

**NOTICE OF REGULAR MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
ENGINEERING COMMITTEE**

**March 9, 2023
8:30 a.m.**

NOTICE IS HEREBY GIVEN that a Regular Meeting of the South Orange County Wastewater Authority (SOCWA) Engineering Committee was called to be held on **March 9, 2023 at 8:30 a.m.** SOCWA staff will be present and conducting the meeting at the SOCWA Administrative Office located at 34156 Del Obispo Street, Dana Point, California.

THE SOCWA MEETING ROOM IS WHEELCHAIR ACCESSIBLE. IF YOU REQUIRE ANY SPECIAL DISABILITY RELATED ACCOMMODATIONS, PLEASE CONTACT THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY SECRETARY'S OFFICE AT (949) 234-5452 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE SCHEDULED MEETING TO REQUEST SUCH ACCOMMODATIONS. THIS AGENDA CAN BE OBTAINED IN ALTERNATE FORMAT UPON REQUEST TO THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY'S SECRETARY AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE SCHEDULED MEETING. MEMBERS OF THE PUBLIC HAVE THE OPTION TO PARTICIPATE IN AND MAY JOIN THE MEETING REMOTELY VIA VIDEO CONFERENCE FOR VISUAL INFORMATION ONLY (USE ZOOM LINK BELOW) AND BY TELECONFERENCE FOR AUDIO PARTICIPATION (USE PHONE NUMBERS BELOW). THIS IS A PHONE-CALL MEETING AND NOT A WEB-CAST MEETING, SO PLEASE REFER TO AGENDA MATERIALS AS POSTED ON THE WEBSITE AT WWW.SOCWA.COM. ON YOUR REQUEST, EVERY EFFORT WILL BE MADE TO ACCOMMODATE PARTICIPATION. FOR PARTIES PARTICIPATING REMOTELY, PUBLIC COMMENTS WILL BE TAKEN DURING THE MEETING FOR ORAL COMMUNICATION IN ADDITION TO PUBLIC COMMENTS RECEIVED BY PARTIES PARTICIPATING IN PERSON. COMMENTS MAY BE SUBMITTED PRIOR TO THE MEETING VIA EMAIL TO ASSISTANT SECRETARY DANITA HIRSH AT DHIRSH@SOCWA.COM WITH THE SUBJECT LINE "REQUEST TO PROVIDE PUBLIC COMMENT." IN THE EMAIL, PLEASE INCLUDE YOUR NAME, THE ITEM YOU WISH TO SPEAK ABOUT, AND THE TELEPHONE NUMBER YOU WILL BE CALLING FROM SO THAT THE COORDINATOR CAN UN-MUTE YOUR LINE WHEN YOU ARE CALLED UPON TO SPEAK. THOSE MAKING PUBLIC COMMENT REQUESTS REMOTELY VIA TELEPHONE IN REAL-TIME WILL BE ASKED TO PROVIDE YOUR NAME, THE ITEM YOU WISH TO SPEAK ABOUT, AND THE TELEPHONE NUMBER THAT YOU ARE CALLING FROM SO THE COORDINATOR CAN UN-MUTE YOUR LINE WHEN YOU ARE CALLED UPON TO SPEAK. ONCE THE MEETING HAS COMMENCED, THE CHAIR WILL INVITE YOU TO SPEAK AND ASK THE COORDINATOR TO UN-MUTE YOUR LINE AT THE APPROPRIATE TIME.

AGENDA ATTACHMENTS AND OTHER WRITINGS THAT ARE DISCLOSABLE PUBLIC RECORDS DISTRIBUTED TO ALL, OR A MAJORITY OF, THE MEMBERS OF THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY ENGINEERING COMMITTEE IN CONNECTION WITH A MATTER SUBJECT FOR DISCUSSION OR CONSIDERATION AT AN OPEN MEETING OF THE ENGINEERING COMMITTEE ARE AVAILABLE FOR PUBLIC INSPECTION IN THE AUTHORITY ADMINISTRATIVE OFFICE LOCATED AT 34156 DEL OBISPO STREET, DANA POINT, CA ("AUTHORITY OFFICE") OR BY PHONE REQUEST MADE TO THE AUTHORITY OFFICE AT 949-234-5452. IF SUCH WRITINGS ARE DISTRIBