)	<u>\$ 1153.00</u> (In Numbers)
		Contract Price (125 dry tons X per liquid ton price from above line): <u>One Hundred Forty-Four Thousand One Hundred Twenty-Five Dollars and Zero Cents</u> (In Words)	<u>\$ 144,125.00</u> (In Numbers)

ADDENDA ACKNOWLEDGMENT: Bidder Acknowledges Receipt of Addendum(s) No(s): None

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this statement was executed on February 16, 2023 at Detroit, ~~California~~, Michigan.

Tatyana Lipanovich

Signature of Authorized Bidder Representative: _____
Tatyana Lipanovich
Name of Individual (Typed): Title: Director of Sales of PVS Technologies, Inc. a Member of the Company
Firm Name: California Water Technologies, LLC.
Address: 8851 Dice Road
City: Santa Fe Springs State: CA Zip: 90670 Telephone: 866-337-7427

STATEMENT OF QUALIFICATIONS AND REFERENCES

**SAN ELIJO JOINT POWERS AUTHORITY
BID SUBMISSION FORM**

**FOR PROVISION OF ALUMINUM SULFATE
BID SPECIFICATION SE 2023 AS**

TO BE EXECUTED BY BIDDER AND SUBMITTED

TO: Michael T. Thornton, General Manager
San Elijo Joint Powers Authority
2695 Manchester Avenue
Cardiff-by-the-Sea, CA 92007

Dated: February 15, 2023

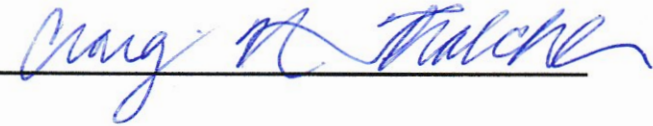
This bid, as presented herein, is irrevocable and may not be withdrawn for a period of sixty (60) calendar days after the date set for the opening of bids, except in accordance with the withdrawal of bid provisions in the request for bids.

Provision of approved liquid Aluminum Sulfate, as outlined in the detailed specification, to San Elijo Water Campus for the period of July 1, 2023 to June 30, 2024, with the option of two (2) additional one (1) year terms at the request of San Elijo Joint Powers Authority. Additional years would be at the same purchase price as the first year.

<u>OPTION NO.</u>	<u>APPROXIMATE QUANTITY</u>	<u>ITEM DESCRIPTION WITH PRICES WRITTEN IN WORDS</u>	<u>TOTAL FIGURES</u>
1	Approximately 125 liquid tons	Pre-approved or proven equal aluminum sulfate in bulk liquid shipments upon request of the Chief Plant Operator. All prices quoted are F.O.B. destination. Freight and full Insurance shall be paid by the bidder to the destination.	
		Price per liquid ton including shipping, setup charges and tax:	
		<u>Six hundred twenty dollars and zero cents</u> (In Words)	\$ <u>620.00</u> (In Numbers)
		Contract price (125 liquid tons x per liquid ton price): <u>Seventy-seven thousand five hundred dollars and zero cents</u> (In Words)	\$ <u>77,500.00</u> (In Numbers)

ADDENDA ACKNOWLEDGMENT: Bidder Acknowledges Receipt of Addendum(s) No(s): 0

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this statement was executed on February 15, 2023 at Salt Lake City, California, Utah.

Signature of Authorized Bidder Representative: 

Name of Individual (Typed): Craig N. Thatcher Title: C.E.O.
Firm Name: Thatcher Company of Nevada, Inc.
Address: P. O. Box 27407
City: Salt Lake City State: UT Zip: 84127-0407 Telephone: (702) 564-7622

NOTES

One year extensions must be mutually agreed upon between Thatcher Company of Nevada, Inc. and San Elijo Joint Powers Authority.

Appendices A and B form part of our proposal.

Chris Trees
Director of Operations
San Elijo JPA
2695 Manchester Avenue
Cardiff By the Sea, CA 92007-7077
Tel: (760) 753-6203 x 70
Email: treesc@sejpa.org

**RE: 2023-2024 BIOXIDE® FULL SERVICE ODOR CONTROL PRICING – OPTION YEAR ONE
AGREEMENT # 2023-001SC
SAN ELIJO, CA JPA
Evoqua Quote No. Q230411DT1**

Dear Chris:

Evoqua Water Technologies LLC (EWT) thanks you for your business and we specifically appreciate your ongoing use of Bioxide®.

Per our conversation, language in your recent bid specification related to a three-year fixed price led to San Elijo JPA to receive a much higher per gallon price than you would have received with yearly price adjustments that are mutually agreeable. EWT would like to offer a price for Option Year One of the current contract (Agreement 2023-001SC). If you are agreeable going forward with the current contract, the Option Year One Bioxide® delivered price will be \$4.03 per gallon for minimum load sizes of 1,600 gallons. Any price adjustment request will be based on the local CPI-U Index with both parties in mutual agreement. This price will be effective July 1, 2023, through June 30, 2024. The price includes the use of the dosing equipment and “as needed” service.

A license to use Bioxide® products is included with the product sale. Patents that cover aspects of the use of Bioxide products include, but are not necessarily limited to, United States Patent Nos. 5,500,368, 6,309,597, 7,087,172 and 7,553,420 B2. Bioxide, Bioxide-AQ, Bioxide AE, AQUIT and Full-Service Odor Control are trademarks of Evoqua Water Technologies LLC.

The current contract Terms and Conditions are considered part of this proposal and shall prevail. The above prices do not include any applicable taxes.

PLEASE NOTE: Effective April 2022, you may be assessed a 3% fee if paying via Credit Card. Find more info on our website here > <https://www.evoqua.com/en/about-us/terms-conditions-sale-products-services/credit-card-fee-faqs>. Ask us how to avoid paying fees by migrating to ACH CTX payment type.

Evoqua appreciates your business and support and looks forward to continuing to provide you the quality products, services, and lowest cost solutions. If you have any questions, comments, or concerns, please give me a call at (909) 837-9908 or via email at daniel.trybulski@evoqua.com. We look forward to providing you the “Best in Class” service for years to come.

Best regards,

Evoqua Water Technologies LLC

Dan Trybulski

Dan Trybulski
Technical Sales Representative / Municipal Services

**RE: 2023-2024 BIOXIDE® FULL SERVICE ODOR CONTROL PRICING – OPTION YEAR ONE
AGREEMENT # 2023-001SC
SAN ELIJO, CA JPA
Evoqua Quote No. Q230411DT1**

Evoqua will process your order when we receive acceptance of this proposal, by signing below and returning to municipalservices@evoqua.com or via fax to: (941) 359-7985.

Company Name: _____

This _____ day of _____ Month _____ Year

By: _____

Title: _____

Attachment 4



490 Stuart Road, NE, Cleveland, Tennessee 37312
Phone: (423) 336-4850 • Fax: (423) 336-4830
Internet Address: www.olinchloralkali.com

March 30, 2023

Mr. Chris Trees, Director of Operations
San Elijo Joint Powers Authority
2695 Manchester Avenue
Cardiff by the Sea, CA 92007-7077
Office (760)753-6203 x70 |
treesc@SEJPA.org | www.SEJPA.org

Re: San Elijo JPA, 12.5% Sodium Hypochlorite – 2023/24 Second Annual Term Pricing

Dear Chris,

Olin sincerely thanks the San Elijo JPA for their chemical business this past year. Olin is requesting an adjustment in delivered pricing as proposed below for the next annual contract term effective July 1.

Chlorine and bleach availability remain in limited supply this year. Olin has consistently met our obligations to our customers but the costs of raw materials (chlorine) and energy since the April 2022 bid have continued to rise significantly this past fiscal year (see following IHS and PG&E documentation). Chemical Manufacturing has also increased (see PPI indices). Fuel costs for transportation are also on the rise again this year. (see attached EIA data). We request relief for the next fiscal 2023/2024 contract term to recover these cost increases for the future next annual term. New annual pricing below will be effective 7/1/23 thru 6/30/24 as follows:

12.5% Sodium Hypochlorite (\$/per gal.)

2023/2024 Annual Pricing


(full loads, $\geq 4,800$)

\$2.29

Note: All other terms and conditions remain the same.

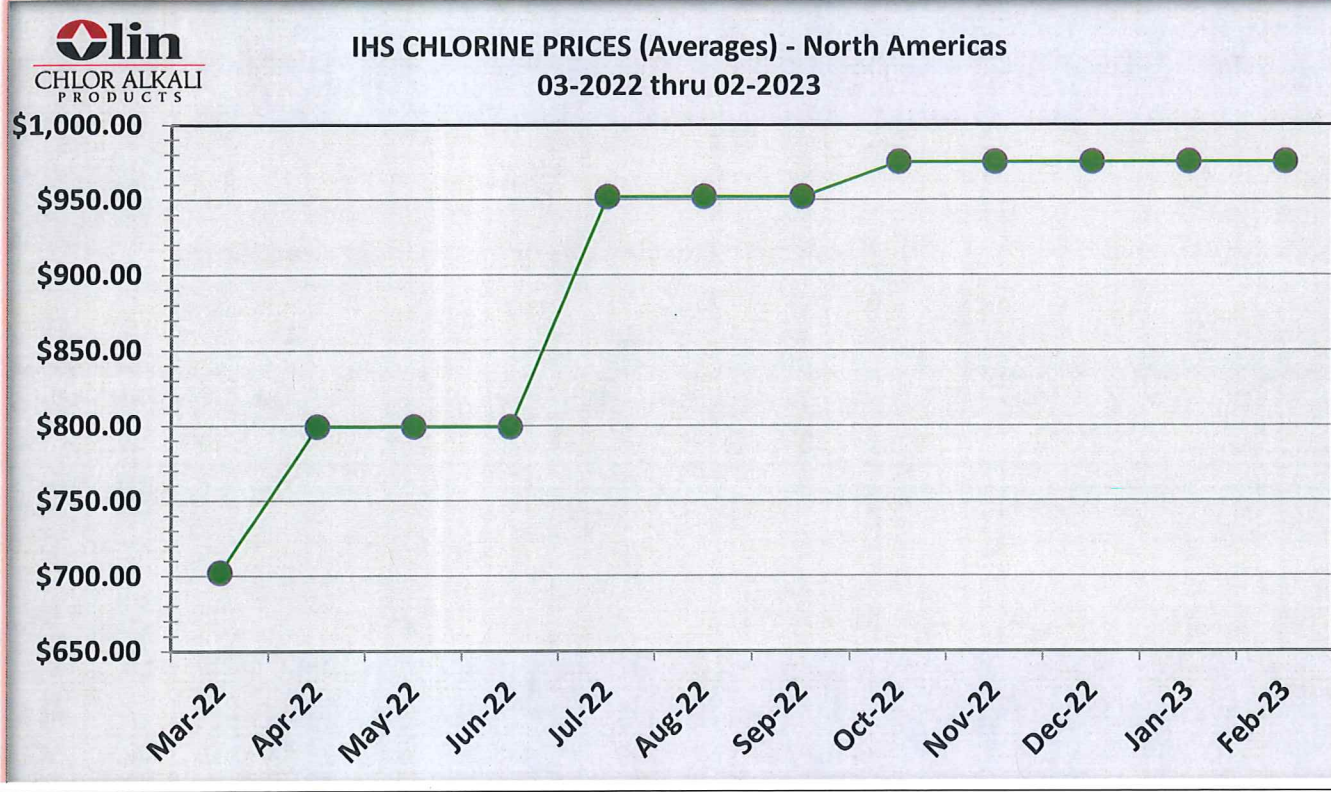
This proposal represents our efforts to provide consistent value and fair current market pricing for the city. Also attached are some Muni pricing data points awarded on recent bids for 2023 for comparison. Please confirm by April 15 so we may lock in our vendors and protect the SEJPA from any further market cost increases. Please feel free to contact me or Chuck Hogan if you should have any questions.

Regards,


John M. Schabacker
Business Director

Cc: Chuck Hogan, Account Manager

Attachments:





Storm Safety

Widespread rain, heavy mountain snow and gusty winds from storms may cause outages.

[We urge you to stay safe and be prepared.](#)

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Explore energy-saving ideas in the Business Resource Center



Customers' Heating Costs Expected to Increase this Winter with Higher Natural Gas Demand on West Coast

JANUARY 26, 2023

Feedback



TWITTER



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The prices that PG&E pays for the natural gas it delivers to its customers have been rising this year. PG&E wants its customers to know their energy bills are likely to rise as well.

Price increases have been driven by higher demand and tighter supplies on the West Coast, as customers use more natural gas for heating during cooler than normal temperatures. Power plants also use more natural gas to meet electricity demand.

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Like other utility companies, PG&E does not control the market prices it pays for gas and electricity. In addition, PG&E does not mark up the cost of the energy it purchases on behalf of its customers.

"PG&E recognizes our responsibility to serve our customers safely and reliably while keeping their energy bills as low as possible," said PG&E Vice President, Customer Operations and Enablement Vincent Davis. "We're here to help all our customers save money by working with them to find the best rate plan for their household or business, sharing no- and low-cost actions to help them reduce energy usage and better manage monthly bills, and offering assistance programs."

How much higher could rates be?

As of January 26, 2023, PG&E projects that gas rates for **small and medium-sized business customers** who procure gas from PG&E, to be about **29%** higher during the peak winter months —December through February— compared to the same months last winter. Similarly, gas rates for **large business customers**, who procure gas from PG&E, project to be **37%** higher during the same period.

Compared to last December through February, electricity customers' average rates will be impacted as follows:

- About 13% higher for small and medium-sized business customers (non-Community Choice Aggregator or Direct Access)
- 20.4% higher for large commercial customers on B/E-19 rate plan
- 24.4% higher for industrial business customers on B/E-20 rate plan
- 14.1% higher for agriculture customers

However, if the colder weather and natural gas prices moderate, then customer impacts could be less severe.

Prices higher in the West than nationwide


Natural gas prices change daily and have been much higher on the West Coast (California, Oregon and Washington) than the rest of the country since November.

Between January 19 and 25, California's average daily prices were five times higher than the U.S. benchmark Henry Hub prices and those in New York and Chicago, according to the [U.S. Energy Information Administration](#).



Databases, Tables & Calculators by Subject

Change Output Options:

From: To: 

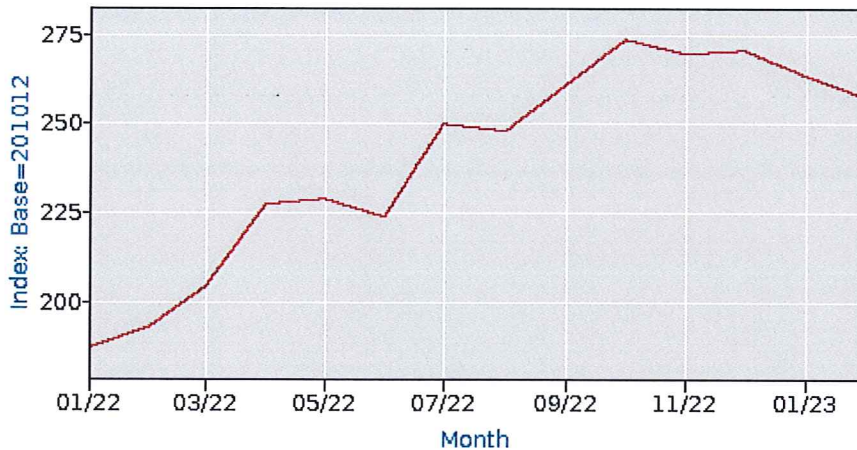
include graphs include annual averages

[More Formatting Options](#) 

Data extracted on: March 24, 2023 (2:19:01 PM)

PPI Industry Data

Series Id: PCU325180325180S
Series: PPI industry data for Other basic inorganic chemical manufacturing-Secondary products, not seasonally adjusted
Title: adjusted
Industry: Other basic inorganic chemical manufacturing
Product: Secondary products
Base Date: 201012



Download:  [.xlsx](#)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	187.089	193.115	204.050	226.850	228.533	223.787	249.673	247.936		273.611	269.419(P)	270.229(P)
2023	263.533(P)	257.506(P)										

P : Preliminary. All indexes are subject to monthly revisions up to four months after original publication.



PETROLEUM & OTHER LIQUIDS

OVERVIEW DATA ANALYSIS & PROJECTIONS

GLOSSARY > FAQs >

Referring Pages:

- California Gasoline and Diesel Retail Prices
- Retail Prices for Gasoline, All Grades

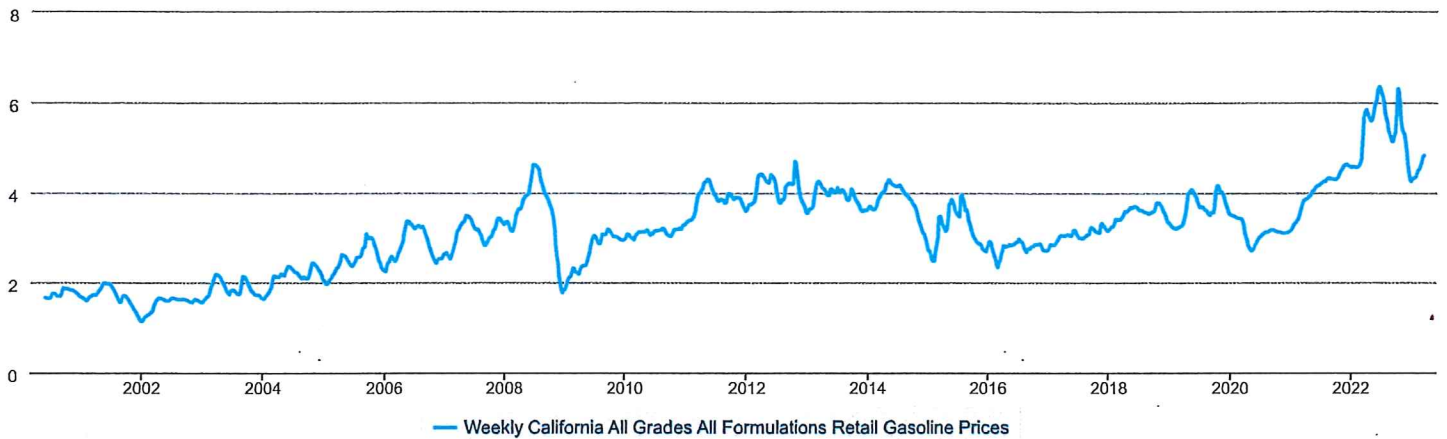
View History: Weekly Monthly Annual

[Download Data \(XLS File\)](#)

Weekly California All Grades All Formulations Retail Gasoline Prices

DOWNLOAD

Dollars per Gallon



eia Data source: U.S. Energy Information Administration

Chart Tools

no analysis applied

This series is available through the EIA open data API and can be downloaded to Excel or embedded as an interactive chart or map on your website.

Weekly California All Grades All Formulations Retail Gasoline Prices (Dollars per Gallon)

	Week 1		Week 2		Week 3		Week 4		Week 5	
2023-Jan	01/02	4.324	01/09	4.331	01/16	4.347	01/23	4.375	01/30	4.462
2023-Feb	02/06	4.514	02/13	4.535	02/20	4.626	02/27	4.687		
2023-Mar	03/06	4.811	03/13	4.834						

-- No Data Reported; -- = Not Applicable; NA = Not Available; W = Withheld to avoid disclosure of individual company data.

Release Date: 3/13/2023
Next Release Date: 3/20/2023

Referring Pages:

- California Gasoline and Diesel Retail Prices
- Retail Prices for Gasoline, All Grades

CUSTOMER	PRODUCT	PRODUCT DETAIL	VOLUME	UOM	EFF FROM	RANK	ORIGINAL BID PRICE	BID DATE
Sacramento Regional Sanitation District	HYPO	12.5%	7,900,000	GALS	12/01/22	1	\$2.45	11/03/22
Los Angeles County Sanitation District	HYPO	12.5%	9,755,000	GALS	01/01/23	1	\$2.02-\$2.66	10/13/22
El Torro Water District	HYPO	12.5%	133,100	GALS	01/01/23	1	\$2.00-\$2.75	10/26/22
Irvine Ranch Water District	HYPO	12.5%	1,391,200	GALS	01/01/23	1	\$2.00-\$2.75	10/26/22
Santa Margarita Water District	HYPO	12.5%	402,000	GALS	01/01/23	1	\$2.00-\$2.75	10/26/22
South Orange County Water District	HYPO	12.5%	755,000	GALS	01/01/23	1	\$2.00-\$2.75	10/26/22
Turlock Irrigation District	HYPO	12.5%	82,000	GALS	01/01/23	1	\$2.50	11/04/22
Rancho California Water District	HYPO	12.5%	182,500	GALS	01/01/23	1	\$2.35	12/13/22
Orange County Water District	HYPO	12.5%	3,275,000	GALS	01/01/23	1	\$2.15	12/29/22
Metropolitan WD/SoCal	HYPO	12.5%	20,000	GALS	02/01/23	1	\$2.632-\$3.032	02/01/23
Tracy, City of	HYPO	12.5%	60,000	GALS	03/01/23	1	\$3.29	03/13/23
Tracy, City of	HYPO	12.5%	175,000	GALS	03/01/23	1	\$2.749	03/13/23
Yreka, City of	HYPO	12.5%	70,000	GALS	04/01/23	1	\$2.54-\$2.75	03/09/23
East Bay Municipal Utility District	HYPO	12.5%	2,000,000	GALS	04/17/23	1	\$2.50	03/08/23
East Bay Municipal Utility District	HYPO	12.5%	150,000	GALS	04/17/23	1	\$3.20	03/08/23
East Bay Municipal Utility District	HYPO	12.5%	5,200,000	GALS	04/17/23	1	\$2.50	03/08/23
Alameda County Water District	HYPO	12.5%	290,000	GALS	07/01/23	1	\$2.8522	02/23/23
Antioch, City of	HYPO	12.5%	255,000	GALS	07/01/23	1	\$2.8052	02/23/23
Brentwood, City of	HYPO	12.5%	140,000	GALS	07/01/23	1	\$2.8052	02/23/23
Burlingame, City of	HYPO	12.5%	100,000	GALS	07/01/23	1	\$2.9116	02/23/23
Central Contra Costa Sanitary District	HYPO	12.5%	450,000	GALS	07/01/23	1	\$2.8052	02/23/23
Central Marin Sanitation Agency	HYPO	12.5%	240,000	GALS	07/01/23	1	\$2.884	02/23/23
Contra Costa Water District	HYPO	12.5%	320,000	GALS	07/01/23	1	\$2.8052	02/23/23
Daly City, City of/N. San Mateo CSD	HYPO	12.5%	135,000	GALS	07/01/23	1	\$2.9116	02/23/23
Delta Diablo Sanitary District	HYPO	12.5%	450,000	GALS	07/01/23	1	\$2.8052	02/23/23
Dublin-San Ramon Services District	HYPO	12.5%	350,500	GALS	07/01/23	1	\$2.6924	02/23/23
El Dorado Irrigation District	HYPO	12.5%	290,000	GALS	07/01/23	1	\$2.89	02/23/23
Folsom, City of	HYPO	12.5%	140,000	GALS	07/01/23	1	\$2.89	02/23/23
Hayward, City of	HYPO	12.5%	250,000	GALS	07/01/23	1	\$2.8522	02/23/23
Las Gallinas Valley Sanitary District	HYPO	12.5%	150,000	GALS	07/01/23	1	\$2.884	02/23/23
Lathrop, City of	HYPO	12.5%	60,000	GALS	07/01/23	1	\$2.9669	02/23/23
Livermore, City of	HYPO	12.5%	260,000	GALS	07/01/23	1	\$2.6924	02/23/23
Marin Municipal Water District	HYPO	12.5%	220,000	GALS	07/01/23	1	\$2.884	02/23/23
Napa Sanitation District	HYPO	12.5%	315,000	GALS	07/01/23	1	\$2.884	02/23/23
Nevada Irrigation District	HYPO	12.5%	45,000	GALS	07/01/23	1	\$2.89	02/23/23
Oro Loma Sanitary District	HYPO	12.5%	208,000	GALS	07/01/23	1	\$2.8522	02/23/23
Pinole, City of	HYPO	12.5%	115,000	GALS	07/01/23	1	\$2.8052	02/23/23
Roseville, City of	HYPO	12.5%	382,400	GALS	07/01/23	1	\$2.89	02/23/23
Sacramento County Water Agency	HYPO	12.5%	200,000	GALS	07/01/23	1	\$2.89	02/23/23
Sacramento, City of	HYPO	12.5%	192,000	GALS	07/01/23	1	\$2.89	02/23/23
San Jose-Santa Clara Reg WW	HYPO	12.5%	1,040,000	GALS	07/01/23	1	\$2.8842	02/23/23
San Leandro, City of	HYPO	12.5%	215,000	GALS	07/01/23	1	\$2.8522	02/23/23
San Mateo, City of	HYPO	12.5%	300,000	GALS	07/01/23	1	\$2.9116	02/23/23
Sewer Authority Mid Coastside	HYPO	12.5%	120,000	GALS	07/01/23	1	\$2.9116	02/23/23
South San Francisco, City of	HYPO	12.5%	220,000	GALS	07/01/23	1	\$2.9116	02/23/23
Stockton, City of	HYPO	12.5%	850,000	GALS	07/01/23	1	\$2.9669	02/23/23
Sunnyvale, City of	HYPO	12.5%	220,000	GALS	07/01/23	1	\$2.8842	02/23/23
Turlock, City of	HYPO	12.5%	350,000	GALS	07/01/23	1	\$2.9669	02/23/23
Union Sanitary District	HYPO	12.5%	1,000,000	GALS	07/01/23	1	\$2.8522	02/23/23
Watsonville, City of	HYPO	12.5%	60,000	GALS	07/01/23	1	\$2.8842	02/23/23
West County Wastewater District	HYPO	12.5%	290,000	GALS	07/01/23	1	\$2.8052	02/23/23
Zone 7 Water Agency	HYPO	12.5%	365,000	GALS	07/01/23	1	\$2.6924	02/23/23

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 18, 2023

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: CLEAN WATER SERVICE AGREEMENT AMENDMENT FOR THE
22nd DISTRICT AGRICULTURAL ASSOCIATION

RECOMMENDATION

It is recommended that the Board of Directors:

1. Authorize the General Manager to amend the agreement with the 22nd District Agricultural Association for the provision of Clean Water Services; and
2. Discuss and take action as appropriate.

BACKGROUND

In 2021, the 22nd District Agricultural Association (22nd DAA), in collaboration with the San Diego Regional Water Quality Control Board, completed a state-of-the-art, stormwater treatment system at the Del Mar Fairgrounds. The \$15 million system is designed to convey and treat stormwater discharged from barn and stable areas. It includes a network of pipelines, lift stations, a treatment facility, settling pond, and manmade wetlands on the infield of the horseracing track. The treatment process removes residual pollutants and includes a UV disinfection system to eliminate pathogens to ensure that the finished water meets all quality requirements prescribed in State law to prevent contamination of Stevens Creek, San Dieguito Lagoon, and the nearby Pacific Ocean.



For more than 20 years, the San Elijo Joint Powers Authority (SEJPA) and 22nd DAA have partnered to bring recycled water to the Del Mar Fairgrounds. As the operator of wastewater, stormwater, and recycled water facilities in Del Mar, Encinitas, and Solana Beach, SEJPA is

uniquely qualified to operate the 22nd DAA's treatment facility. SEJPA employs certified water system operators, mechanics, and engineers who are well-qualified to operate the treatment and UV disinfection system. On April 19, 2022, San Elijo Joint Powers Authority (SEJPA) entered into an agreement with the 22nd DAA as a contract operator of the stormwater treatment system.

DISCUSSION

The current agreement expires on April 30, 2023. This proposed amendment with 22nd DAA extends the terms of the agreement for an additional year with an increased annual agreement amount from \$120,000 to \$136,953 to address cost increases associated with inflation. The agreement period will end on April 30, 2024. The scope of work remains the same. The 22nd DAA presented the amendment to their Board of Directors in March 2023 and was approved. Next step is for SEJPA Board of Directors to consider approval.


FINANCIAL IMPACT

The proposed clean water services agreement with the Del Mar Fairgrounds is anticipated to generate \$136,953 in annual revenues for SEJPA. Revenues would cover labor costs to run the wetlands treatment system and associated facilities. The proposed agreement amendment is consistent with the mission to protect the water environment and would diversify revenue sources to the agency. As presented, the agreement term is for one year, with an option to renew by mutual approval of both parties.

It is recommended that the Board of Directors:

1. Authorize the General Manager to amend the agreement with the 22nd District Agricultural Association for the provision of Clean Water Services; and
2. Discuss and take action as appropriate.

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 18, 2023

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: BIOSOLIDS DEWATERING FACILITY IMPROVEMENT – CONTRACT CHANGE
ORDER NO. 1 (MS-2 UPSIZING)

RECOMMENDATION

It is recommended that the Board of Directors:

1. Authorize the General Manager to execute Contract Change Order No. 2 (CCO#2) in an amount not-to-exceed \$100,000 for upsized Main Switchboard No. 2 (MS-2); and
2. Discuss and take action as appropriate.

BACKGROUND

The Biosolids Dewatering Facilities Improvements Project (Biosolids Project) consists of two major components – (1) replacement of the aging biosolids dewatering equipment, polymer system, electrical systems, and biosolids handling systems, and rehabilitation of the dewatering building and ancillary systems and structures; (2) replacement of Main Switchboard No. 2 (MS-2) which feeds secondary, tertiary, Advanced Water Purification (AWP), and solids treatment processes. The biosolids facility and MS-2 were originally constructed in 1991 and are approaching the end of their service life and the building is exhibiting extensive deterioration.

The project was publicly bid and SEJPA awarded a contract to lowest, responsive bidder, GSE Construction, Inc. (GSE) in January 2023 in the amount of \$8,687,200.

DISCUSSION

The Biosolids Project originally specified replacing MS-2 with a 2,500 amp switchboard, which would maintain existing capacity and comply with current electrical code requirements, including the new solar power feed. However, SEJPA staff has since identified that future power demands will likely exceed the capacity of the 2,500 amp switchboard for MS-2 within the next five years.

To address the issue, SEJPA requested that GSE, the contractor of the Biosolids Project, increase the capacity of MS-2 from 2,500 to 3,000 amps, and revise breaker sizes for Motor Control Center – G (MCC-G) that supplies power to the biological reactors. SEJPA will only cover the cost difference for the parts and any additional installation expenses since GSE has not yet purchased the equipment. GSE provided preliminary equipment quotes and construction costs for the upsized MS-2 and for increased conduits/wiring sizing. To ensure the completeness and reasonableness of the proposed changes, SEJPA reviewed the potential scope and cost of the change order with the construction manager and the design engineer. The project team confirmed that installing a new and separate electrical service and switchboard in the future would be substantially more expensive than upgrading MS-2 at present. Additionally, modifying MS-2 in the future was found to be technically challenging. Consequently, staff determined that upgrading MS-2 at this time is the most effective and economical option for SEJPA.

To maintain momentum and minimize impacts to the Biosolids Project, CCO#2 should be executed in a timely manner. Due to supply chain issues impacting the electrical equipment market, final costs were not available at the time of writing this staff report. SEJPA staff and its project team will negotiate final change order costs and time impacts with GSE. At this time, the change order value is anticipated to be between \$50,000 and \$100,000. Additional time will be provided to accommodate the delay in the procurement process.

FISCAL IMPACT

The Biosolids Project budgeted at \$11.2 million, including \$1.02 million in contingency, is fully funded from Wastewater Capital Program. CCO#2 is not-to-exceed \$100,000 or 1% of the construction contract amount. Approval of staff's recommendation will reduce contingency funds to \$919,255 for the remainder of the project. No additional funding is needed at this time.

RECOMMENDATION

It is therefore recommended that the Board of Directors:

1. Authorize the General Manager to execute Contract Change Order No. 2 (CCO#2) in an amount not to exceed \$100,000 for upsized Main Switchboard No. 2 (MS-2); and
2. Discuss and take action as appropriate.

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 18, 2023

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: UPDATE OF EMERGENCY REPAIRS TO RECYCLED WATER PIPELINE IN
MANCHESTER AVE.

RECOMMENDATION

It is recommended that the Board of Directors:

1. Confirm the continuation of the Agreement with GEM Site Development, LLC pursuant to San Elijo Joint Power Authority’s Resolution 2022-01 “Purchasing Policies and Procedures” and Public Contract Code 22050, pending completion of final grind and overlay pavement restoration.

BACKGROUND

The San Elijo JPA’s recycled water system consists of a “north system” and a “south system”, both of which are supplied by recycled water produced at the San Elijo Water Campus. On February 5, 2023, wet pavement was observed just east of the intersection of the Water Campus entrance on Manchester Avenue. As reported to the Board on February 21st, SEJPA investigated the situation and enacted emergency provisions of our Purchasing Policy and Procedures to retain a local pipeline contractor, GEM Site Development, LLC (GEM) under a time and materials (T&M) contract. SEJPA’s Resolution 2022-01 “Purchasing Policies and Procedures”, Part 3.1.d provided for emergency contract in this situation under the General Manager’s authority.

The Contractor located a leak at an existing service saddle on February 6, 2023. Under SEJPA’s direction, GEM proceeded with repair work including material purchases, removing a section of damaged pipe, and replacement of the pipe with repair couplings, joint restraints, and a new service saddle. Trench preparation, pipe bedding, backfill and trench repair were completed in accordance with City of Encinitas standards on February 11, 2023. Pursuant to City of Encinitas requirements, the Contractor is to return to perform a grind and overlay patch on the trench.

Pursuant to Section 22050 of the Public Contract Code (PCC) SEJPA is to provide an update to the governing Board until the action (here, the emergency repair contract) is terminated.

DISCUSSION

Although the pipeline repair and initial road paving has been completed, final pavement restoration consistent with the City's paving requirements is still outstanding. Providing a time between initial and final pavement restorage provides allowance for potential settling and correction. However, wet weather over the past month has extended the period between initial and final paving. Upon completion of all work, SEJPA will reconcile the time and materials charges in order to approve and pay-out GEM's final invoice. After this final reconciliation is performed, the General Manager will terminate the time and materials contract with GEM.

FINANCIAL IMPACT

Funding for this emergency event will be allocated from the recycled water reserve fund. Board action on February 21, 2023, confirmed the Emergency Condition and ratified the emergency repair contract with GEM Site Development, LLC for an amount not to exceed an estimated value of \$50,000. SEJPA is monitoring the Time and Material (T&M) costs and does not anticipate the repair work to exceed the authorized amount.

RECOMMENDATION

It is recommended that the Board of Directors:

1. Confirm the continuation of the Agreement with GEM Site Development, LLC pursuant to San Elijo Joint Power Authority's Resolution 2022-01 "Purchasing Policies and Procedures" and Public Contract Code 22050, pending completion of final grind and overlay pavement restoration.

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 18, 2023

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: Director of Finance and Administration

SUBJECT: PRESENTATION OF SAN ELIJO JOINT POWERS AUTHORITY FISCAL YEAR
2023-24 RECOMMENDED BUDGET

RECOMMENDATION

It is recommended that the Board of Directors:

1. Review the Fiscal Year 2023-24 Recommended Budget; and
2. Discuss and take action as appropriate.

DISCUSSION

The Fiscal Year (FY) 2023-24 San Elijo Joint Powers Authority (SEJPA) Recommended Budget has been prepared in accordance with SEJPA formation agreement and service agreements with other government entities. The budget estimates all expenditures necessary to provide wastewater treatment, waste disposal, water recycling, laboratory, ocean outfall, pump stations, and other services. The FY 2023-24 Recommended Budget Document is available on SEJPA's website at <https://www.sejpa.org/about-us/financials>.

The FY 2023-24 Recommended Budget consists of \$9,974,623 operating expense, \$6,570,000 capital appropriation, and \$2,394,566 debt service payments for a total budget of \$18,939,189. This amount includes the Recycled Water program, which has a total recommended budget of \$8,173,135 including operations and maintenance, capital projects appropriation, and debt service payments. The total recommended budget also includes Leucadia Wastewater District (WWD) Technical Support Services, a new program with a budget of \$22,800 and the second year of service to the 22nd District Agricultural Association clean water services program with a budget of \$136,954. Both programs are fully funded by the organizations that are requesting these services.

Operating Costs

SEJPA management has reviewed the recommended budget in detail to control costs, maximize value, and ensure the agency's ability to perform its vital functions. The recommended operating budget for all programs will increase by \$1,063,178. This increase reflects general cost inflation associated with labor, utilities, and chemicals, coupled with higher demands for engineering services to expand and advance the recycled water program. In addition, for pension management, \$37,000 is budgeted to be deposited into SEJPA's PARS Trust, which is expected to increase the PARS Trust balance to \$611,737.

Program	Adopted Budget 2022-23	Recommended Budget 2023-24	Budget Change	% Change
Wastewater Treatment	\$ 3,455,532	\$ 3,963,797	\$ 508,265	14.7%
Laboratory Services	894,520	955,076	60,556	6.8%
Ocean Outfall	1,020,349	1,031,231	10,882	1.1%
Cardiff Sanitary Division Pump Stations	355,226	376,169	20,943	5.9%
Encinitas Sanitary Division Pump Station	155,882	167,777	11,895	7.6%
City of Encinitas Urban and Stormwater Services	37,314	55,514	18,200	48.8%
City of Solana Beach Pump Stations	446,437	463,275	16,838	3.8%
City of Solana Beach Generator Maintenance Services	14,884	15,507	623	4.2%
City of Del Mar Pump Station	61,888	66,392	4,504	7.3%
22nd District Agricultural Association (Del Mar Fairgro	120,000	136,953	16,953	14.1%
Leucadia WWD Technical Support Services <i>New!</i>	-	22,800	22,800	
	<u>\$ 6,562,032</u>	<u>\$ 7,254,491</u>	<u>\$ 692,459</u>	<u>10.6%</u>
Recycled Water	2,349,413	2,720,132	370,719	15.8%
Total Operating Expenses	<u>\$ 8,911,445</u>	<u>\$ 9,974,623</u>	<u>\$ 1,063,178</u>	<u>11.9%</u>

Capital Improvement Program

The SEJPA Capital Improvement Program includes both new and ongoing projects for the Wastewater Treatment, Laboratory Services, Ocean Outfall, and the Recycled Water programs. This program also contains pump station projects which are funded entirely by the owner of the pump station. FY 2023-24 recommended Capital Improvement Program appropriation is set at \$6,570,000, including \$4,450,000 Recycled Water Phase 4 capital program projects (see Recycled Water Program section below) and \$2,120,000 capital improvements funded by agencies served by SEJPA using the pay-as-you-go (PAYGO) method or cash revenue for capital needs. PAYGO capital is budgeted at \$1,225,000 for Wastewater related improvements, \$120,000 for Laboratory improvements, and \$100,000 for Ocean Outfall capital reserve. In addition, SEJPA is collecting \$75,000 in capital funds associated with the Olivenhain inlet gate replacement and \$600,000 in capital funds associated with mechanical equipment replacement at the Moonlight Beach pump station. The table below depicts the PAYGO capital requests for each agency served by SEJPA.

CAPITAL IMPROVEMENT PROGRAM

Capital Project	Encinitas	Solana Beach	Del Mar	Rancho Santa Fe CSD	Escondido	Recycled Water	Total
Biological Treatment Improvements (NDN & CCT)*	\$ 220,000	\$ 220,000	\$ 60,000	\$ 25,000	\$ -	\$ 525,000	\$ 1,050,000
Stormwater Capture and Reuse*	146,667	146,667	40,000	16,666	-	350,000	700,000
Miscellaneous Projects	146,667	146,667	40,000	16,666	-	-	350,000
Laboratory Remodel	50,286	50,286	13,714	5,714	-	-	120,000
Outfall Reballast Reserve	4,412	4,412	1,176	490	39,510	-	50,000
Escondido Vault Rehabilitation	4,412	4,412	1,176	490	39,510	-	50,000
Olivenhain Inlet Gate Replacement	75,000	-	-	-	-	-	75,000
Moonlight Beach Pump Station Rehabilitation	600,000	-	-	-	-	-	600,000
RW Valve Replacement (part of Wanket project)	-	-	-	-	-	\$ 460,000	460,000
Wanket Tank Refurbishment & Pipeline	-	-	-	-	-	2,990,000	2,990,000
Pump Services	-	-	-	-	-	125,000	125,000
Total*	\$ 1,247,444	\$ 572,444	\$ 156,066	\$ 65,026	\$ 79,020	\$ 4,450,000	\$ 6,570,000

* The Wastewater Program will reimburse the Recycled Water Program for its share of the NDN conversion and stormwater capture and reuse across the Water Campus through four annual installments of \$875,000 per year, totaling \$3.5 million, starting in FY 2023-24.

Debt Service

Debt service for SEJPA is budgeted at \$2,394,566, which increased from the prior year by \$806,850. This increase reflects the estimated debt service payment for the private placement loan in an amount of up to \$10,000,000 to fund the Recycled Water Phase 4 capital program projects. Terms of the loan, subject to competitive process, are anticipated to be a fixed interest rate for a term of 20 years with annual payments estimated at approximately \$800,000. Debt service on the loan will be paid through recycled water fund. The planned debt service for the FY 2023-24 Budget is as follows:

- 2017 Revenue Bond payment of \$1,338,175 (2017 Clean Water Projects)
- San Diego Gas & Electric On Bill Financing of \$53,388 (Blower Replacement Project)
- Advanced Water Purification (AWP) loan payment of \$148,153 (constructed in 2013)
- SFID Pipeline loan of \$44,500 (11th year)
- Solana Beach Pipeline loan of \$10,350 (4th year)
- Recycled Water Capital Improvement Program (Phase 4) estimated at \$800,000 **New!**

DEBT SERVICES

Expense	Adopted 2022-23	Recommended 2023-24	\$ Change	% Change
2017 Revenue Bonds	\$ 1,337,425	\$ 1,338,175	\$ 750	0.1%
San Diego Gas & Electric	53,388	53,388	-	0.0%
Advanced Water Purification	148,153	148,153	-	0.0%
SFID Pipeline Loan	37,500	44,500	7,000	18.7%
Solana Beach Pipeline Loan	11,250	10,350	(900)	-8.0%
Recycled Water Capital Improvement Program (Phase 4)*	-	800,000	800,000	100.0%
Total	\$ 1,587,716	\$ 2,394,566	\$ 806,850	50.8%

* Estimated debt service anticipated to be issued in May 2023.

Budget Allocation Basis and Revenues

The cost for wastewater treatment and disposal services for the Member Agencies and other participating agencies is proportionally allocated based on use, indicated by measured flows or level of effort, as appropriate. Flows are averaged over a 3-year period to determine the cost sharing estimate for the subsequent fiscal year. Below is a table showing influent and effluent flow and capacity owned or leased by entity. Below are tables of the budget allocation basis and revenue by entity based on the allocation.

BUDGET ALLOCATION BASIS

Entity	Millions of Gallons Per Day (MGD)							
	Influent		Effluent		Wastewater Treatment Capacity		Outfall Capacity	
City of Encinitas	1.214	45.9%	0.527	5.1%	2.200	41.9%	2.250	8.8%
City of Solana Beach	0.920	34.8%	0.391	3.8%	2.200	41.9%	2.250	8.8%
Rancho Santa Fe CSD	0.148	5.6%	0.064	0.6%	0.250	4.8%	0.250	1.0%
City of Del Mar	0.364	13.8%	0.151	1.5%	0.600	11.4%	0.600	2.4%
City of Escondido	-	0.0%	9.174	89.0%	-	0.0%	20.150	79.0%
Total	2.645	100.0%	10.307	100.0%	5.250	100.0%	25.500	100.0%

REVENUE BY ENTITY BASED ON ALLOCATION

Revenue Source	Adopted Budget 2022-23	Recommended Budget 2023-24	Budget Change	% Change
City of Encinitas	\$ 4,874,444	\$ 4,691,390	\$ (183,054)	-3.8%
City of Solana Beach	3,145,811	3,332,966	187,155	5.9%
City of Del Mar	949,515	994,172	44,657	4.7%
22nd District Agricultural Association	120,000	136,953	16,953	14.1%
Rancho Santa Fe CSD	377,184	404,207	27,023	7.2%
City of Escondido	988,720	996,841	8,121	0.8%
Laboratory Services	42,000	100,600	58,600	139.5%
Recycled Water	4,236,796	4,803,713	566,917	13.4%
T-Mobile Cell Site Lease	31,783	32,736	953	3.0%
Other Revenue	50,000	22,800	(27,200)	-54.4%
Interest on Wastewater Operations	30,000	30,000	-	0.0%
Interest on Water Reclamation	12,000	12,000	-	0.0%
Total Revenue Sources	\$ 14,858,253	\$ 15,558,379	\$ 700,126	4.7%

Recycled Water Program

SEJPA owns and operates a Recycled Water utility that sells water to San Dieguito Water District, Santa Fe Irrigation District, Olivenhain Municipal Water District, City of Del Mar, and Encinitas Ranch Golf Authority. For FY 2023-24, recycled water total revenues are recommended at \$4,803,713, which will be an increase of \$566,917 year-over-year in anticipation of water sales performance and grant revenues to be reimbursed. Recycled water total expenses are recommended at \$8,173,135 including \$2,720,132 operating cost, 4,450,000 capital appropriation, and \$1,003,003 debt services costs.

Operating costs are recommended to increase by \$370,719 to support staff effort required to operate and advance the program, including grant pursuits and capital planning as well as accounting for inflation to supplies and services costs. The \$4,450,000 recycled water capital project appropriation is for the improvements to the recycled water treatment, storage, and conveyance systems. The funds will be utilized for projects related to treatment system enhancement, valve maintenance and replacements, refurbishment of existing storage tanks or the construction of new storage, replacing existing distribution system pumps and motors, stormwater recycling, and ongoing system asset management. The capital funding strategy includes a private placement loan of up to \$10 million to smooth cashflows. The Wastewater Program will reimburse the Recycled Water Program for its share of the NDN conversion and stormwater capture and reuse across the Water Campus through four annual installments of \$875,000 per year, totaling \$3.5 million, starting in FY 2023-24 (see Capital Improvement Program section above). Below are two tables showing the Recycled Water Program revenue sources and expenses.

RECYCLED WATER PROGRAM REVENUE SOURCES

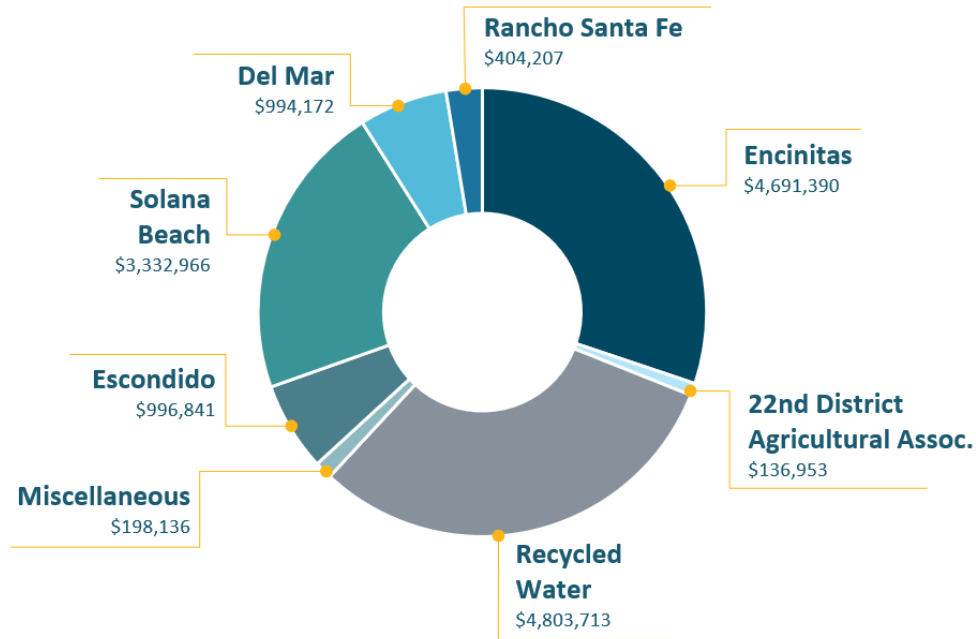
Revenue Source	Adopted Budget 2022-23	Recommended Budget 2023-24	Budget Change	% Change
Santa Fe Irrigation District	\$ 1,044,300	\$ 1,096,044	\$ 51,744	5.0%
San Dieguito Water District	708,000	746,634	38,634	5.5%
City of Del Mar	159,300	165,510	6,210	3.9%
Encinitas Ranch Golf Course	314,906	327,503	12,597	4.0%
Olivenhain Municipal Water District	490,290	548,022	57,732	11.8%
Total Customers	\$ 2,716,796	\$ 2,883,713	\$ 166,917	6.1%
MWD/CWA Incentives	720,000	720,000	-	0.0%
IRWM Grant	800,000	1,200,000	400,000	50.0%
Total Revenue	\$ 4,236,796	\$ 4,803,713	\$ 566,917	13.4%

RECYCLED WATER PROGRAM EXPENSES

Expense	Adopted Budget 2022-23	Recommended Budget 2023-24	Budget Change	% Change
Personnel	\$ 874,202	\$ 945,399	\$ 71,197	8.1%
Supplies and Services	1,375,211	1,684,733	309,522	22.5%
Capital Outlay	50,000	40,000	(10,000)	-20.0%
Contingency	50,000	50,000	-	
Total Operating Expense	<u>\$ 2,349,413</u>	<u>\$ 2,720,132</u>	<u>\$ 370,719</u>	<u>15.8%</u>
Capital Expenses	500,000	4,450,000	3,950,000	790.0%
Total Operating and Capital Expenses	<u>\$ 2,849,413</u>	<u>\$ 7,170,132</u>	<u>4,320,719</u>	<u>151.6%</u>
Debt Service				
Recycled Water CIP (Phase 4)	\$ -	\$ 800,000	\$ 800,000	
Advanced Water Purification	148,153	148,153	-	-
SFID Pipeline Loan	37,500	44,500	7,000	18.7%
Solana Beach Pipeline Loan	11,250	10,350	(900)	-8.0%
Total Debt Service	<u>\$ 196,903</u>	<u>\$ 1,003,003</u>	<u>\$ 806,100</u>	<u>409.4%</u>
Total Expenses	<u>\$ 3,046,316</u>	<u>\$ 8,173,135</u>	<u>\$ 5,126,819</u>	<u>168.3%</u>

SUMMARY

The recommended FY 2023-24 Budget consists of \$9,974,623 operating expense, \$6,570,000 capital projects appropriation, and \$2,394,566 debt service payments for a total recommended budget of \$18,064,189. SEJPA receives revenues from seven primary sources, with the three largest customers being the City of Encinitas, the City of Solana Beach, and the Recycled Water Utility, which are expected to provide \$4,691,390, \$3,332,966, and \$4,803,713, respectively. The graph below shows the revenue source allocations for FY 2023-24. In addition to the budget, to align with current duties, staff recommends two changes to the Classification and Salary Schedule. One change is to add the Management Analyst position title series matching the Financial Analyst series for non-financial related duties. The other change is to replace the Laboratory Analyst-In-Training position title with Laboratory Assistant.



Further information about the FY 2023-24 Recommended Budget is discussed in detail in the budget document, along with information regarding the contribution requirements of the various agencies served by SEJPA. The May 16, 2023 Board Agenda will include a budget discussion item for the Board to publicly discuss any changes or comments on the recommended budget. The final recommended budget will be brought to the June 20, 2023 meeting for Board approval.

It is therefore recommended that the Board of Directors:

1. Review the Fiscal Year 2023-24 Recommended Budget; and
2. Discuss and take action as appropriate.

Respectfully submitted,

Amy Chang
 Director of Finance and Administration

SAN ELIJO JOINT POWERS AUTHORITY
MEMORANDUM

April 18, 2023

TO: Board of Directors
San Elijo Joint Powers Authority

FROM: General Manager

SUBJECT: AWARD OF PROFESSIONAL ENGINEERING AND DESIGN SERVICES FOR
STORMWATER CAPTURE, REUSE, AND SITE WATER QUALITY
IMPROVEMENTS PROJECT

RECOMMENDATION

It is recommended that the Board of Directors:

1. Authorize the General Manager to execute a Professional Services Agreement with Dudek in an amount not-to-exceed \$268,556 for design of the Stormwater Capture, Reuse, and Site Water Quality Improvements Project with cost shared equally between the Recycled Water Program and Wastewater Program; and
2. Discuss and take action as appropriate.

BACKGROUND

In March 2023, SEJPA's Board approved the Phase 4 Capital Projects, including the Stormwater Capture, Reuse, and Site Water Quality Improvements Project (Project) which will provide new source water for recycling, improve site drainage to manage runoff and erosion, protect downstream water quality, and align with industrial stormwater permit requirements. The project is budgeted at \$2.1 million and has qualified for up to \$1.4 million in state and federal grant funding. The remaining project cost of approximately \$700,000 will be funded equally by Wastewater Program and Recycled Water Program Funds.

DISCUSSION

In March 2023, San Elijo Joint Powers Authority (SEJPA) advertised a request for proposals (RFP) through its online procurement portal, Planet Bids. Prospective proposers were given the opportunity to visit the site and discuss the project with SEJPA staff. SEJPA received three proposals by the due date of April 4th from Dudek, Fuscoe Engineering Inc. (Fuscoe), and Hoch Consulting APC (Hoch). A selection panel consisting of SEJPA staff reviewed the proposals and rated the teams in accordance with the selection process defined in the RFP that included the following criteria (assigned 10 maximum points each): the strength of the project team members,

the firm’s experience and technical competence, the approach to the project, and overall firm qualifications and strength. The selection panel’s consensus scoring is represented in the table below. Staff met with the highest ranked team, Dudek to review scope assumptions, clarify project objectives, and confirm expectations for project delivery. Staff also reviewed the proposed level of effort (labor hours), use of sub-consultants to fulfill the scope, and compared billing rates against typical market rates, determining that the scope, level of effort, and fee are reasonable. Based on the outcome of scope and fee negotiations, Staff recommends award of the Design Services to Dudek for a not-to-exceed fee of \$268,556. The Dudek team has experience at the San Elijo Water Campus and demonstrated strong qualifications and experience with industrial stormwater permit compliance, stormwater capture and reuse, and pump station design. They proposed an appropriate staffing plan (level of effort and resources) and are committing key personnel with the skillset and commitment most closely aligned with SEJPA’s needs for this project.

Rating Criteria	Max Score	Dudek	Fuscoe	Hoch
Strength of Project Team Members	10	8	7	7
Firm Experience and Technical Competence	10	9	7	7
Approach to the Project	10	7	4	7
Overall Firm Qualifications and Strength	10	8	6	7
Total	40	32	24	28
Proposed Fee Estimate		\$268,556 ⁽¹⁾	\$245,409	\$254,384 ⁽²⁾
<p>(1) As-negotiated and including allowance for as-needed permitting, digital ortho-photo, and groundwater level monitoring.</p> <p>(2) Hoch proposal offered an alternative pump station design; cost includes optional services.</p>				

FISCAL IMPACT

All Project costs will be paid through the Recycled Water Program from capital reserves and Phase 4 Capital Program financing, as necessary. The Wastewater Program will reimburse its share (net of grant funding) through capital cash contributions (pay-go). Recycled Water Program’s share (net of grant funding) will be funded from recycled water sales. There are sufficient funds in the Recycled Water Program capital reserves to fund the design at this time.

It is therefore recommended that the Board of Directors:

1. Authorize the General Manager to execute Professional Services Agreement with Dudek in an amount not-to-exceed \$268,556 for design of the Stormwater Capture, Reuse, and Site Water Quality Improvements Project with cost shared equally between the Recycled Water Program and Wastewater Program; and
2. Discuss and take action as appropriate.

Respectfully submitted,



Michael T. Thornton, P.E.
General Manager



TECHNICAL PROPOSAL

STORMWATER CAPTURE, REUSE, AND SITE WATER QUALITY IMPROVEMENTS PROJECT

SAN ELIJO JOINT POWERS AUTHORITY

APRIL 4, 2023

605 Third Street / Encinitas, CA 92024 / 760.942.5147

DUDEK

Cover Letter

April 4, 2023

Abby Schlenk
 Purchasing Department
 San Elijo Joint Powers Authority
 2695 Manchester Avenue
 Cardiff-by-the-Sea, California 92007

Subject: Request for Proposals for Stormwater Capture, Reuse, and Site Water Quality Improvements Project for San Elijo Joint Powers Authority

Dear Ms. Schlenk :

While the winter of 2022/2023 may have many of the general public thinking the days of drought conservation in Southern California are nearing an end, water management professionals know that the future of water resource management in the region is one of scarcity and ever-increasing demands on a diminishing resource. Climate change impacts such as reduced snowpack and altered precipitation patterns bringing periods of more intense and sporadic rainfall are coupled with increasing demands from a growing population in San Diego County. These all conspire to exacerbate existing water resource challenges, making it more difficult to meet the region’s water needs.

With these challenges in mind, identifying and capitalizing on underutilized local resources provides an opportunity for enhanced water supply reliability and increased resiliency for the community. The San Elijo Joint Powers Authority (SEJPA) and their stakeholders will be able to benefit from local stormwater through the implementation of the Stormwater Capture, Reuse, and Site Water Quality Improvements Project (Project). The capture and reuse of 19 acre-feet per year of local stormwater will both benefit reliability and reduce urban pollutants (sediment, oil and grease, metals, pesticides and fertilizers) found in the regional storm channel within the SEJPA Water Campus that ultimately end up in the San Elijo Lagoon.

While the primary focus of the Project is linked to water supply reliability and point source water quality enhancements, SEJPA has an opportunity to improve compliance with the California Statewide Permit for Stormwater Discharges Associated with Industrial Activities, commonly referred to as the Industrial General Permit (IGP). Site improvements, including enhanced erosion control, improved best management practice (BMP) performance, and Low Impact Development site design techniques, should allow for reduced discharge levels for all pollutants currently sampled under the IGP and reduced likelihood of future violations.

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Balancing these desired project outcomes requires a consultant with a unique blend of skills and experience. Understanding the inner workings on a wastewater treatment plant and avoiding the disruption of operations and biological and chemical processes within the plant while also navigating appropriate analytic methodology for stormwater hydrology and hydraulics, successful erosion control measures, and the unique design considerations for stormwater diversion pump systems will be integral to the successful completion of the project.

The Dudek team, with our rich history of successful wastewater treatment and industrial stormwater management projects, is distinctively qualified to assist SEJPA with the Project. Our recent project history includes projects in the Water Campus at the headworks, previous stormwater management BMPs, and numerous site improvement, drainage management, erosion and sediment control, and IGP compliance projects at wastewater facilities throughout Southern California.

By teaming with Group Delta, Dudek enhances our already strong water quality and erosion control design experience. Group Delta has worked on numerous projects in the region addressing highly erodible soils, embankment stabilization, and water quality BMP projects, including our ongoing Park Drive drainage improvement and slope stabilization project for the City of Carlsbad. Their knowledge of site soils and stabilization options has enhanced our ability to find long-term and cost-effective solutions.

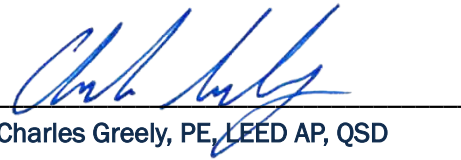
Dudek appreciates the opportunity to present the following proposal to SEJPA for the above referenced project and are excited at the prospect to further discuss the goals, challenges, and opportunities with SEJPA. We have reviewed the contract documents along with the Request for Proposal (RFP) information and have a clear understanding of the project and its requirements.

Should you have any questions regarding this proposal, please contact Charles Greely at 760.685.0735 or via email at cgreely@dudek.com.

Sincerely,



Bob Ohlund, PE
Vice President



Charles Greely, PE, LEED AP, QSD
Principal/Project Manager

Bob Ohlund is authorized to sign on behalf of Dudek.

Exceptions: - *The Professional Services Agreement Section 7.03: the form of indemnity includes a separate duty to defend. In the context of professional liability claims, Dudek prefers to reimburse its clients rather than assume the primary defense. To that end, Dudek would like to include an exception and ask that the following sentence be added to this section: "Notwithstanding the foregoing, with respect to any professional liability claim or lawsuit, this indemnity does not include providing the primary defense of SEJPA, provided, however, Consultant shall be responsible for SEJPA's defense costs to the extent such costs are incurred as a result of Consultant's negligence, recklessness or willful misconduct."*

1. Identification of Responder

Table 1. Identification of Responder

Requested Information	
Legal Name:	Dudek
Legal Form of Company:	C1210012 –California corporation
Identify Any Parent Companies:	N/A
Addresses of Offices in San Diego County:	605 Third Street, Encinitas, California 92024 2280 Historic Decatur Road, Suite 200, San Diego, California 92106
Name, Title, Address, and Telephone Number of Person to Contact Concerning the Qualification:	Charles (Chuck) Greely, PE, LEED AP, QSD, Project Manager 605 Third Street, Encinitas, California 92024 760.601.3411 / cgreely@dudek.com

Dudek Firm Overview

We are a California-based environmental and engineering consultant with nationwide offices and more than 700 planners, scientists, civil engineers, contractors, and support staff. We assist private and public clients on a range of projects that improve and evolve our communities, infrastructure, and natural environment. From planning, design, and permitting through construction, we move projects forward through the complexities of regulatory compliance, budgetary and schedule constraints, and conflicting stakeholder interests. Our professionals find practical, cost-effective approaches to help you achieve your specific project goals.

Subconsultants

GROUP DELTA - GEOTECHNICAL ENGINEERING

Group Delta has provided geotechnical and environmental engineering, materials testing and inspection, and construction support services throughout California for more than 37 years. Group Delta maintains offices in the cities of San Diego, Irvine, Anaheim, Torrance, and Ontario, as well as accredited laboratories in San Diego and Anaheim. Group Delta’s San Diego office and fully certified soil and materials laboratory.

RIGHT-OF-WAY ENGINEERING SERVICES - SURVEY

Right-of-Way Engineering Services, Inc., located in Oceanside, California, is dedicated to providing all aspects of professional surveying services to municipalities and professional design firms specializing in public works projects. Right-of-Way Engineering Services is a sub S corporation chartered under the laws of the state of California and registered as a public works contractor with the department of industrial relations.

GERRY GREEN INC. - ELECTRICAL ENGINEERING

Gerry Green Inc., established in 2020, is a consulting engineer firm providing electrical, instrumentation, and control systems design services. The firm provides services for a client base of civil engineers and water utility companies throughout Southern California. Services consist of electrical power system design, instrumentation and control design, and construction support services; design phase deliverables generally consist of preliminary design reports, construction drawings, technical specifications, and cost estimates.

2. Experience and Technical Competence

WATER RECLAMATION FACILITY NO. 2 PAVING REHABILITATION AND DRAINAGE IMPROVEMENTS

Client: City of Corona

Period of Performance: January 6, 2021–Present (Ongoing)

Reference: Vernon Weisman (now with South Coast Water District); 31592 West Street, Laguna Beach, California 92651; 949.342.1140; vweisman@scwd.org

Proposal Project Team: Charles Greely, Sofie Black, Nicole Rieger, Neil Harper

The City of Corona hired Dudek to evaluate the potential for Water Reclamation Facility (WRF) No. 2 to achieve National Pollutant Discharge Elimination System (NPDES) compliance through a Notice of Non-Applicability (NONA) process. Dudek's evaluation included assessing the existing conditions within the facility for drainage and pavement and conducting a hydrology analysis for historic precipitation events through the 100-year, 24-hour event based on National Oceanic and Atmospheric Administration precipitation data as the NONA process requires that the site demonstrate the ability to retain these flow volumes. Based on the assessed storage volume requirements, Dudek evaluated the facility for storage-based water quality best management practices (BMPs), and while the initial goal of obtaining the NONA was not successful due to space constraints within the site, Dudek designed a number of pavement restoration, drainage, sediment and erosion management, and BMP improvements for that site, including detention basins, infiltration basins and drywells, disconnecting impervious areas, and low gradient swales and energy dissipation devices. The result will be significantly improved drainage performance within the facility characterized by reduced off-site runoff, improved downstream conditions through reduction of sediment generated within the facility, and enhanced compliance with the facility's Industrial General Permit (IGP) requirements.



FINAL DESIGN OF SAN ELIJO WATER RECLAMATION FACILITY HEADWORKS

Client: San Elijo Joint Powers Authority

Period of Performance: November 9, 2015–September 30, 2017

Reference: Chris Trees, Project Manager; 695 Manchester Avenue, Cardiff, California 92007; 760.753.6203 Ext. 70; treesc@sejpa.org

Proposal Project Team: Nicole Rieger

The Headworks at the San Elijo Water Reclamation Facility (SEWRF) was over 50 years old with multiple deficiencies, including insufficient peak wet weather hydraulic capacity and an absence of backup equipment. Dudek was contracted by the San Elijo Joint Powers Authority (SEJPA) for the preliminary and final design of the headworks upgrade. In addition to the headworks upgrades, Dudek provided stormwater quality recommendations to SEJPA. SEJPA desired to eliminate or reduce the total suspended solids (TSS) being discharged to the regional storm drain channel and San Elijo Lagoon and receive grant funding as part of Round 4 Integrated



Regional Water Management (IRWM) to assist with these efforts. A number of Dudek's recommendations were implemented to help SEJPA reduce stormwater pollutants to meet several goal objectives, including (1) meeting regulatory requirements of the San Diego Municipal Separate Storm Sewer System Permit and the IGP, (2) meeting the grant requirements, and (3) meeting stormwater requirements of near-term projects planned at the facility.

HILL CANYON WASTEWATER TREATMENT PLANT STORMWATER DIVERSION

Client: City of Thousand Oaks

Period of Performance: May 12, 2020–Present (Ongoing)

Reference: Nader Heydari, 2100 Thousand Oaks Blvd, Thousand Oaks, CA 91362; 805.449.2400; nheydari@toaks.org

Proposal Project Team: Charles Greely, Jennifer O'Brien

The City of Thousand Oaks Hill Canyon Treatment Plant receives flooding and accompanying debris flows after large storm events, which interrupt plant operations and require debris removal. The existing configuration requires treatment of off-site stormwater flows that enter the site. Dudek designed a stormwater diversion system to capture debris before entering the Hill Canyon Treatment Plant and convey clearwater flows to an off-site outlet. Challenges included designing a stormwater diversion system that effectively intercepts debris and diverts flows off site but does not undermine the steep slopes that surround the treatment plant or impact operations and existing on-site utilities. With the construction of this project, the City of Thousand Oaks gains reliable use of their site after storm events and blocks commingling of off-site stormwater flows with on-site flows that require treatment.

PARK DRIVE DRAINAGE IMPROVEMENTS

Client: City of Carlsbad

Period of Performance: April 26, 2017–Present (Ongoing)

Reference: Scott Lyle, Senior Engineer; 1635 Faraday Avenue, Carlsbad, California 92008; 442.602.7505; scott.lyle@carlsbadca.gov

Proposal Project Team: Nicole Rieger, Charles Greely, Jennifer O'Brien, Sofie Black, Rob Stroop (Group Delta), Chris Vonk (Group Delta), Mike Schlumberger (ROW Engineering)

The project scope included addressing retaining wall degradation, slope failures, and drainage issues along Park Drive to alleviate safety concerns and reduce maintenance efforts. In addition to standard engineering solutions, the team evaluated bioengineering solutions to improve erosive conditions. An assessment of the groundwater conditions impacting the retaining wall and slope integrity was performed as well as a hydrologic and hydraulic assessment. The alternatives analysis included evaluating multiple solutions and documenting the benefits and costs of each scenario, including roadway improvements. The project team is the process of completing final design documents.

Additional Project Experience

Table 2. Additional Project Experience

Industrial Facility Stormwater Project Experience	Stormwater Management	Hydrology and Hydraulics	Erosion and Sediment Control	Water Quality BMPs	Industrial General Permit Compliance	Pump Stations	Storm Drain Pipe Systems	Paving and Hardscape Condition Assessment and Restoration	IGP SWPPP Services
Coachella Valley Water District – WRP No. 7	X	X	X	X			X	X	
City of Gonzales – New Separate Industrial WWTP Preliminary and Final Design	X	X	X	X	X		X	X	
Valley Center Municipal Water District – Treatment Plant Expansion	X	X		X			X	X	
Crestline Sanitation District – Huston Creek WWTP Dewatering Project	X	X		X		X	X	X	
Moulton Niguel Water District – Plant 3A Subsidence Mitigation and Drainage Improvements	X	X	X	X	X	X	X	X	X
Eastern Municipal Water District – Mountain Avenue West Recharge Facility	X	X	X	X		X	X	X	X
City of San Diego—Clean Water Program	X		X	X	X				X
City of Santa Maria – WWTP Expansion	X			X			X	X	
Confidential Client – Renewable Energy Project Monterey County	X		X	X	X				X
Stone Brewery Escondido	X				X				X
Pine Hill Egg Ranch – Ramona	X				X				X
Reuland Electric – City of Industry	X				X				X
Coachella Valley Mosquito and Vector Control – Maintenance and Equipment Facility	X	X	X	X	X		X	X	X
Pasadena Water and Power – Arroyo Seco Canyon Stormwater Diversion Project	X	X	X	X		X	X	X	
Inland Empire Utility Agency – San Sevaine Basin Improvements	X		X		X	X	X		

Notes: BMP = best management practice; IGP = Industrial General Permit; SWPPP = stormwater pollution prevention plan; WRP = water reclamation plant; WWTP = wastewater treatment plant.

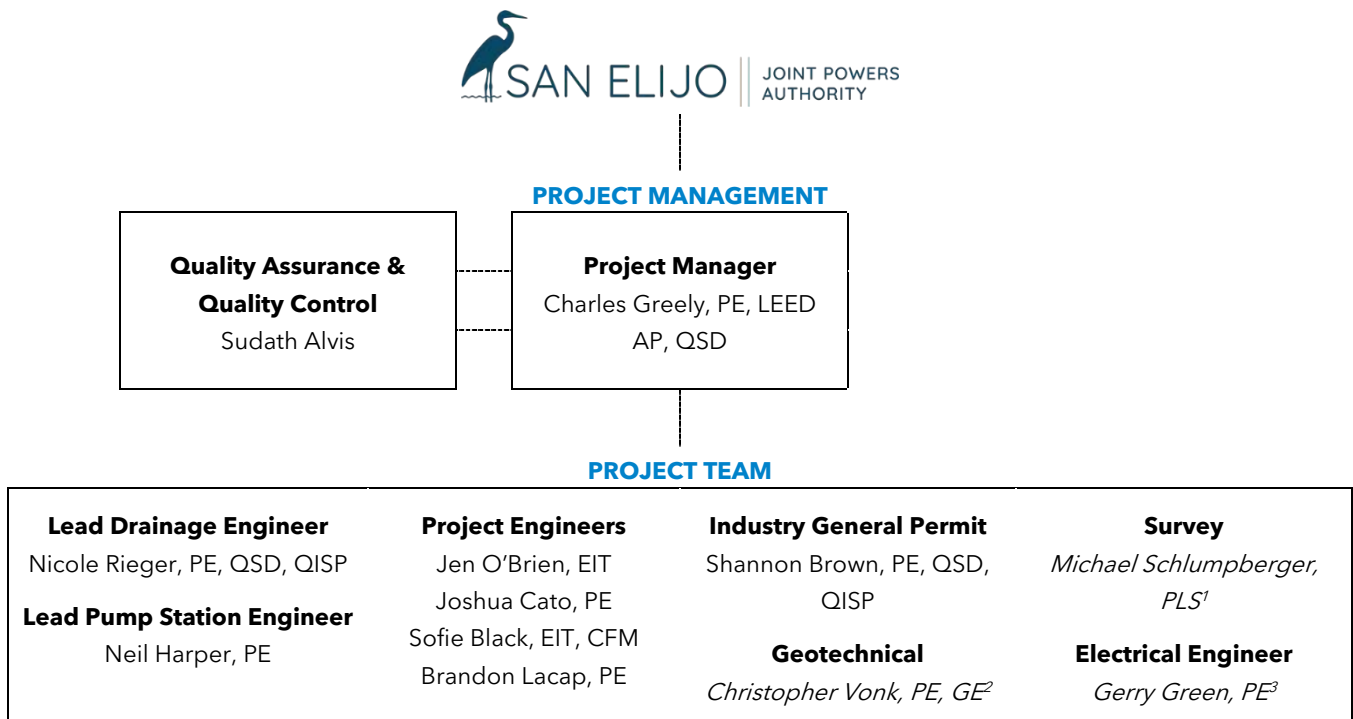
3. Project Organization and Key Personnel

Dudek is pleased to present a team of highly qualified professionals who have worked together on similar assignments, as indicated in our Experience and Technical Competence section. Dudek will serve as the prime consultant, providing overall management, engineering, and planning, and will be responsible for coordinating with SEJPA staff. The project team will comprise the following key individuals, with staffing functions, as indicated in Figure 1. Our project team, led by Principal Engineer Charles Greely, PE, LEED AP, QSD, brings specialized qualifications for all aspects of stormwater capture and reuse and site water quality improvements. Our organizational plan centers around a highly qualified project manager supported by the appropriate technical staff and required resources. Our project team will be involved from notice to proceed to final delivery of the plans, specifications, estimate, and bid package.

Mr. Sudath Alvis will serve as quality control and quality assurance manager. Mr. Alvis is experienced in working with SEJPA. He will assure the review of all deliverables by independent technical experts and will ensure all resources are being used to complete the projects on time and budget. Together, Mr. Greely and Mr. Alvis will work closely to ensure access to all necessary Dudek personnel and materials. Most staff will be from Dudek’s La Quinta, Encinitas, San Diego, and San Juan Capistrano offices.

Figure 1 outlines proposed lines of communication for this contract, followed by brief biographies for key personnel. Table 3 presents our additional technical team members’ and subconsultants’ experience and qualifications. Focused resumes are provided in Appendix A.

Figure 1. Dudek Team Organization



¹ Right-of-Way Engineering Services - Survey

² Group Delta - Geotechnical

³ Gerry Green Inc. - Electrical Engineer

Charles Greely, PE, LEED AP, QSD

PROJECT MANAGER

- 23 years' experience working on public infrastructure projects
- Diverse skill set, having provided project management and design services on water resource, wastewater treatment, environmental mitigation and restoration, stormwater management, and site development projects

Relevant Projects/Experience

- WRF No. 2 Paving and Drainage | **City of Corona**
- Plant 3A Subsidence Mitigation and Drainage Improvements | **MNWD**
- Hill Canyon WWTP Drainage Improvements | **Thousand Oaks**
- WRP 7 Site Improvements | **CVWD**
- Lift Station 55-11 Capacity Upgrades, Drainage Improvements | **CVWD**



Office Location – La Quinta

Education

University of Washington
BS, Civil Engineering, 1998

Certifications

Professional Civil Engineer (PE)
CA No. 69056; WA No. 40823
South Coast Air Quality
Management District Fugitive
Dust Control Certification,
No. 05-08-3112
LEED AP
Qualified SWPPP Developer
(QSD), No. 69056

Sudath Alvis

QUALITY ASSURANCE & QUALITY CONTROL

- 28 years' experience in project management, engineering design, master planning, site and construction inspections, and design review of multiphase and multidiscipline projects in a broad segment of engineering
- Experience spans Stormwater, Wet Utilities, Transportation, Commercial and Subdivision development projects

Relevant Projects/Experience

- Sunset Cliffs Natural Park Drainage Study, San Diego, California
- Sprinter Rail Project Wetlands Mitigation, Escondido, California
- High Point Country Manor Grading, Drainage and Water Quality, Escondido, California
- Village Nurseries Grading, Drainage, Water Quality, Pauma Valley, California
- San Vicente Dam Raise Project, San Diego County Water Authority



Office Location – Encinitas

Education

University of Nevada Las Vegas
BS Civil Engineering 1999
BS Mechanical Engineering
1992
University of Wisconsin
MS Mechanical Engineering
1994

Certifications

Professional Civil Engineer (PE),
NV No 030584
NY No 091056



Nicole Rieger, PE, QSD, QISP
LEAD DRAINAGE ENGINEER

Office Location – San Diego

Qualifications

- 20 years' experience in civil engineering, specializing in floodplain, drainage, and stormwater quality design and analysis
- Extensive experience working with clients as a drainage and stormwater design lead on municipal, roadway, and private development projects and is well versed in stormwater quality requirements

Relevant Experience

- SEJPA – Water Reclamation Headworks
- MNWD – Plant 3A Subsidence Mitigation and Drainage Improvements
- Padre Dam MWD – Preliminary Assessment for Erosion Control/Drainage Improvements
- EVMWD – Meadowbrook No. 1 Reservoir Improvements
- Carlsbad – Park Drive Drainage Improvements

Education/License(s)

BS, Civil Engineering
 Civil Engineer, CA No. 70782
 Qualified SWPPP Developer,
 No. 24471
 QISP No. 70782



Shannon Brown, PE, QSD, QISP
INDUSTRY GENERAL PERMIT

Office Location – Encinitas

Qualifications

- 12 years' experience, specializing in water resources including geospatial analysis, hydrology and hydraulics modeling, air quality modeling, land use planning, field data collection, and regulatory permitting
- Experience with Global Navigation Satellite System mapping, wetland delineation, and U.S. Fish and Wildlife Service protocol surveys, and has prepared environmental documentation for state and federal compliance

Related Experience

- Reuland Electric – City of Industry
- Pine Hill Egg Ranch – Ramona
- Carlsbad – Park Drive Drainage Improvements
- Stone Brewery – Escondido
- Confidential Client – Renewable Energy Project Monterey County

Education/License(s)

MS, Environmental Engineering
 BS, Environmental and Resource Science (GIS and Remote Sensing) Civil Engineer, CA No. 92771, QISP #92771



Neil Harper, PE
LEAD PUMP STATION ENGINEER

Office Location – San Juan Capistrano

Qualifications

- 24 years' experience in project management, engineering, planning, design, and construction support services for a variety of municipal and public agency projects
- Specific areas of practice include water, wastewater, and water reuse systems

Related Experience

- South Coast Water District - Lift Station No. 2 Pump Replacement
- Garden Grove Sanitation District - Belgrave Sewer Pump Station
- Garden Grove Sanitation District - Tiffany Sewer Pump Station
- City of Newport Beach - Pump Station Rehabilitations
- Resource Development and Management Department (now called Orange County Public Works) - O'Neill Regional Park Sewer Conversion

Education/License(s)

Civil Engineer, CA No. 63228
 BS, Bio-Resource and Agricultural Engineering

Table 3. Additional Team Members and Subconsultant Qualifications

Name, Role, Education, and Credentials	Qualifications	Project Experience
Additional Team Members		
<p>Jennifer O'Brien, EIT Project Engineer Office Location – San Diego California State Polytechnic University, Pomona BS, Civil and Environmental Engineering Engineer-in-Training (EIT), No. 166391</p>	<ul style="list-style-type: none"> ▪ 7 years' experience in stormwater resources, including site, channel and storm drain design, scour and floodplain analysis, hydraulics and hydrology, and channel restoration ▪ lead the production of alternative analysis, final PS&E packages, hydraulic modeling as well as performed construction support for various stormwater and land development projects 	<ul style="list-style-type: none"> ▪ Huston Creek WWTP Primary Clarifier and Dewatering Building Improvements, Crestline Sanitation District, Crestline, California ▪ E Reservoir Replacement and Pump Station, Vista Irrigation District, Vista, California ▪ Reservoir Repairs Phase 3, City of Oceanside, California ▪ Upper and Lower System Recycled Water System Expansion, City of Oceanside, California
<p>Joshua Cato, PE Project Engineer Office Location - Pasadena California State Polytechnic University, Pomona BS, Civil Engineering, 2017 Professional Civil Engineer, CA No. 92397</p>	<ul style="list-style-type: none"> ▪ 5 years' experience focusing on surface water resources ▪ experience includes hydrologic analysis and modeling, complex 1- and 2-D hydraulic modeling and analysis, creek improvements, stream restoration, hydraulic bridge analysis and sizing, performing erosion and scour analyses, processing FEMA LOMR and No-Rise Certifications, producing PS&E packages, and writing H&H and design reports to support rural, industrial and urban stormwater infrastructure projects. 	<ul style="list-style-type: none"> ▪ Eagle Scout Lake Management Program, City of Escondido, California ▪ Foss Lake Hydraulic Analysis, Oceanside, California ▪ La Mirada Creek Park Masterplan Project and Creek Park Improvements Project, RRM Design Group, La Mirada, California ▪ West Fontana Channel Bioswale, San Bernardino County Flood Control District, San Bernardino, California.
<p>Sofie Black, EIT, CFM Project Engineer Office Location - Encinitas University of Colorado, Boulder BS, Civil Engineering, 2017 Engineer-in-Training (EIT), No. 74093 Certified Floodplain Manager (CFM), No. US-19-11308</p>	<ul style="list-style-type: none"> ▪ 5 years' professional experience as a civil designer specializing in site design, stormwater resources, and floodplain management ▪ experience with floodplain analysis and design, including hydrologic and hydraulic analyses, as well as implementation of stormwater management facilities and construction best management practices 	<ul style="list-style-type: none"> ▪ Lakes at Rockport Ranch, Lennar Homes, Menifee, California ▪ La Costa Request for Bid, Stormwater Detention Basin Rehabilitation, City of Encinitas, California ▪ Merwin Drive Storm Drain Realignment, City of Carlsbad, California ▪ WRF2 Paving and Drainage Improvements, City of Corona, California
<p>Brandon Lacap, PE Project Engineer Office Location - Encinitas BS, Civil Engineering</p>	<ul style="list-style-type: none"> ▪ 13 years' experience in engineering design ▪ Experienced in designing and preparing plans, 	<ul style="list-style-type: none"> ▪ Senior Engineer, Reservoir Condition Assessment, Elsinore Valley Municipal Water District

Table 3. Additional Team Members and Subconsultant Qualifications

Name, Role, Education, and Credentials	Qualifications	Project Experience
<p>Civil Engineer, CA No. 87211</p>	<p>specifications, and cost estimations for public agencies</p> <ul style="list-style-type: none"> ▪ Specializes in pump/lift station design ▪ Well versed in hydraulic modeling/analysis of municipal water distribution systems 	<ul style="list-style-type: none"> ▪ Project Engineer, E Reservoir and Pump Station, Vista Irrigation District ▪ Project Engineer, Encinitas Ranch Recycled Water Booster Pump Station ▪ Project Engineer, 5.0-MG Morro Hills No. 1 and 2 and Pump Station ▪ Project Engineer, Padre Dam Municipal Water District, Blossom Valley Reservoir Rehabilitation
<p>Subconsultants</p>		
<p>Christopher Vonk, PE, GE Group Delta Geotechnical Engineering Office Location – San Diego, CA Master of Science, Civil Engineering, San Diego State University Bachelor of Science, Civil Engineering, San Diego State University Geotechnical Engineer, California No. 3216 Professional Engineer, California No. 86619</p>	<ul style="list-style-type: none"> ▪ 10 years of practical experience working on infrastructure, industrial, commercial, private, and public works projects ▪ coordinated, conducted, and managed numerous geotechnical site investigations of various sizes involving test pits, borings, cone penetration testing, field infiltration testing, and geotechnical laboratory testing 	
<p>Michael Schlumpberger, PLS Right of Way Engineering Services Survey Office Location – Oceanside, CA A.A., Surveying, Palomar College, California A.A., General Education, Palomar College, California Professional Land Surveyor-California, 2001 (#7790) California Land Surveyors Association member, State and local chapter</p>	<ul style="list-style-type: none"> ▪ 32 years’ experience in all aspects of municipal surveying projects including horizontal and vertical control surveys, boundary surveys, GPS surveys, and construction staking 	
<p>Gerry Green, PE Gerry Green Inc. Electrical Engineering Office Location – Oceanside, CA 1986-1994 San Diego Mesa College 1995-1997 San Diego State University, Electrical Engineering</p>	<ul style="list-style-type: none"> ▪ Over 30 years’ of electrical design experience in Southern California ▪ Specializes in the design of industrial power systems including electrical and controls systems for water and wastewater facilities 	

Availability of Team Members

The Dudek team specifically chosen for this contract has the availability and capacity to provide consistent and timely services on Stormwater Capture, Reuse, and Site Water Quality Improvements Project. Our team, presented in this proposal, is fully committed and available for this contract. With current workloads ranging from 50% to 80%, team members can commit substantial effort (up to 100%) when it is necessary for the success of a project. The key personnel will be available to the extent proposed for the duration of the project, and no person designated as “key” to the project shall be removed or replaced without the prior written concurrence of SEJPA.

4. Project Approach

Situated adjacent to the San Elijo Lagoon Ecological Reserve, a 979-acre shallow water estuary formed where the Escondido and La Orilla Creeks meet the Pacific Ocean, the SEJPA Water Campus provides wastewater treatment and recycled water services to the residents of Solana Beach, Rancho Santa Fe, Encinitas, and Del Mar.

Providing safe and reliable recycled water is at the heart of SEJPA's mission, and the opportunity to capture, divert, and treat stormwater to augment the water supply with local sources will enhance supply reliability and increase climate resilience for the local community.

Additional benefits from the capture of local stormwater for reuse in the SEWRF will include water quality benefits through the reduction of various contaminants such as sediments, metals, oil and grease, pesticides, and fertilizer that currently run through the regional storm channel that collects runoff from the 0.8-acre urbanized watershed and discharges directly to the San Elijo Lagoon, which is listed on the U.S. Environmental Protection Agency's 303(d) list as impaired for bacteria, sediment, and nutrients. The capture, treatment, and reuse 19 acre-feet per year of stormwater is expected to reduce pollutant loading by over 14,000 pounds of TSS per year into to the San Elijo Lagoon.

In addition to the direct discharge water quality benefits, it is expected that the proposed improvements within Water Campus will improve SEJPA's compliance with the current NPDES IGP. Dudek understands that under the IGP SEJPA currently samples for TSS, pH, and oil and grease with numeric action level thresholds set at 400 mg/L instantaneous or an annual average of 100 mg/L for TSS, between 6.0 and 9.0 for pH samples, and 25 mg/L instantaneous or an annual average of 15 mg/L for oil and grease. The TSS annual average was exceeded in the reporting year of 2021–2022, and SEJPA is currently under a Level 1 Exceeded Response Action Plan.

Dudek's previous experience with stormwater management on the SEJPA Water Campus provides a unique insight into opportunities and constraints that may affect the outcomes of the proposed improvements. In early 2017, Dudek stormwater engineers visited the Water Campus to provide recommendations on BMPs and other erosion control measures to reduce sediment at discharge locations. Several measures were adopted since then, including adding a bioretention basin, lining portions of the access roads with gravel, and stabilizing the landscape area near the headworks. While a large portion of the Water Campus facility is highly developed, there are areas at the north end of the sites and along the eastern boundary that continue to experience significant erosion and rutting along the slopes and access roads that are impacting access as well as contributing to the TSS exceedances under the IGP. Temporary BMP measures have been implemented and are providing some benefit to reduce the sediment-laden flows; however, long-term solutions are needed.



The southeast site boundaries illustrating significant erosion and rutting along the slope contributing TSS exceedances.

Dudek's technical approach to successful design and implementation of the Stormwater Capture, Reuse, and Site Water Quality Improvements Project is summarized in Table 4.

Table 4. Project Approach, Opportunities, and Constraints

Project Component	Approach, Opportunities, and Constraints
<p>Stormwater conveyance infrastructure</p>	<p>Low flow diversion within the existing regional storm channel will be focused on ease and flexibility with operational and maintenance considerations. These include accessibility to the proposed pump system and location of detention facilities (wet well, sump, etc.) to optimize low flow capture while reducing sediment management and uptake into the Water Reclamation Facility (WRF).</p> <p>Dudek will minimize impacts to the existing channel and sediment capture systems.</p> <p>Dudek will work with San Elijo Joint Powers Authority (SEJPA) engineering and operations staff to understand any existing utility or other physical constraints for the alignment of conveyance piping from the pump station to a point of entry with the WRF.</p> <p>The optimal discharge location for stormwater from the pump station in the WRF will be identified. It is understood that the likely location would be at the existing plant headworks, but once the discharge criteria (gravity vs. pressure pipe, pipe size, flow rates, etc.) is established, Dudek will work with our in-house treatment and mechanical systems experts and SEJPA staff to confirm the connection point into the WRF.</p>
<p>Pump station to convey stormwater from the regional storm channel into the WRF</p>	<p>Understanding the current hydrologic performance of the regional storm channel to establish design flow rate criteria for the pump station (efficient pump sizing to ensure annualized capture of 19 acre-feet under low flow, low total dynamic head conditions) is important.</p> <p>Dudek will consider operations and maintenance factors, including access, familiarity or preference with pump type (sump anticipated) and maintenance, and integration with existing facilities.</p> <p>Inclusion of a magnetic flow meter that will allow for compliance with any reporting requirements and can accommodate a range of flow rates while maintaining accuracy standards will be considered.</p>
<p>Stormwater management improvements</p>	<p>Dudek will prepare a hydrologic and hydraulic assessment of the site with a focus on the areas without permanent stabilization. We will consult with a geotechnical engineer on site soils and considerations for best management practices (BMPs).</p> <p>Dudek will perform an assessment for best locations for enhanced erosion control and slope stabilization BMPs and appropriate sizing focusing on the unpaved access road, the solar panel slope area, and the sludge drying area. We will review recommendations on slope and access road stabilization measures with SEJPA with a focus on reducing impact on plant operations and less frequent maintenance needs.</p> <p>Dudek will focus on improvements to reduce TSS exceedances for Industrial General Permit stormwater pollution prevention plan reporting.</p>

PROJECT MANAGEMENT AND QUALITY CONTROL APPROACH

Meeting **your** Critical Success Factors requires proactive, effective project management, which includes the following:

- Communication skills (graphic, written, oral, personal, and daily)
- Responsiveness, staying ahead of the project
- Quality assurance (QA) to be certain quality control (QC) is completed
- Adherence to the scope, documenting changes in scope
- Management of subconsultants
- Keeping the progression of work on schedule
- Established cost control
- Providing clear and accurate deliverables
- Proper resource allocation
- Maintaining focus towards meeting **SEJPA's** Project goals and objectives

SEJPA's RFP presents the framework for an effective project management approach, requiring detailed monthly project status reports, schedule tracking, transparent records management, and a QA/QC plan. The following is a summary of how we plan to execute these elements, as well as our philosophy and tools used to assure your project is successful.

Schedule and Budget Management

Mr. Greely and Ms. Alvis will work together and use earned value (EV) budget and schedule management on your project. EV tracking has proven successful with providing information necessary to complete subtasks on budget and schedule. We work with our subconsultants as extensions of our own staff, holding them to our same internal management, tracking, and reporting requirements. With Dudek's strong oversight and coordination, our entire team is focused on meeting the schedule.



Project Workflow

*Master deliverables list
Schedule tracking with
Microsoft Project
Budget tracking with EV and
Vision*

Monthly Project Status Reports

Dudek understands SEJPA requires detailed monthly project status reports and meetings. Dudek generates invoices at the beginning of each month. We will upload invoices to SEJPA each month along with a status report. Status reports include the following:

- Invoice showing hours billed by each project participant for each major task of the project
- Progress report summarizing work completed during the previous month, planned activities for the coming month, status of deliverables, scope or budget discussion items, and project issues and recommended resolutions
- Current EV tracking and updated project schedule
- Current action/decision log



Communications

*Kickoff meeting to establish
milestones/develop strategy
Evaluation of existing data
Consistent reporting and
direct access to PM*

Coordination with Subconsultants

Effective subconsultant coordination is critical to the success of this and other multidisciplinary engineering projects. Our subconsultants depend on us for information to provide their services efficiently and accurately. All too often, subconsultants can receive direction or necessary data late for an upcoming deliverable, negatively impacting the Project schedule and quality. The Dudek philosophy is to coordinate with our subconsultants early and often. The following are a few of our best practices for subconsultant coordination:

- Our computer-aided design (CAD) designers provide a package of plot configuration files, sample drawings, and instructions so that drawing format is uniform from the start
- We have face-to-face meetings with key design subconsultants, such as surveying, geotechnical, traffic control, corrosion control, and potholing teams, to review project features and their scope
- We take our role as project lead serious and conduct thorough interdisciplinary QA/QC reviews of subconsultant deliverables

Quality Assurance/Quality Control

QA is a project management responsibility to be conducted in accordance with a specific QC plan. The project QA/QC plan is prepared by the project manager, in collaboration with the QC team, prior to the kickoff meeting. Key elements of our QA/QC plan include the following:

- True peer-review-based QC process where submittals receive full review
- Project quality roles and responsibilities of the project manager, principal in charge, project engineers, and QC reviewers
- Master deliverables list with scheduled submittal dates, review(s) to be performed (i.e., client standards, intra-discipline, inter-discipline, constructability), QC review deadline, and assigned QC reviewer(s)
- Submittal QC review process and documentation requirements
- Subconsultant submittal validation procedures



Quality Control Assurance

- Peer Review*
- Project Quality Roles Responsibilities*
- Master Deliverable List*
- Quality Control Review Process*
- Subconsultant Submittal Validation*

Our expert-level Independent QC Reviewer, Ms. Sudath Alvis, will perform quality design and constructability reviews of deliverables. Electronic files of QC review comments and resolutions are retained in the project records.

Scope of Work

Dudek has reviewed the proposed scope of work provided with the RFP and takes no exceptions to the SOW. Dudek and our sub consultants are prepared to deliver the complete scope of work for a successful project. Based on our understanding of the project goals and expected outcomes and our approach defined above, Dudek offers the following clarifications and assumptions for the proposed scope of work:

PRE-DESIGN SERVICES

Surveying

- Horizontal and vertical control will be established based on NAD 83 and NAVD 88, respectively.
- Up to six aerial targets will be established for project vertical control.

- Aerial mapping will be provided at a 1"=20' scale with 0.5' contour intervals.
- If necessary for establishment of record boundaries for the site, SEJPA will provide a Preliminary Title Report.
- Boundary will be established based on record data oriented to select existing survey monuments. A comprehensive boundary survey is not included in the scope of work.
- If necessary, any subsurface utility data (invert elevations, locations, etc.) will be provided by SEJPA.

Optional Services: Provide digital orthophoto

Geotechnical Investigation and Report

- Group Delta assumes that the existing geotechnical information that will be provided by SEJPA can be used to supplement the subsurface information that will be obtained from our proposed scope of services.
- Group Delta will obtain a County of San Diego Department of Environmental Health (DEH) Soil Boring permit per standard legal requirements. SEJPA will be responsible for signing the permit.
- Locations of the subsurface explorations on the ground surface will be coordinated with SEJPA and marked out using measurements from a handheld GPS.
- Utility clearances will be conducted following mark out of the proposed subsurface exploration locations, including notification of Underground Service Alert, Review of As-Built Plans, and utilization of a private utility locating service.
- Borings will be completed using a conventional truck-mounted drill rig using hollow stem augers. While drilling, the contractor will obtain bulk samples in the upper 5 feet. Drive samples will be collected at 5- to 10-foot depth intervals using Modified California and Standard Penetration Test split-barrel drive samplers in borings that are deeper than 5 feet. A Group Delta engineer or geologist will supervise the field work, log the borings, collect and label the soil samples, and transport them to our geotechnical testing laboratory in San Diego. Proposed borings include:
 - One 30- to 40-foot-deep boring at the location of the proposed wet well.
 - Two 10- to 20-foot-deep borings along the alignment of the proposed storm drain between the wet well and existing headworks.
 - Two 5-foot deep "pothole" borings within the eastern dirt-surfaced access road to obtain pavement subgrade samples.
 - Two 5-foot-deep borings at the location of the proposed BMP basin. These borings will be converted to percolation test holes using slotted PVC pipe and gravel. Percolation testing will be performed at each location following the required pre-soak period.
- Collect up to four surficial grab samples from the fill slope in the southeastern and central temporary soil stockpile.
- Abandon the explorations with bentonite and soil cuttings. Group Delta will "thin spread" any remaining soil cuttings on the site.
- Group Delta will conduct laboratory testing on selected soil samples to evaluate physical and geotechnical engineering properties. Our accredited laboratory in San Diego will perform the testing per ASTM and California Department of Transportation (Caltrans) standards. Agronomic testing will also be performed on the grab samples collected from the slopes and soil stockpiles.
- Group Delta will prepare and submit a draft geotechnical report to Dudek summarizing their findings, conclusions, and recommendations for design and construction of the proposed improvements. The report will include figures, boring records, and laboratory test data sheets.
- Group Delta will finalize the report for comments, if any, from SEJPA.

Optional Item: Convert one deep boring to a groundwater monitoring well.

Hydrology and Hydraulics Analyses

- Hydrology and hydraulics analysis will be based on the County of San Diego hydrology manual and hydraulics design manual methodologies.
- The 2-, 10-, and/or 100-year storm events will be analyzed as necessary for BMPs and drainage measures.
- It is assumed that off-site drainage onto the project area is limited to slope areas, and flow rates for any storm drain infrastructure (i.e., Caltrans right-of-way) can be provided by SEJPA or others.
- Regional channel and culvert as-builts and design information regarding hydrology and hydraulics can be provided by SEJPA or others.

DESIGN

- It is assumed that a single set of construction documents will include all erosion control and slope stabilization measures as well as pump station and related infrastructure.
- If City of Encinitas review and approval is required, it will be limited only to any facilities located within the regional storm channel and its associated easement or ROW.
- It is assumed that the stormwater intake structure will not impact the regional channel hydraulics and will not require improvements to the channel.
- Estimate 24 sheets total: general (3 sheets), civil (8 sheets), mechanical (4 sheets), electrical (5 sheets), instrumentation (2 sheets), and landscape (2 sheets).
- For electrical design, power will be supplied through an existing panel within the Water Campus, and no new San Diego Gas & Electric Company facilities or coordination is required.
- Pump station controls will be localized at the pump station facility; ~~no remote monitoring or SCADA system integration is required (including flow metering).~~

Optional Services: Permitting (allowance)

BID PHASE SERVICES

- Costs are based on the assumption of 6 RFIs and 1 addendum during bid services.

5. Consultant Fee Estimate

Our fee proposal is provided in a separate file per the RFP requirements.

Appendix A

Resumes

Charles Greely, PE, LEED AP, QSD

PROJECT MANAGER

Charles Greely (*CHAR-uhls GREE-lee; he/him*) is a civil engineer with 23 years' experience working with public and private entities on infrastructure improvement projects throughout California. Mr. Greely provides a diverse skill set, having provided project management and design services on water resource, wastewater treatment, environmental mitigation and restoration, stormwater management and quality control, transportation, and site development projects. As a Leadership in Energy and Environmental Design Accredited Professional (LEED AP), he specializes in the application of low-impact development techniques for infrastructure improvement projects. Mr. Greely is experienced in federal, state, and regional permits and requirements for construction work within sensitive environmental settings and can therefore successfully bridge the gap between environmental concerns and cost-efficient, field-tested construction solutions.

Project Experience

Crossings Golf Course Erosion Repairs, City of Carlsbad, California. Project manager and technical lead for the preparation of mitigation and repair plans for ongoing erosion at the Crossings Golf Course. Evaluated the current concerns and operations with course maintenance staff, identified repair options that address erosion and sediment management that would minimize impacts to both playability of the course and the surrounding coastal sage scrub habitat, and facilitated approval of the repairs through the California Coastal Commission.

WRF2 Paving and Drainage Improvements, City of Corona, California. Project manager and technical lead for the full site pavement rehabilitation and drainage improvement project. Analyzed hydrologic site conditions per Riverside County standards, using AES HydroWIN software. Explored various stormwater treatment and storage facility options. Improved stormwater conveyance and sediment management through grading and site feature implementation. Achieved stormwater quality improvements through infiltration/retention basins for enhanced Industrial General Permit compliance.

Plant 3A Subsidence Mitigation and Drainage Improvements, Moulton Niguel Water District, California. Served as the lead technical engineer for the site improvement project, including pavement rehabilitation and drainage design. Analyzed hydrologic site conditions and designed localized drainage features to manage stormwater. Designed proposed grades to direct stormwater to proposed drainage features.

Lake Hodges Natural Treatment System Design, San Diego, California. Design engineer and technical manager for the development of a natural treatment system for a portion of the tributary drainages to Lake Hodges, San Diego, California. The lake is a manmade reservoir that is used in part for drinking water storage and is 303(d) listed for



Education

University of Washington
BS, Civil Engineering,
1998

Certifications

Professional Civil
Engineer (PE)
CA No. 69056; WA No.
40823

South Coast Air Quality
Management District
Fugitive Dust Control
Certification,
No. 05-08-3112

LEED AP

Qualified SWPPP
Developer (QSD),
No. 69056

Professional Affiliations

California Water
Environment Association,
State Board of Directors
2013–2019, 2022–2024

several pollutants. Assisted with hydrologic modeling and water quality modeling, including best management practices (BMP) pollutant reduction analysis focused on the reduction of sediment and nutrients.

Park Drive Drainage Improvements, City of Carlsbad, California. Principal in charge and lead quality control/quality assurance for addressing retaining wall degradation, slope failures, and drainage issues along Park Drive to alleviate safety concerns as well as reduce maintenance efforts. In addition to standard engineering solutions, the team evaluated bioengineering solutions to improve erosive conditions. An assessment of the groundwater conditions impacting the retaining wall and slope integrity was provided as well as a hydrologic and hydraulic assessment to better convey runoff away from the slope face. The alternatives analysis included evaluating multiple solutions and documenting the benefits and costs of each scenario, including roadway improvements. Dudek is preparing final engineering documents.

Montanoso Recreation Center Bioswale, City of Mission Viejo, California. Project manager and technical lead assisting the City in identifying sites suitable for bioswale implementation. Stormwater generated at the Montanoso Recreation Center was directed through sheet flow and storm drains directly into the adjacent Oso Creek. Prepared due diligence reports and preliminary hydrology and hydraulic analysis; lead the preparation of grading, bioswale planting, and irrigation plans, specifications, and engineer's estimate for the redirection of low-flow stormwater to a nearby plateau that was determined to be suitable for bioswale construction.

North Avenue Channel Protection, City of Oceanside, California. Served as project manager conducting hydrology and hydraulic analyses, preliminary design feasibility, cultural resource investigation, California Environmental Quality Act (CEQA) documentation, final design, and regulatory permitting to address the continual erosion of the earthen embankment along the northern edge of North Avenue channel. The channel is characterized by native vegetation and supports concrete headwalls and drainage pipe infrastructure. Limited areas of riprap have been placed on the south end of the channel to protect and reduce the erosion of the embankment. Successful project completion will preserve the integrity of the street with the embankment through the use of rock filled gabions to provide adequate formation support and long-term stability, which satisfy all regulatory agency requirements.

Midway Street Bluff–Storm Drain and Slope Repair Project, City of San Diego, California. Worked with the City of San Diego to analyze the damage associated with a failed storm drain system located within Midway Street. Midway Street terminates at a bluff above the Pacific Ocean, and extensive damage occurred to the bluff, including erosion and loss of infrastructure. Dudek provided a review of the watershed boundaries and potential flow generation to the storm drain system, a review of upstream BMP placement that could help prevent future maintenance issues, and a complete set of design plans and specifications for repair of the damaged storm drain and eroded bluff.

Lower Blackwood Creek, Habitat Restoration Sciences, Lake Tahoe, Nevada. Provided site civil engineering design, hydraulic and hydrology analysis, and construction support services for the design of a creek flow detention and bypass system in support of a comprehensive bank stabilization and habitat restoration project. Annual high creek flows have resulted in significant bank erosion and degradation of riparian and fish habitat; erosion within the watershed contributes approximately 21.5 tons of fine sediment per square kilometer per year. The bypass system included the design of multiple dams (primary diversion dam, mid reach isolation, and downstream isolation dams) using earthen berms techniques; a gravity bypass pipe system (welded HDPE pipe) analyzed for a base flow of 20 cubic feet per second and a 3x factor of safety for storm related surge flows; and a localized dewatering pumping system to remove standing water following bypass of the creek flows.

Sudath Alvis

QUALITY ASSURANCE & QUALITY CONTROL

Sudath Alvis is a project manager with nearly 28 years' professional experience in project management, engineering design, master planning, site and construction inspections, and design review of multiphase and multidiscipline projects in a broad segment of engineering. The experiences span Stormwater, Wet Utilities, Transportation, Commercial and Subdivision development projects.

As the projects' lead engineer, Mr. Alvis was responsible for directing staff engineers to successfully and efficiently reach project scope of work as well as provide quality assurance. As the Project Manager, he, coordinated efforts between all internal and external clients as well as providing quality control of production documents.

Dudek Project Experience

Stormwater and Water Quality

Sunset Cliffs Natural Park Drainage Study, San Diego, California. Mr. Alvis completed the study of the Sunset Cliffs Natural Park to identify causes of erosion and develop a storm drain collection system. He developed mitigation measures to reduce or eliminate the cause of erosion. Recommendations were made to enhance the natural appearance of the park. The study focused on returning the park to its original beauty, while maintaining beneficial public use. Included in the study is a public outreach program with several workshops.

Sprinter Rail Project Wetlands Mitigation, Escondido, California. As part of wetland mitigation requirements resulting from the Sprinter Rail Project, Dudek assisted the North County Transit District (NCTD) create off-site wetlands habitat. The project site encompasses 5.28 acres and is located along Escondido Creek. Grading and erosion control plans were prepared with accompanying earth work volume calculations and engineer's estimate of probable construction costs. A hydraulic analysis of Escondido Creek was also done to compare the pre-and post-project conditions of the site. As part of the requirements of the General Permit (NPDES Permit), a construction phase storm water pollution prevention plan was prepared to accompany the grading and erosion control plans.

High Point Country Manor Grading, Drainage and Water Quality, Escondido, California. To obtain the necessary approvals for the construction of a 39-estate hillside development, Mr. Alvis, as the project lead, completed a storm water management plan which included the design of detention and treatment basins, a storm water pollution prevention plan to manage erosion and runoff during construction and a drainage study to support the grading design of the subdivision.



Education

*University of Nevada Las Vegas
BS Civil Engineering 1999
BS Mechanical Engineering 1992
University of Wisconsin
MS Mechanical Engineering 1994*

Certifications

*Professional Civil Engineer (PE),
NV No 030584
NY No 091056*

Village Nurseries Grading, Drainage, Water Quality, Pauma Valley, California. Mr. Alvis worked on the development of agricultural facilities for approximately 240 acres in Pauma Valley, California. As part of this study, detailed hydrologic and hydraulic analyses, stormwater quality, site design and grading design were completed and processed through the County of San Diego.

San Vicente Dam Raise Project, San Diego County Water Authority, San Diego County, California. The San Vicente Dam Raise Project increased the size of the existing 220-foot-high concrete gravity dam by 117 feet and added 157,000 acre-feet of water storage. Primary area of responsibility was to provide as-needed engineering support services to the Water Authority's design managers in this multiphase, multidiscipline project. Responsibilities included the QA/QC of deferent components of the engineering design, earthwork calculations and review and analysis of construction methods and means. Also provided assistance to the project by designing interim grading of access roads, temporary parking facilities, conducting stormwater calculations and drainage designs, and creating erosion control plans.

North Agua Hedionda Interceptor, Carlsbad, California. Mr. Alvis was the lead designer for the rehabilitation, improvements, and restoration of the City of Carlsbad 24-inch North Agua Hedionda Interceptor. The project design included the construction of nearly 2,000 linear feet of new pipeline utilizing microtunneling methods, as well as structural rehabilitation of 16 manholes in the environmentally sensitive Agua Hedionda Lagoon in coastal Carlsbad. As part of the work, a comprehensive analysis of the stormwater runoff affecting the site was conducted and drainage component were designed.

Sprinter Rail Water Quality Plan, San Diego County, California. Mr. Alvis completed a Water Quality Plan for the entire 22-mile stretch of the proposed Sprinter Rail Project. Data compilation, determination of adequacy and efficiency of construction, as well as post-construction BMPs and maintenance requirements were all addressed in the study.

Other Relevant Stormwater Experience

Ogdensburg Airport Expansion, Ogdensburg, NY. Mr. Alvis was the design lead for the new concrete apron, new parking lot and the loop road, and all relevant stormwater design. The efforts included analysis of pre and post expansion hydrology and hydraulics and resultant design which included several closed drainage systems, pretreatment facilities and storage ponds.

NY 17/81 Interchange Improvements, NY. Mr. Alvis was responsible for the drainage design of the 1.5-mile-long project including the completion of Hydrology and Hydraulic analysis, creating stormwater management plan as well as developing the drainage system construction phasing plan. Extensive HydroCAD models of the Pre and Post construction scenarios were created and analyzed. Recommendations were made to modify the existing stormdrain system and new networks of pipes were designed to route and treat the water quality volumes via a low flow diversion structure while the major storm flows were routed to the Chenango River.

Warriors in Transit, Fort Drum, NY. Mr. Alvis was responsible for conducting Hydrology and Hydraulic analysis for the Military Residential Design Build project. Efforts included developing grading plans, all wet utilities and design of stormwater practices to meet stormwater requirements. Modeled the drainage system using HydroCAD software to design stormwater ponds and size pipe networks and isolated culverts. Analyzed an impacted stream for pre and post conditions using Hec-Ras to design a 4'x13' bridge culvert as part of a new road.

Nicole Rieger, PE, QSD

LEAD DRAINAGE ENGINEER

Nicole Rieger (*nih-COHL REE-gur; she/her*) is a senior engineer with 20 years' experience in civil engineering, specializing in floodplain, drainage, and stormwater quality design and analysis. Ms. Rieger has extensive experience working with clients as a drainage and stormwater design lead on municipal, roadway, and private development projects and is well versed in stormwater quality requirements. She has engineered and managed projects through all phases, from preliminary and final design through construction.

Project Experience

San Elijo Water Reclamation Facility Preliminary Treatment Upgrades, San Elijo Joint Powers Authority, Encinitas, California. Prepared a technical memorandum and preliminary design for bioretention basins to be located near the preliminary treatment upgrades. The bioretention basins were designed to meet several objectives, including meeting the regulatory requirements of the San Diego MS4 permit and Industrial General Permit, meeting grant requirements, and meeting the stormwater requirements for the near-term future projects planned at the facility. Design included reviewing the site for ways to reduce sediment discharges, which is a priority pollutant of concern for the downstream water bodies.

Preliminary Assessment for Erosion Control/Drainage Improvements, Padre Dam Municipal Water District, Santee, California Provided preliminary recommendation to remedy erosion issues impacting District facilities at four locations. Included site visits to each location with District staff and providing scoping information.

Meadowbrook No. 1 Reservoir Improvements, Elsinore Valley Municipal Water District, Lake Elsinore, California. Provided erosion control and drainage assessment for the proposed rehabilitation of a 2-million-gallon welded steel reservoir. Provided infiltration assessment for proposed basin.

Plant 3A Subsidence Mitigation and Site Improvements, Moulton Nigel Water District, Mission Viejo, California. Served as the drainage lead for the investigation of the subsidence issues at the plant and design solutions to improve the onsite drainage on an accelerated schedule. Design included new inlet locations as well as regrading portions of the site to allow better drainage.

Mission Basin Groundwater Purification Facility Well 2 Site Improvements, City of Oceanside, California. Served as the drainage and stormwater lead in the engineering design for site modifications for access to the Well 2 facility. Design included reconfiguring the existing biofiltration basin and preparing a SWQMP for the project to meet the San Diego MS4 permit stormwater quality requirements.



Education

California Polytechnic State University, San Luis Obispo
BS, Civil Engineering, 2002

Certifications

Professional Civil Engineer (PE), CA
No. 70782

Qualified SWPPP Developer, No. 24471

Professional Affiliations

American Public Works Association

American Society of Civil Engineers

CASQA

Floodplain Managers Association

Recycled Water Expansion Project, City of Oceanside, California. Served as the drainage and stormwater lead in the preliminary site assessment and engineering design for proposed recycled water tanks located throughout the city. Because of the size of the tanks, the projects were required to meet the San Diego Municipal Separate Storm Sewer (MS4) permit stormwater quality requirements including hydromodification.

Mission Trails Flow Regulatory Structure II SWPPP Compliance, San Diego County Water Authority, San Diego, CA
Provided support services for SWPPP compliance for the construction site of the flow regulatory structure including stockpile stabilization recommendations and remediation recommendations for an unauthorized discharge.

Cal Fire Highway 17 Fuel Reduction – Emergency Shaded Fuel Break Project, Santa Clara County Firesafe Council, Santa Clara County, California. Served as the engineering lead to support the erosion control and stormwater management tasks. Prepared a Caltrans Water Pollution Control Plan for approval and implementation for the vegetation removal activities. Provided technical guidance to field staff on appropriate BMPs and provided implementation recommendations. Tasks included interpretation and application of Caltrans stormwater management requirements and ensuring appropriate measures were being implemented during and after implementation. Also included monitoring and reporting/documentation associated with the implementation of the Caltrans Water Pollution Control Plan.

Relocation of Aufdenkamp Connection Transmission Main SWPPP Services, Santa Margarita Water District, Santa Ana, California. Provided support services related to the project SWPPP including document review, updating SMARTS, and filing notice of termination.

Industrial General Permit Support, Confidential Client, Monterey County, California. Served as the Qualified Industrial Storm Water Practitioner (QISP) for an existing energy storage site. Project tasks included providing compliance support including reviewing monitoring data, assessing BMPs, preparing ERA action plans and updating the IGP SWPPP with site improvements.

MS4 Permit Compliance Program, City of Goleta, California. Serving as a technical expert supporting the city of Goleta through technical project implementation and extension of staff services. Program support activities include preparation of technical reports and analyses, development of stormwater training materials and jurisdictional program procedures, regulatory audit preparation, drafting and issuance of notice of violations (NOVs) to city stakeholders, illicit connection illicit discharge (ICID) investigations, new development stormwater control plan review, SWPPP development, and post-construction BMP inspection. Dudek is under contract to provide on-going technical support.

Daney Creek Restoration Preliminary Assessment, City of San Diego, Ramona, California. The City of San Diego Public Utilities Department contracted with Dudek to explore solutions to address stabilization and repair of portions of Daney Creek, which have sustained significant historic erosion and bank failure along different sections of the creek, resulting from periodic flood events and water transfers from Sutherland Reservoir. Dudek provided bank stabilization options, preliminary feasibility analysis, and recommendations for the bank stabilization and erosion repair.

SWPPP and USMP Review Services, Port of San Diego, San Diego, California. Served as a reviewer of SWPPP and USMP reports for projects in the Port's jurisdiction for compliance with the State Construction General Permit and the local MS4 Permit. Ensured that the reports were consistent with the Port's stormwater policies.

Neil Harper, PE

LEAD PUMP STATION ENGINEER

Neil Harper is a professional engineer with 24 years of experience in project management, engineering, planning, design, and construction support services for a variety of municipal and public agency projects. Specific areas of practice include water, wastewater, and water reuse systems. Mr. Harper's relevant experience includes water distribution and treatment facilities, pumping facilities, and reservoirs.

He successfully manages projects and communicates regularly with clients to develop a thorough understanding of the project and the client's needs. Mr. Harper focuses on tracking project milestones and their relation to the project schedule and budget, allowing for ongoing knowledge of the project status.

Project Experience

Lift Station No. 2 Pump Replacement, South Coast Water District, Laguna Beach, Orange County, California. Served as project manager for preliminary design and selection of the replacement pumps for the lift station. The project entailed field testing and measurements to confirm station's hydraulics. The recommended pump selection was based on the size of the station's existing electrical and controls systems. The dry well piping and valving required replacement and reconfiguring based on the new pump/motor assemblies. Other proposed station upgrades and modifications included reconfiguring the stairway, replacement of the floor grating with hatches, and reconfiguring the building doors to facilitate removal and installation of the larger pump assemblies.

Belgrave Sewer Pump Station, Garden Grove Sanitation District, Garden Grove, California. Served as project engineer for preliminary and final design of a 1,450-gpm sewer pump station that included an in-depth pump comparison and evaluation of three pump types (vortex/recessed impeller, non-clog and enclosed screw impeller). The station replaced an existing pump station and involved siting the new station, development of a variety of site configurations, sizing the wet well, valve vault, overflow structure, generator set, bypass pumping connection, new electric service, motor control center, pump controls, radio and backup telephone telemetry.

Tiffany Sewer Pump Station, Garden Grove Sanitation District, Garden Grove, California. Served as project engineer for preliminary and final design of a 1,100-gpm sewer pump station that included an in-depth pump comparison and evaluation of three pump types (vortex/recessed impeller, non-clog and enclosed screw impeller). The station replaced an existing pump station and involved siting the new station, development of a variety of site configurations, sizing the wet well, valve vault, overflow structure, generator set, bypass pumping connection, new electric service, motor control center, pump controls, radio and backup telephone telemetry.



Education

California Polytechnic State University, San Luis Obispo
BS, Bio-Resource and Agricultural Engineering

Certifications

Professional Civil Engineer (PE), CA No. C63288

Professional Affiliations

Orange County Water Association, 2002–present; Board of Directors (2014–2017); President (2017)

American Society of Civil Engineers

Pump Station Rehabilitations, City of Newport Beach, Newport Beach, California. Served as project manager for design of the rehabilitation of five (5) of the City's wastewater pump stations. Four (4) of the stations were rehabilitated which included complete removal and replacement of the electrical and control systems for the stations, wet well and suction piping rehabilitation which required bypass pumping plans and extensive coordination with City operations staff, addition of emergency generator sets, coordination and service planning with electric and gas utility companies, modification of bypass pumping connections, and other miscellaneous upgrades. One (1) station was relocated and was comprised of a reinforced concrete wet well/dry well facility. Construction support and administration services were also part of this project and ongoing. These services included processing of RFI's, shop drawing review, construction progress meeting, and providing coordination and direction to contractor on behalf of the City.

O'Neill Regional Park Sewer Conversion, Resource Development and Management Department (now called Orange County Public Works), City of Trabuco, Orange County, California. Served as project engineer for design of a 40-foot deep submersible lift station, 12,000 feet of gravity sewer, 98 manholes, and 1,400 feet of force main. The project required a project concept report that developed and evaluated alternatives to septic tanks/leach fields to hold/treat sewage generated by the park's 14 restrooms and RV dump station. The alternatives considered included a variety of gravity and pressure sewer conveyance systems and on-site sewage holding tanks. A preliminary design report further developed the recommended concept that was a gravity sewer system and one pump station and forcemain. One challenging aspect of the project was a 35-foot-deep open cut crossing of Trabuco Creek; this was primarily due to permitting.

Smith/Rincon Sewer Lift Station Replacement, City of Corona Department of Water and Power, Riverside County, California. Served as project manager for design of the replacement sewer lift station which included two 40 hp dry pit sewage pumps operated with reduced voltage soft starters, 25-foot deep reinforced concrete wet well and dry well pump station with stairway, overhead crane, rerouting of station sewer piping (15 inch), manholes, and force main (14-inch), dry pit piping and valves, flowmeter, bypass pumping connections, facility lighting and ventilation, motor control center, PLC/SCADA system, radio telemetry, and miscellaneous site upgrades.

Edenglen Sewer Lift Station Upgrades, City of Ontario, San Bernardino County, California. Served as project manager for design of sewer lift station upgrades which included upsizing of pumps, valve/meter vault piping, electric service, and upsizing/replacement of MCC and standby generator set. A parallel forcemain was constructed on site for future increased flows.

Walnut Canyon Desilting Basin Feasibility Study, City of Anaheim, Orange County, California. Served as project engineer for feasibility study for the assessment of mitigating silt deposition in the Anaheim Hills Golf Course Ponds and facilities. Study identified silt contributing areas and their respective best management practices for mitigating silt deposition on the golf course.

Placentia and Raymond Basins Feasibility Study, Orange County Water District, Anaheim, California. Served as project engineer for preliminary pump station design that included preparation of system head curves (full and empty basin condition) for each basin, pump selection, preparing construction cost estimates, sizing electric service, preparing preliminary submersible pump station configurations (including detailed sump layouts with piping/valve configurations), preparing preliminary site plans, and composing pertinent sections of the feasibility study.

Shannon Brown, PE, QSD, QISP

INDUSTRY GENERAL PERMIT

Shannon Brown is a civil engineer with 12 years' experience as a consultant specializing in stormwater, water, and sewer program management and infrastructure design. Mr. Brown is experienced in a broad range of disciplines, including industrial and construction regulatory permit compliance, preparation of design drawings and specifications, hydrology and hydraulics modeling, and geospatial analysis. Mr. Brown has a background in state and federal environmental compliance, including environmental impact documentation, technical studies, and field data collection.

Project Experience

Terminals Action Plan, Port of San Diego, California. Served as project engineer. Dudek prepared and managed development of an action plan for Municipal Separate Storm Sewer System permit compliance at three of the Port's industrial marine terminals. The action plan consists of a tenant best management practice (BMP) plan, stormwater monitoring program, program assessment plan, long-term BMP plan, and tenant outreach plan. Ongoing responsibilities include implementation of program assessment goals, which consists of evaluation of tenant BMP inspection and audit results, comparison of monitoring results to structural and nonstructural BMP installations, and assessment of tenant and terminal user stormwater pollution prevention knowledge.

Level 1 Exceedance Response Actions Plan, Reuland Electric, City of Industry, California. Served as lead technical engineer. Dudek prepared a level 1 Exceedance Response Actions (ERA) plan for an industrial electric motor manufacturing facility that monitors stormwater runoff for ph, total suspended solids, oil and grease, aluminum, copper, iron, and zinc. During the 2020-2021 reporting year, the industrial facility recorded annual average Numeric Action Level (NAL) exceedances for aluminum and iron. The ERA included assessment of site conditions, current best management practices for stormwater management, and recommendations for operational enhancements to limit stormwater contact with industrial use areas that may contribute towards the exceedances.

Industrial and Construction Stormwater Permit Compliance, Confidential Client, Monterey, California. Served as lead technical engineer. Dudek has been supporting a 120 acre industrial energy production and storage facility in Monterey County since 2018 with industrial and construction stormwater compliance including stormwater pollution prevention plan (SWPPP) development, SWPPP update, and Level 1 and Level 2 Exceedance Response Action (ERA) plans and ERA Technical Reports. SWPPP support has included modernization of their Industrial General Permit SWPPP and development of multiple Construction General Permit SWPPPs for construction of battery energy storage facilities. The facility monitors industrial stormwater runoff for ph, total suspended solids, oil and grease, and iron. The facility first entered Level 1 status for iron in 2020 and Level 2 for iron 2021. Dudek's ERA plan includes limiting sediment exposure to stormwater runoff, removal of rusted equipment



Education

California State University,
Fullerton
MS, Environmental
Engineering, 2017
University of California,
Davis
BS, Environmental and
Resource Science, 2009

Certifications

Civil Professional
Engineer (PE), California
No. 92771
Qualified Stormwater
Developer (QSD)
Qualified Industrial
Stormwater Practitioner
(QISP)
OSHA 30-Hour
Construction Safety

exposed on the site, cleaning of storm drains, and implementation of a robust street sweeping and best management practice maintenance program.

Santa Maria Wastewater Reclamation Plant Headworks Design, Ramona Municipal Water District, Ramona, California. Served as project engineer. Dudek led a team of civil, mechanical, structural, and electrical engineers through the design process for a new 5-million-gallons-per-day headworks facility. Project work included design and coordination with vendors for Archimedian screw pumps, mechanical bar screens, screenings handling equipment, grit handling equipment, and associated hydraulic calculations. Design work included process-flow diagrams, hydraulic profiles, and piping and instrumentation diagrams. Overall project design included the new headworks facility, influent and effluent sewers, yard piping for potable and non-potable hookups, and civil site design.

Trash Amendments Planning, City of Carlsbad, California. Served as project engineer. Dudek prepared a regulatory compliance implementation plan and internal action plan. The implementation plan detailed installation of structural and nonstructural stormwater trash control BMPs throughout the City under a Track 2 compliance pathway and a citywide On-Land Visual Trash Assessment control monitoring program. Dudek also prepared an action plan that serves as a framework for internal implementation of the trash amendments, documenting annual steps for a multidepartment, collaborative effort to ensure compliance within the allotted 10-year time frame. In December 2018, the final implementation plan was submitted for approval to the San Diego Regional Water Quality Control Board, and an internal action plan was developed in 2019.

Municipal Waterways Maintenance Plan, City of San Diego, California. Served as project engineer. The Municipal Waterways Maintenance Plan supports the findings of a programmatic environmental impact statement for maintenance of more than 60 earthen and concrete-lined channels throughout the City. Project work included preparation of hydrologic and hydraulic assessments, associated technical reporting, and planning and construction-level channel maintenance plans. The hydraulic studies include Hydrologic Engineering Center – River Analysis System analysis to determine the extent of maintenance required to restore each channel's flood control function while minimizing the impacts to sensitive environmental resources in the area.

Small Municipal Separate Storm Sewer System Permit Compliance Program, City of Goleta, California. Served as technical reviewer and project engineer. Dudek is currently supporting the City of Goleta through technical project implementation and extension of staff services. Dudek has played a key role in overhauling and redeveloping Goleta's Phase II stormwater program to ensure all municipal operations and new development requirements meet or exceed the Small Municipal Separate Storm Sewer System permit provisions. Dudek combined local and regional stormwater expertise to develop a list of prioritized action items designed to address stormwater program needs based on each item's relative threat to water quality, operational feasibility, and budget. Ongoing program support activities include preparation of technical reports and analyses, development of stormwater training materials and jurisdictional program procedures, regulatory audit preparation, drafting and issuance of notice of violations to City stakeholders, illicit connection/illicit discharge investigations, new development stormwater plan review, stormwater pollution prevention plan development, and post-construction BMP inspection.

Park Drive Drainage Improvements, City of Carlsbad, California. Served as project engineer. The project scope includes addressing retaining wall degradation, slope failures, and drainage issues along Park Drive to alleviate safety concerns and reduce maintenance efforts. In addition to standard engineering solutions, the team evaluated bioengineering solutions to improve erosive conditions. Dudek is preparing final engineering documents.

Jennifer O'Brien, EIT

PROJECT ENGINEER

Jennifer O'Brien is a senior project engineer with 7 years' experience in stormwater resources, including site, channel and storm drain design, scour and floodplain analysis, hydraulics and hydrology, and channel restoration. Ms. O'Brien has successfully lead the production of alternative analysis, final PS&E packages, hydraulic modeling as well as performed construction support for various stormwater and land development projects. Ms. O'Brien is proficient in AutoCAD Civil 3D, FHWA HY-8 and Hydraulic Toolbox, HEC-RAS, Flowmaster, EPA SWMM, WSPGW and additional modeling software.

Project Experience

Huston Creek WWTP Primary Clarifier and Dewatering Building Improvements, Crestline Sanitation District, Crestline, California. Senior project engineer responsible for the design of the site and drainage improvements associated with the WWTP facility improvements. Work involved hydrologic and hydraulic analysis of the site as well as preparation of construction documents for the proposed grading and site design. Dudek's design minimized impacts to the continuing operations of the WWTP during construction and utility conflicts within the site due to the density of underground utilities at the WWTP. Dudek prepared the complete design plans and bid documents for the proposed improvements. Construction of the improvements is currently in process.

E Reservoir Replacement and Pump Station, Vista Irrigation District, Vista, California. Senior project engineer for the design of the drainage and site improvements associated with the reservoir repairs. Work involved hydrologic and hydraulic analysis of the site as well as the surrounding storm drain system. Dudek's design incorporated accommodating challenging subgrade conditions with half of the site on hard rock and half of the site on colluvium. The site is space constrained and the design sought to limit the aesthetic impact to adjacent properties while increasing the capacity of the new reservoir as compared to the old and adding a new pump station. Ms. O'Brien completed the proposed grading and storm drain plans and bid documents. Construction of the improvements is currently in process.

Reservoir Repairs Phase 3, City of Oceanside, California. Senior project engineer for the design of the drainage and site improvements associated with the reservoir repairs. Work involved hydrologic and hydraulic analysis of the site as well as the surrounding storm drain system. Dudek's design resolved historic flooding issues at the site while minimizing the footprint of the improvements to lessen permitting requirements for the project. Ms. O'Brien completed the proposed grading and storm drain plans and bid documents. Construction of the improvements is currently in process.

Upper and Lower System Recycled Water System Expansion, City of Oceanside, California. Senior project engineer for the drainage and site design improvements associated with the new reservoir. Work involved hydrologic and hydraulic analysis of the site as well as the surrounding storm drain system as well as designing appropriate hydromodification



Education

California State
Polytechnic University,
Pomona
BS, Civil Engineering
2016

Certifications

Engineer-in-Training (EIT),
No. 166391

Professional Affiliations

Chi Epsilon – Civil
Engineering
Honor Society
American Society of Civil
Engineers

BMPs as required to comply with County of San Diego drainage design standards. Ms. O'Brien is currently completing the final proposed grading and storm drain plans and bid documents for the site improvements.

Anaheim South Recycled Water Project, City of Anaheim, California. Project engineer for the site and drainage design of the pump station site. Work involved hydrologic and hydraulic analysis of the site as well as the surrounding storm drain system and design plans for proposed grading and storm drain. Dudek prepared the complete design plans and bid documents for the construction of the \$25M infrastructure project. Once construction is complete, the project will provide a supplement to the water supply and convert the substantial Disneyland irrigation demand to a sustainable water supply.

Wildrose Reservoir No. 2, Temescal Valley Water District, Temescal Valley, California. Senior project engineer responsible for the design of the site and drainage improvements associated with the new reservoir. Work involved hydrologic and hydraulic analysis of the site as well as preparation of construction documents for the proposed grading and site design. Dudek's design minimized the footprint of the new reservoir site to minimize the permitting requirements of the project. Dudek has prepared the 90% PS&E for the project and will complete final bid documents in 2023.

San Carlos Reservoir Replacement Project, City of San Diego, California. Senior project engineer responsible for the design of the site and drainage improvements associated with the construction of the new reservoir. Work involved hydrologic and hydraulic analysis of the site as well as preparation of construction documents for the proposed grading and site design. Dudek is currently preparing preliminary design for the project and will complete final bid documents in 2024.

Lift Station 55-11 Capacity Upgrade Project, Coachella Valley Water District, Mecca, California. Senior project engineer for the design of the drainage and site improvements associated with the improvements to the lift station site. Work involved hydrologic and hydraulic analysis of the site as well as preparation of construction documents for the proposed grading and site design. Dudek has prepared the 100% PS&E for the project and will complete final bid documents in 2023.

Laguna Canyon Channel Transition Structure Improvements at Beach Street, City of Laguna Beach, Laguna Beach, California. Project engineer for the final design of improvements to the Laguna Canyon Channel transition structure upstream of the Beach Street culvert inlet. Prior to the design of improvements, Dudek performed a study on the entire Laguna Canyon Channel Culvert to find deficiencies in the system. Following the modeling process, Dudek prepared the complete design plans and bid documents for the construction of the proposed transition structure that increased conveyance through the system by more than 25%. Dudek provided the final plans, specifications and cost estimate. Construction of the project was completed in 2020.

Laguna Canyon Channel Culvert Flood Alternative Study, Laguna Beach, California. Design engineer for the hydraulic evaluation of the historic flooding of downtown Laguna Beach. This project, focusing on the Laguna Canyon Channel culvert between Beach Street to the ocean, identified the existing system's limitations and provided the City with several alternatives to minimized the impacts of recurring flooding. Dudek modeled and evaluated multiple mitigation scenarios for the City and ranked them based on their feasibility. Given the City's dense and historic buildings and infrastructure, advanced modeling allowed Dudek to identify unique alternatives that would minimize flood risks and construction impacts. XPSWMM was used to evaluate a linked subsurface/surface model (1D/2D) that more accurately displayed the true impacts of various potential solutions. The outfall was at the ocean, which entailed a variable tide, which included storm surge. Dudek provided the preliminary plans and cost estimates for a phased approach that would work with the City's budget.

Joshua Cato, PE

PROJECT ENGINEER

Joshua Cato is a California-registered professional civil engineer with over 5 years' experience focusing on surface water resources. His experience includes hydrologic analysis and modeling, complex 1- and 2-D hydraulic modeling and analysis, creek improvements, stream restoration, hydraulic bridge analysis and sizing, performing erosion and scour analyses, processing Federal Emergency Management Agency (FEMA) Letter of Map Revision (LOMR) and No-Rise Certifications, producing PS&E packages, and writing H&H and design reports to support rural, industrial and urban stormwater infrastructure projects.

Project Experience

Eagle Scout Lake Management Program, City of Escondido, California. Served as project engineer producing a Lake Assessment Report and conceptual plans for Kit Carson Park. Project components included mitigating high sediment load of the existing tributaries of Kit Carson Creek that outlet to Eagle Scout Lake. Responsibilities include performing site visits and field erosion assessments; producing the Lake Assessment Report to identify existing deficiencies in the tributary creek, park, and lake; performing hydraulic analysis of the creek's existing condition; identifying potential areas of improvement; and producing the Lake Remediation Masterplan report and conceptual plans to accompany masterplan report. The hydraulic modeling and analysis were performed using HEC-RAS.

Foss Lake Hydraulic Analysis, Oceanside, California. Responsible for creating the hydraulic model and performing the hydraulic analysis for the natural creek system based on proposed habitat improvement grading and inclusion of a proposed culvert. Assisted in development of the floodplain assessment report. The 1-D hydraulic modeling and analysis were performed using HEC-RAS.

La Mirada Creek Park Masterplan Project and Creek Park Improvements Project, RRM Design Group, La Mirada, California. Responsible for performing the hydraulic analysis of the existing creek and the preliminary proposed creek alternatives during the masterplan phase. Refined and analyzed the proposed creek grading to address observed scour and aggradation within the park between channel check dams. Lead the effort for the basis of design report to support the proposed creek improvements, bank erosion protection, and rock pool drop structures. The hydraulic modeling and analysis were performed using HEC-RAS.

West Fontana Channel Bioswale, San Bernardino County Flood Control District, San Bernardino, California. Served as project engineer working on the bioswale design for an existing storm drain channel in San Bernardino County. The bioswale will be designed to treat specific constituents through a "treatment train" style design, sized for the required design storm. Any flows surpassing the design storm will weir over the sideboard into the existing channel based on a hydraulic analysis using U.S. Environmental Protection Agency Storm Water Management Model 5 and Water Surface Pressure Gradient for Windows.



Education

California State
Polytechnic University,
Pomona
BS, Civil Engineering

Certifications

Professional Civil
Engineer, CA No. 92397

Professional Affiliations

American Society of
Civil Engineers
Association of State
Floodplain Managers
Chi Epsilon-
Civil Engineering
Honor Society

Mockingbird Canyon Wash Stabilization Project, Riverside County Flood Control and Water Conservation District, Riverside County, California. Serving as the project hydrology and hydraulics lead responsible for the hydraulic analysis of the channel improvements for the approximate 2-mile project reach of Mockingbird Canyon Wash within Riverside County. Hydraulic analysis and design components include 1-D HEC-RAS hydraulic modeling, channel improvements, channel section design, scour analysis and mitigation, riprap design, grade control structure selection and design, energy dissipator selection and design, and sediment transport modeling. Contributed to and/or wrote associated technical memorandums and design reports related to hydrology and hydraulic design components.

Dam Failure Inundation Studies and EAP Development, Ramona Municipal Water District, California. Analyzed five jurisdictional dams owned by RMWD to create dam failure models, failure studies, associated inundation modeling and mapping, and Emergency Action Plans. Dam breach modeling was performed using HEC-HMS. FLO-2D was used for the 2-D Hydraulic modeling. The inundation study, the inundation map, and the EAP were prepared in compliance with FEMA, Cal OES, and California Government and Water Code guidelines.

Lakes at Rockport Ranch, Lennar Homes, Menifee, California. Serving as the project engineer for the lake design of two recreational lakes for a new housing development planned in Menifee, California. Proposed development stormdrains outlet into the lakes; the lakes serves as the onsite BMP for the development. Worked with site civil engineers to develop and the WQMP and provide basis of design for the selected water quality components of the lakes. Lake design consists of lake liner design, lake edge design, and water quality measures in the form of mechanical and biological treatments. Water quality design components include intake bay/skimmer system, water jets through the lake edge, up-flow biofiltration units, aeration system, pump vault/station design, and water feature design. After design, a lake maintenance manual is created for the future homeowner's association, who will have to maintain and operation the lakes.

Lower Mission Creek Floodplain Management Services, City of Santa Barbara, California. Serving as project engineer for floodplain assessment based on the inclusion of new bridge structures to the Mission Creek riverine system. Responsibilities included performing and creating the 1-D hydraulic analysis and model of the existing channel using HEC-RAS and the 2-D hydraulic analysis using FLO-2D, writing the technical study associated with the FEMA LOMR application, processing model results to create geographic information system files, and floodplain mapping.

Mission Oaks Business Park-Building 7 Site Development, PEGH Investments, Camarillo, California. Worked with the project engineer for the design and coordination of a 5-acre design-build commercial/light industrial site. Project tasks included the mass and fine grading for the site, landscape plans, irrigation plans, and utility design plans.

Dunlap Boulevard Bridge Removal and Replacement at Wilson Creek Channel, City of Yucaipa, Yucaipa, California. Worked with project engineer to create 1-D hydraulic model of Wilson Creek. Analysis results guided bridge sizing, soffit height, scour wall depth, and ultimate bridge design. Coordinated with utility owner regarding for utility plans and relocations. Assisted in plan production and basis of design report.

Live Oak Canyon Road Bridge Removal and Replacement Preliminary Design, City of Yucaipa, Yucaipa, California. Served as the hydraulic design lead for the replacement of an existing low-water crossing and culverts with a proposed bridge to allow for all-weather crossing. Energy dissipation selection and design for the downstream chute using spillway design criteria. Existing conditions analysis used 1-D HEC-RAS model. Proposed conditions analysis required conjunction of HEC-RAS modeling and additional calculations for proposed stepped spillway energy dissipator and impact basin design. Created the technical memo for the hydrology and hydraulics basis of design.

Sofie Black, EIT, CFM

PROJECT ENGINEER

Sofie Black (SO-fee BLAC; she/her) is a project engineer with 5 years' professional experience as a civil designer specializing in site design, stormwater resources, and floodplain management.

Ms. Black successfully and efficiently delivers construction documents and has received municipal approval for multiple site development projects. She has experience with floodplain analysis and design, including hydrologic and hydraulic analyses, as well as implementation of stormwater management facilities and construction best management practices. She is practiced in adhering to federal, state, and local agency design standards and codes. Ms. Black is proficient in AutoCAD Civil 3D, AES HydroWIN, Flowmaster, HEC RAS, and additional modeling software.

Project Experience

Lakes at Rockport Ranch, Lennar Homes, Menifee, California. Worked as project engineer for subdivision development lake design. Design consists of two lakes, totaling 4.5 acres, to be implemented as community features. Engineered lake liner design, lake edge design, and water quality measures. Coordinated with civil, electrical, mechanical, and piping designers to meet the client's needs.

La Costa Request for Bid, Stormwater Detention Basin Rehabilitation, City of Encinitas, California. Prepared maintenance plan for proposed sediment removal project at the existing regional detention basin. As-built documents were reviewed to determine originally intended design. Maintenance design included proposed grading to reestablish intended design and basin capacity, as well as reestablishing outlet structure operation and overflow design. The plan also included construction best management practices to protect downstream waterbodies.

Merwin Drive Storm Drain Realignment, City of Carlsbad, California. Served as project engineer for storm drain realignment design. Existing infrastructure consistently floods residential street during and after storm events. Design process included analyzing hydrologic and hydraulic site conditions, evaluating effectiveness of existing stormwater management and flood control infrastructure, and developing an innovative design to reduce flooding given site constraints.

WRF2 Paving and Drainage Improvements, City of Corona, California. Served as project engineer for full site pavement rehabilitation and drainage improvement project. Analyzed hydrologic site conditions per Riverside County standards, using AES HydroWIN software. Explored various stormwater treatment and storage facility options. Improved stormwater conveyance through grading and site feature implementation. Achieved stormwater storage through infiltration/retention basins.

Plant 3A Drainage Improvements, Moulton Niguel Water District, California. Served as project engineer for improvement project, including pavement rehabilitation and drainage design. Analyzed hydrologic site conditions



Education

University of Colorado,
Boulder
BS, Civil Engineering,
2017

Certifications

Engineer in Training (EIT)
No. 74093

Certified Floodplain
Manager (CFM)
No. US-19-11308

Professional Affiliations

Association of State
Floodplain Managers

and designed localized drainage features to manage stormwater. Designed proposed grades to direct stormwater to proposed drainage features. Maintained stormwater flows on site, per existing conditions.

Park Drive Drainage Improvements, City of Carlsbad, California. Served as project engineer for addressing retaining wall degradation, slope failures, and drainage issues along Park Drive to alleviate safety concerns and reduce maintenance efforts. In addition to standard engineering solutions, the team evaluated bioengineering solutions to improve erosive conditions. An assessment of the groundwater conditions impacting the retaining wall and slope integrity was provided, as was a hydrologic and hydraulic assessment, to better convey runoff away from the slope face. The alternatives analysis included evaluating multiple solutions and documenting the benefits and costs of each scenario, including roadway improvements. Dudek is currently preparing final engineering documents and the environmental documents and permitting.

Stormwater Prevention Pollution Plan for the Nelson Sloan Reclamation Project, California State Parks, San Diego, California. Prepared stormwater prevention pollution plan for reclamation of a 146-acre abandoned sand and gravel quarry. Erosion and environmental concerns were reviewed and the project was designed to minimize the impact of the construction on the habitat surrounding the project and the Tijuana River Valley.

Rice Canyon Reservoir Access Road, Elsinore Valley Municipal Water District, Lake Elsinore, California. Served as project engineer for analysis of existing floodway and design of access road improvements. Created an existing condition HEC RAS model to analyze flood extents, flows, and associated velocity of flow within the canyon. Redesigned previously undermined low water crossings to better withstand future storm events.

Federal Emergency Management Agency Storm Damage Repairs, Desert Water Agency, Coachella Valley, California. As project engineer, responsible for performing existing condition hydrologic and hydraulic analysis. Investigated the extents of storm damage repair. Designed site elements to restore culvert and low water crossing capacity and functionality and implemented slope erosion protection measures.

Mission Creek Letter of Map Revision 2022, City of Santa Barbara, California. Served as design engineer to update a hydrologic model to reflect new bridge construction within a Federal Emergency Management Agency (FEMA) mapped floodway. Responsibilities included analyzing as-built documents and updating the HEC RAS hydraulic model to reflect the new construction.

Drainage Channel Minor Maintenance, City of San Diego, California. Served as stormwater engineer for this on-call project. Reviewed field data for over 360 drainage facilities within the city. Developed definition/criteria for “minor maintenance” facility condition. Aided the city in determining approximately 20 applicable facilities to perform work on for fiscal year 2021. Utilized geographic information system (GIS) to obtain field data and Excel to produce deliverables.

Consequence of Flooding Analysis, City of San Diego, California. Served as stormwater engineer for this on-call project. Reviewed flood mapping information for approximately 40 drainage facilities within the city. Generated flood inundation boundary. Evaluated “at risk” facilities and infrastructure based on various criteria. Utilized GIS to obtain topography data, HEC RAS to delineate floodplain, and Excel to produce deliverables.

La Mirada Creek Park, RRM Design Group, La Mirada, California. Performed updated grading at creek park redesign project. Evaluated hydraulic channel capacity given target storm event conveyance.

Buena Vista Creek Restoration, City of Oceanside, California. Serving as project engineer on creek restoration and community feature enhancement project. Evaluated existing condition flood extents within a FEMA-mapped floodway. Provided team with description of channel characteristics and observed hydraulic impacts. Dudek will prepare the proposed floodway elevation and submit necessary FEMA documents as the design progresses.

Brandon Lacap, PE

PROJECT ENGINEER

Brandon Lacap (BRAN-din LAH-kup; he/him) is a professional civil engineer with 13 years' experience in engineering design and managing water/wastewater infrastructure and capital improvements projects. Mr. Lacap is well versed in developing and establishing positive working relationships with clients. He has experience managing concurrent design projects, managing design budgets, designing and preparing plans and specifications for public and federal agencies, technical writing of preliminary design reports, and hydraulic modeling/surge analysis of water distribution systems. Mr. Lacap specializes in water pump station, sewer lift station, and mechanical piping design.

Project Experience

Plant 2 Booster Pump Station and Reservoir Condition Assessment, Indio Water Authority, Indio, California. Served as project manager for the comprehensive condition assessment of four (4) of the Indio Water Authority Plant 2 water facilities. These facilities include two active groundwater extraction well pump stations, a booster pump station, and a 1.0-MG, raw-water reservoir. A record data review and field inspection were required for each facility to determine deficiencies and develop recommendations for a prioritized list of capital improvement projects with design recommendations to rehabilitate/replace assets at each of the evaluated facilities. In addition to developing the prioritized short-term and long-term improvement projects at the plant, Dudek provided class 3 construction cost estimations for each of the recommended improvement projects to assist IWA in budget planning for the upcoming near and mid-term CIP phases.

P-991 Coastal Campus Utilities (Phase 2) Recycled Water Booster Pump Station and Water Lines, Naval Facilities Engineering Command, San Diego, California. Served as project engineer for the design of a 450-gpm packaged recycled water booster pump station, skid mounted, in-line vertical multistage pumps, within a block wall enclosure with double-leaf access gate and paved access driveway; design of a 10,000-gallon bolted glass-fused to steel recycled water air-gap tank; and the design of approximately 13,900 linear feet of 4-inch and 6-inch recycled water pipelines as a part of the Coastal Campus' new recycled water distribution system. The project included preparation of a basis of design report, preparation of final design and final bid documents, and construction phase support services throughout construction of the project.

Wilson Middle School Increment 2 Stormwater Pump Stations, San Diego Unified School District, San Diego, California. Served as project engineer for design of three (3) stormwater pump station facilities, PS-1 (660-gpm, 7.5-horsepower duplex pump station), PS-2 (2,200-gpm, 20-horsepower pump station), and PS-3 (1,050-gpm, 10-horsepower pump station).

P159 Camp Wilson Infrastructure Upgrades, Naval Facilities Engineering Command, San Diego, California. Served as project engineer for design of a 750-gpm water booster pump station (20-horsepower horizontal frame



Education

San Diego
State University
BS, Civil Engineering,
2009

Certifications

Professional Civil
Engineer (PE),
CA No. 87211

Professional Affiliations

WaterReuse Association

mounted, centrifugal end suction pumps), approximately 3,000 feet of 8-inch-diameter PVC (C-900) force main, and 1-million-gallon pre-stressed concrete water storage tank.

E Reservoir Replacement and Pump Station, Vista Irrigation District, City of Vista, San Diego County, California.

Served as senior engineer for the preliminary and final design of the E reservoir pump station and replacement of the existing E reservoir. The District desired a redundant pumping facility to convey water from the 752 Zone to the 984/976/900 zones. As part of the E reservoir replacement project, a new pump station was designed on the E Reservoir site which conveys water from the 752 Zone to the 984/976/900 zones. Multiple analyses and scenarios were modeled which concluded with the recommendation for a 3,000-gpm pump station comprised of 5 duty and 1 standby 50-hp pumps situated within a 35' x 25' CMU building and operated with VFD's. The project also involves a new 3.1-MG cast-in-place concrete reservoir, valve vault, piping, landscaping, new fencing, and a new 480V, 3-phase electrical service.

Modernization of Busch Garden and Rosemont Sewer Pump Stations, City of Pasadena, Pasadena, California.

Served as lead engineer for the rehabilitation design of two (2) of the City's aging residential sewer pump stations. The redesign of the Busch Garden Sewer Pump Station involved conversion of the existing above grade pump house with self-priming solids handling pumps, to a submersible style pump station facility with 20-horsepower submersible pumps and adjacent valve vault. The rehabilitation of the Rosemont Sewer Pump Station involved retrofitting the existing wet well with lift-assisted hatch and pump guide rail system for easier maintenance of new 10-horsepower submersible pumps, re-lining of the existing well with spray-on epoxy liner, and redesigning the pump discharge assemblies to include a valve vault for maintenance access to the check and isolation valves. Both pump stations required preparation of construction phasing to ensure continued operation of both stations during construction.

Rehabilitation Design of Cabot and Calle Corta Recycled Water Pressure Reducing Stations, Moulton Niguel Water District, Laguna Niguel, California.

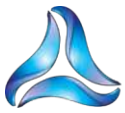
Served as project manager for the field assessment, rehabilitation design, and construction support services for the rehabilitation of two (2) of their aging sub-grade recycled water PRSs. Dudek performed a field inspection of both existing facilities to document deficiencies and propose improvements to both the Cabot and Calle Corta PRS. Dudek prepared final design plans, specifications, and opinion of probable costs for each of the stations, which included design of a drainage swale around the adjacent retaining wall to divert stormwater runoff away from the access cover. The new designs also included 8-inch diameter and 6-inch diameter ductile iron piping; 2-inch diameter pressure reducing valve bypass assembly; sump pump assembly with 1.5-inch discharge piping; and sidewalk, curb, and gutter replacement.

Benson Avenue Temporary and Permanent Sewer Pump Stations and Force Main, City of Chino, California.

Served as project manager. Dudek was hired to design a two-phase pump station and force main project that diverts sewer flows to a nearby Inland Empire Utilities Agency interceptor sewer manhole. The two-phase approach required design of a 150-gpm temporary sewer pump station as well as the design of an additional 150-gpm permanent pump station for long-term operation. The coordinated effort between the City of Chino, Southern California Edison, IEUA, and California Department of Transportation (Caltrans) successfully allowed the Caltrans work to proceed on schedule while providing the City of Chino time to construct the permanent solution.

El Capitan PS-1 Surge Tanks Replacement, Padre Dam Municipal Water District, Santee, California.

Served as project engineer, performing surge modeling and transient analysis for the 16,000-gpm PS-1 facility. The project included preparation of a preliminary design technical report; design of two 4,600 gallon, 6-foot-diameter suction and discharge hydro-pneumatic tanks (150 pounds per square inch [psi]/ 300 psi ASME rated); redesign of pump station bypass piping and relocation of the pressure relief valve; and management of construction support services.



Professional Registrations

Geotechnical Engineer, California
No. 3216

Professional Engineer, California
No. 86619

Education

Master of Science, Civil Engineering,
San Diego State University

Bachelor of Science, Civil Engineering,
San Diego State University

Professional Affiliations

American Society of Civil Engineers

Years of Experience: 10

Mr. Vonk is a registered Geotechnical Engineer with 10 years of practical experience working on infrastructure, industrial, commercial, private, and public works projects. Mr. Vonk has coordinated, conducted, and managed numerous geotechnical site investigations of various sizes involving test pits, borings, cone penetration testing, field infiltration testing, and geotechnical laboratory testing. He has also performed geotechnical engineering analyses for: various foundation systems including drilled piers, driven piles, mat, and spread footing foundations; static settlement magnitude and duration based on loading from new fill, foundations, and other structural loading; geotechnical hazards such as liquefaction and slope instability and mitigation using geosynthetics, tie-back anchors, soil nails, ground improvement, and shear pins; earth retaining structures including shoring, SRW and MSE walls, and lateral earth pressures; flexible, rigid, temporary and plantable pavement design; and evaluating sites for infiltration feasibility. Mr. Vonk also has experience performing and managing on-site quality control and quality

assurance of geotechnical related construction activities for large and small-scale grading and construction projects including observation of drilled shafts, driven piles, micropiles, ground improvement, tie-backs, soil nails, spread footings, grading, utility and basement excavations, retaining walls, geosynthetic reinforced slopes, compacted fill, and pavements. Representative experience includes:

Park Drive Street and Drainage Improvements, Carlsbad, California: Mr. Vonk provided the geotechnical investigation and prepared geotechnical recommendations for design and construction of the slope stabilization and stormwater improvement components to help manage sediment generated from eroding slopes. The investigation included installing two ground water wells and collecting multiple grab and hand auger samples throughout the project alignment. The proposed project improvements include new retaining walls, surface and subsurface drainage improvements, and regraded slope conditions. Estimated construction value is \$2 Million.

San Diego State University Mission Valley Site Development, San Diego State University, San Diego, California: Mr. Vonk managed the field investigation, geotechnical analyses, and construction phase services to support the design-build redevelopment of the 170-acre SDCCU (former Qualcomm) Stadium site into San Diego State University Mission Valley. The project consists of developing the site around Snapdragon Stadium for future multi-family Residential Housing, an Innovation District, and Hotel and Conference Center. The project also consists of constructing an 80-acre River Park along the east and south boundaries of the site. This complicated project involved many design challenges including working around several critical existing utilities and infrastructure, demolition of the existing stadium that was supported on over 1,500 deep foundations, integrating offsite improvements into the overall onsite design scheme, and managing substantial variability within the subsurface materials since the site is within the San Diego River floodplain and it is underlain by alluvial soils with a high potential for soil liquefaction. Mr. Vonk also managed the import screening program for over 450,000 cubic yards of fill soil that were imported from over 50 different construction sites. Construction value is approximately \$200 Million (Initial site development, River Park, and traffic improvements).

Kite Street Emergency Storm Drain Improvements, San Diego, California: Mr. Vonk provided a preliminary geotechnical evaluation and managed construction phase geotechnical services for the replacement of an existing 18-inch diameter corrugated metal pipe (CMP) storm drain. Localized leaking of storm water resulted in a 16-foot-deep sinkhole at the top of the slope with additional voids approximately 20-feet in length both upstream and downstream of the sinkhole. Project components included temporary shoring, jack and bore and conventional cut and cover trench installation methods for the storm drain, and custom permanent drainage structures.



City of Carlsbad Wetland Mitigation Site, Carlsbad, California: Mr. Vonk installed two groundwater monitoring wells for the City of Carlsbad. Remote data collection systems were installed to provide easily accessible and continuous monitoring data for the City staff to support the conclusion that developing the site as a wetlands mitigation site was feasible.

Santa Margarita River Weir Structure, Marine Corps Base Camp Pendleton, San Diego County, California: Mr. Vonk performed the geotechnical investigation and design recommendations for this planned 250-foot-long inflatable weir diversion structure to replace the existing sheet pile weir in the Santa Margarita River. The structure consists of a concrete slab foundation and two separate steel gate panels that could be separately raised and lowered pneumatically using heavy gauge inflatable air bladders. Services included field exploration, compiled data from field explorations and laboratory testing to create soil profiles, performed analysis and calculations (including bearing capacity, lateral earth pressures, site specific ground motions and liquefaction) and prepared the final geotechnical report.

La Mesa Sewer Replacement, La Mesa, California: Mr. Vonk provided a geotechnical investigation and prepared a geotechnical investigation report for the City of La Mesa Sewer Replacement project. The investigation characterized the subsurface conditions and provided geotechnical recommendations for key areas of the project, as well as provided design and construction recommendations.

Village Park Recycled Water Pipeline, City of Encinitas, California: Mr. Vonk provided the geotechnical investigation of the installation of 6 to 12-inch PVC pressurized recycled water pipeline beneath various streets in the City of Encinitas. Services included field reconnaissance, obtaining boring construction and encroachment permits, obtaining traffic control plans, drilling, logging, and sampling five exploratory borings in the city right-of-way with traffic control, performance of geotechnical calculations and analyses and preparation of the final geotechnical evaluation report.

San Vicente Wastewater Reclamation Plant, Ramona, California: Mr. Vonk provided the geotechnical investigation on determining the cause of and mitigating seepage through the embankments in a water storage pond. Services included field reconnaissance, obtaining boring construction permits, drilling, logging, and sampling four exploratory borings, performance of geotechnical calculations and analyses and preparation of the final geotechnical evaluation report.

Otay Water District 870-2 Pump Station, San Diego County, California: Mr. Vonk provided the geotechnical investigation and recommendations for this new outlet pipe from the existing Roll Reservoir (571-1) to the proposed pump station in the Otay Mesa area. Services included field reconnaissance, drilling, logging, and sampling three exploratory borings, performance of geotechnical calculations and analyses and preparation of the final geotechnical evaluation report.

Thermal Energy Storage Tank, Ironwood State Prison, Blythe, California: Mr. Vonk provided the geotechnical investigation and recommendations for this new 60-foot diameter thermal energy storage tank. Services included drilling, logging, and sampling of exploratory borings, performance of geotechnical calculations and analyses and preparation of the final geotechnical evaluation report.

P-1220 Raw Water Pipeline, Marine Corps Base Camp Pendleton and Naval Weapons Station Fallbrook, San Diego County, California: Mr. Vonk provided the geotechnical investigation and design recommendations for this new 7-mile-long raw water pipeline, connecting the Fallbrook Public Utilities District supply to Camp Pendleton. Services included field exploration, compiled data from field explorations and laboratory testing, performed analysis and calculations, and preparing the final geotechnical report.

Poinsettia Park Dog Park and Parking Lot, City of Carlsbad, California: Mr. Vonk managed the subsurface investigation, which included test pits, borings, infiltration testing and laboratory testing, as well as provided design recommendations for the proposed parking lot improvements, a restroom, subsurface utilities, shade structures, storm water BMPs, and site grading.

Right-Of-Way Engineering Services, Inc.

Land Surveying



Michael Schlumpberger, PLS
President

Project assignment:
Project Manager
Survey Supervisor

Education:

A.A., Surveying, Palomar College, California
A.A., General Education, Palomar College, California
Joint apprenticeship program training
Continuing education courses, seminar, workshops and specific equipment training

Professional registration and affiliation:

Professional Land Surveyor-California, 2001 (#7790)
California Land Surveyors Association member, State and local chapter

Relevant experience:

Michael Schlumpberger has 32 years' experience in all aspects of municipal surveying projects including horizontal and vertical control surveys, boundary surveys, GPS surveys, and construction staking. He is well versed in all aspects of the surveying industry.

Roadway improvement experience includes design surveys for numerous street widening and re-alignment projects ranging in size from small residential street improvements to Caltrans highways. Services performed include GPS horizontal and vertical control networks, boundary surveys to determine existing right of way, document preparation for additional acquisition, locating existing encumbrances, cross section of existing roadways, utility research, utility location, aerial mapping, monument preservation, and construction staking.

Michael has overseen and conducted complex boundary surveys on various project types and sizes. Completed projects include miles of proposed roadway, existing road right of way, long pipeline corridor alignments, military bases, sectionalized land, remote communication tower sites, wind turbine sites, surface mining limits and municipal facility sites. Records of surveys documenting these boundary surveys that extend throughout many southern California counties have been filed with the respective county surveyor.

In addition, Michael has provided oversight on a multitude of water and sewer projects which include aerial photogrammetry control, boundaries, right of way surveys, utility location and construction staking for reservoirs, treatment plants, pumping stations, large diameter engineered pipe and small diameter replacement lines.

Michael now serves as President and project oversight providing expertise in boundary locations, mapping, right of way acquisition and field procedures.

GERRY GREEN, PE
Principal Electrical Engineer

EDUCATION

1986-1994 San Diego Mesa College

1995-1997 San Diego State University, Electrical Engineering

PROFESSIONAL EXPERIENCE

California P.E. License E-15691 issued in 1998

Mr. Green is a California registered electrical engineer with over thirty years of electrical design experience in Southern California. He specializes in the design of industrial power systems including electrical and controls systems for water and wastewater facilities. Recent experience is with pump stations, lift stations, wells, and water/wastewater treatment plants. He has performed electrical and control system design, electrical power system studies, and construction support services for several projects in Southern California. Green's active design involvement in these projects from concept design through construction completion keep him current with design trends and advances in equipment technology.

Examples of recent relevant design project experience are outlined below:

- **Rosecrans Booster Pump Station, Buena Park, CA**

Booster pump station replacement with (3) 50HP and (2) 150HP pumps. Upgraded electrical utility service, emergency generator, and motor control center with variable frequency drives for pumps, lighting, and general power. Instrumentation and controls system with pressure, flow, and treatment instruments, VFD controls, pump controls, and SCADA PLC w/telemetry

- **Morro Hills No. 1 and No. 2 Reservoir Repairs, Oceanside, CA**

Booster pump station replacement with (3) 60HP pumps. Upgraded electrical utility service, emergency generator, packaged pump system with variable frequency drive control panel, lighting and general power. Instrumentation and controls system with pressure, flow, and treatment instruments, and SCADA PLC w/telemetry.

- **Fire Mountain Recycled Water Reservoir and Pump Station, Oceanside, CA**

New 2.2MG Reservoir and Pump Station with (4) 25HP pumps. New electrical utility service, packaged pump system with variable frequency drive control panel, lighting, and general power. Instrumentation and controls system with pressure, flow, level, and treatment instruments, and SCADA PLC w/telemetry.

- **E Reservoir Replacement and Pump Station, Vista, CA**

New 2.9MG Reservoir and Pump Station with (6) 50HP pumps. New electrical utility service, power distribution switchboard, separate pump variable frequency drive control panels, lighting and general power. Instrumentation and controls system with pressure, flow, level, and treatment instruments, and SCADA PLC w/telemetry.

- **Pump Station 1090-1 Upgrades, Spring Valley, CA**

Pump station upgrade with (3) 60HP pumps. Upgraded electrical utility service, existing emergency generator, motor control center with soft starters, lighting, and general power. Instrumentation and controls system with pressure and flow instruments, pump controls, and SCADA PLC w/telemetry.

- **Alberhill 1601/1634 Pump Station, Lake Elsinore, CA**

New Pump Station with (4) 150HP pumps and (2) 75HP pumps. New electrical utility service, emergency generator, and motor control center with soft starters for pumps, lighting, and general power. Instrumentation and controls system with pressure, flow, and treatment instruments, soft starter pump controls, and SCADA PLC w/telemetry.

- **Sommers Bend Hydropneumatic Pump Station, Temecula, CA**

New Pump Station with (2) 20HP pumps and (1) 75HP pumps. New electrical utility service, emergency generator, and motor control center with soft starters for pumps, lighting, and general power. Instrumentation and controls system with pressure, flow, and treatment instruments, soft starter pump controls, and SCADA PLC w/telemetry.

- **Blossom Valley Reservoir Alternatives Analysis – (Dudek)**

Principal Electrical Engineer performing the electrical and instrumentation and control system scope for a reservoir Alternatives Analysis Study. Scope of study includes analysis of electrical service, instrumentation/controls (SCADA), and conduit for security system.



DUDEK

800.450.1818 | HELLO@DUDEK.COM

DUDEK.COM





San Elijo Joint Powers Authority
 P223253 San Elijo Water Campus - Rev.1a
 DUDEK FEE ESTIMATE
 03/23/2023

Dudek Labor Hours and Rates											Subconsultant Fees						
Project Team Role:		Principal Engineer II	Senior Project Manager/Engineering	Principal Engineer I	Senior Engineer II	Senior Engineer I	Senior Engineer I	Project Engineer III/Technician III	Project Engineer I/Technician I	Senior Specialist III	TOTAL DUDEK HOURS	DUDEK LABOR COSTS	General Services	Geotechnical	Surveying	OTHER DIRECT COSTS	TOTAL FEE
Team Member:		Charles Greely	Nicole Rieger	Neil Harper	Servando Diaz	Joshua Cato	Jennifer O'Brien	Sofie Black	Project Engineer I/Technician I	Stuart Fraser			Gerry Green	Group Delta	Right of Way Engineering		
Billable Rate:		\$280.00	\$260.00	\$270.00	\$235.00	\$225.00	\$225.00	\$200.00	\$170.00	\$225.00			Fee	Fee	Fee		
Task 1	Project Management	14	6								20	\$5,480.00				\$1,100.00	\$6,580.00
Task 2	Pre-Design Services																
2.1	Surveying						2		5		7	\$1,300.00			\$21,263.00		\$22,563.00
2.2	Geotechnical Investigation and Report		2								2	\$520.00	\$27,445.00				\$27,965.00
2.3	Hydrology & Hydraulic Analysis	2	8	4	18	10		14	44		100	\$20,480.00					\$20,480.00
2.4	<i>Project Concept Report</i>																
2.4.1	Draft Design Approach Summary Memorandum	2	7	2	8	4		16	30	6	75	\$15,350.00	\$3,872.00				\$19,222.00
2.4.2	Final Design Approach Summary Memo	1	2	1	4		4	8	5	2	27	\$5,810.00	\$1,936.00				\$7,746.00
2.5	<i>Meetings</i>																
2.5.1	Kick Off	1	1								2	\$540.00					\$540.00
2.5.2	Prelim Design Workshop	2	2	2							6	\$1,620.00					\$1,620.00
Subtotal Task 2		8	22	9	30	14	6	38	84	8	219	\$45,620.00					\$100,136.00
Task 3	Design																
3.1	<i>Meetings</i>																
3.1.1	Design Review (3 @ 1hr ea)	3	3	2			3				11	\$2,835.00					\$2,835.00
3.1.2	Bi-Weekly Progress (12 @ 0.5 ea)	6									6	\$1,680.00					\$1,680.00
3.1.3	Additional (2 @ 1 hr ea)	2	2	1							5	\$1,350.00					\$1,350.00
3.2	50% Design Submittal	8	12	8	26		22	40	94	12	222	\$45,260.00	\$8,360.00	\$2,200.00			\$55,820.00
3.3	90% Design Submittal	4	8	4	22		16	30	70	6	160	\$32,300.00	\$6,908.00	\$1,650.00			\$40,858.00
3.4	100% / Construction Documents	2	4	2	4		4	12	38		66	\$12,840.00	\$1,672.00				\$14,512.00
3.5	Construction Implementation	4	8		4		18		8		42	\$9,550.00					\$9,550.00
Subtotal Task 3		29	37	17	56		63	82	210	18	512	\$105,815.00					\$126,605.00
Task 4	Bid Phase Services																
4.1	RFI and Addendums	2	4	4	6		7	4	8		35	\$7,825.00	\$1,210.00				\$9,035.00
4.2	Pre-Bid Meeting	2									2	\$560.00					\$560.00
4.3	Bid Evaluation		4					6			10	\$2,240.00					\$2,240.00
4.4	Conformed Construction Documents	2	2	2				4	14		24	\$4,800.00					\$4,800.00
Subtotal Task 4		6	10	6	6		7	14	22		71	\$15,425.00					\$16,635.00
Total Hours		57	75	32	92	14	76	134	316	26	822						
Total		\$15,960.00	\$19,500.00	\$8,640.00	\$21,620.00	\$3,150.00	\$17,100.00	\$26,800.00	\$53,720.00	\$5,850.00		\$172,340.00	\$23,958.00	\$31,295.00	\$21,263.00	\$1,100.00	\$249,956.00
<i>Percent of Hours (Base)</i>		<i>7%</i>	<i>9%</i>	<i>4%</i>	<i>11%</i>	<i>2%</i>	<i>9%</i>	<i>16%</i>	<i>38%</i>	<i>3%</i>							
Optional Services																	
Task X.1	Surveying Digital Orthophoto															\$1,100.00	\$1,100.00
Task X.2	Environmental Permitting Support	8	16				20				44	\$10,900.00					\$10,900.00
Task X.3	Geotech Boring Conversion to Monitoring Well													\$6,600.00			\$6,600.00
Total Optional + Base Hours and Fee		65	91	32	92	14	96	134	316	26	866	\$183,240.00	\$23,958.00	\$37,895.00	\$22,363.00	\$1,100.00	\$268,556.00
<i>Percent of Hours (Optional + Base)</i>		<i>8%</i>	<i>11%</i>	<i>4%</i>	<i>11%</i>	<i>2%</i>	<i>11%</i>	<i>15%</i>	<i>36%</i>	<i>3%</i>							

DUDEK 2023 Standard Schedule of Charges

Engineering Services

Project Director	\$325.00/hr
Principal Engineer III	\$290.00/hr
Principal Engineer II	\$280.00/hr
Principal Engineer I	\$270.00/hr
Program Manager	\$260.00/hr
Senior Project Manager	\$260.00/hr
Project Manager	\$250.00/hr
Senior Engineer III	\$245.00/hr
Senior Engineer II	\$235.00/hr
Senior Engineer I	\$225.00/hr
Project Engineer IV/Technician IV	\$215.00/hr
Project Engineer III/Technician III	\$205.00/hr
Project Engineer II/Technician II	\$195.00/hr
Project Engineer I/Technician I	\$175.00/hr
Senior Designer II	\$195.00/hr
Senior Designer I	\$190.00/hr
Designer	\$180.00/hr
Assistant Designer	\$175.00/hr
CADD Operator III	\$170.00/hr
CADD Operator II	\$160.00/hr
CADD Operator I	\$145.00/hr
CADD Drafter	\$130.00/hr
CADD Technician	\$120.00/hr
Project Coordinator	\$150.00/hr
Engineering Assistant	\$125.00/hr

Environmental Services

Senior Project Director	\$300.00/hr
Project Director	\$265.00/hr
Senior Specialist V	\$250.00/hr
Senior Specialist IV	\$235.00/hr
Senior Specialist III	\$225.00/hr
Senior Specialist II	\$210.00/hr
Senior Specialist I	\$200.00/hr
Specialist V	\$185.00/hr
Specialist IV	\$175.00/hr
Specialist III	\$165.00/hr
Specialist II	\$155.00/hr
Specialist I	\$145.00/hr
Analyst V	\$135.00/hr
Analyst IV	\$125.00/hr
Analyst III	\$115.00/hr
Analyst II	\$105.00/hr
Analyst I	\$95.00/hr
Technician III	\$85.00/hr
Technician II	\$75.00/hr
Technician I	\$65.00/hr

Mapping and Surveying Services

Application Developer II	\$195.00/hr
Application Developer I	\$155.00/hr
GIS Analyst V	\$205.00/hr
GIS Analyst IV	\$165.00/hr
GIS Analyst III	\$145.00/hr
GIS Analyst II	\$130.00/hr
GIS Analyst I	\$115.00/hr
UAS Pilot	\$115.00/hr
Survey Lead	\$185.00/hr
Survey Manager	\$145.00/hr
Survey Crew Chief	\$120.00/hr
Survey Rod Person	\$95.00/hr
Survey Mapping Technician	\$95.00/hr

Construction Management Services

Principal/Manager	\$195.00/hr
Senior Construction Manager	\$185.00/hr
Senior Project Manager	\$175.00/hr
Construction Manager	\$170.00/hr
Project Manager	\$165.00/hr
Resident Engineer	\$160.00/hr
Construction Engineer	\$155.00/hr
On-site Owner's Representative	\$145.00/hr
Prevailing Wage Inspector	\$145.00/hr
Construction Inspector	\$140.00/hr
Administrator/Labor Compliance	\$100.00/hr

Hydrogeology/HazWaste Services

Project Director	\$325.00/hr
Principal Hydrogeologist/Engineer II	\$295.00/hr
Principal Hydrogeologist/Engineer I	\$275.00/hr
Senior Hydrogeologist V/Engineer V	\$260.00/hr
Senior Hydrogeologist IV/Engineer IV	\$250.00/hr
Senior Hydrogeologist III/Engineer III	\$240.00/hr
Senior Hydrogeologist II/Engineer II	\$230.00/hr
Senior Hydrogeologist I/Engineer I	\$220.00/hr
Project Hydrogeologist V/Engineer V	\$205.00/hr
Project Hydrogeologist IV/Engineer IV	\$195.00/hr
Project Hydrogeologist III/Engineer III	\$185.00/hr
Project Hydrogeologist II/Engineer II	\$175.00/hr
Project Hydrogeologist I/Engineer I	\$165.00/hr
Hydrogeologist/Engineering Assistant	\$130.00/hr

District Management & Operations

District General Manager	\$225.00/hr
District Engineer	\$215.00/hr
Operations Manager	\$165.00/hr
District Secretary/Accountant	\$140.00/hr
Collections System Manager	\$140.00/hr
Grade V Operator	\$130.00/hr
Grade IV Operator	\$115.00/hr
Grade III Operator	\$105.00/hr
Grade II Operator	\$85.00/hr
Grade I Operator	\$80.00/hr
Operator in Training	\$75.00/hr
Collection Maintenance Worker	\$75.00/hr

Creative Services

Creative Services IV	\$165.00/hr
Creative Services III	\$150.00/hr
Creative Services II	\$135.00/hr
Creative Services I	\$120.00/hr

Publications Services

Technical Editor IV	\$165.00/hr
Technical Editor III	\$150.00/hr
Technical Editor II	\$135.00/hr
Technical Editor I	\$120.00/hr
Publications Specialist IV	\$125.00/hr
Publications Specialist III	\$115.00/hr
Publications Specialist II	\$105.00/hr
Publications Specialist I	\$95.00/hr
Clerical Administration	\$90.00/hr

Expert Witness – Court appearances, depositions, and interrogatories as expert witness will be billed at 2.00 times normal rates.

Emergency and Holidays – Minimum charge of two hours will be billed at 1.75 times the normal rate.

Material and Outside Services – Subcontractors, rental of special equipment, special reproductions and blueprinting, outside data processing and computer services, etc., are charged at 1.15 times the direct cost.

Travel Expenses – Mileage at current IRS allowable rates. Per diem where overnight stay is involved is charged at cost.

Invoices, Late Charges – All fees will be billed to Client monthly and shall be due and payable upon receipt. Invoices are delinquent if not paid within 30 days from the date of the invoice. Client agrees to pay a monthly late charge equal to 1% per month of the outstanding balance until paid in full.

Annual Increases – Unless identified otherwise, these standard rates will increase in line with the CPI-U for the nearest urban area per the Department of Labor Statistics to where the work is being completed) or by 3% annually, whichever is higher.

The rates listed above assume prevailing wage rates does not apply. If this assumption is incorrect Dudek reserves the right to adjust its rates accordingly.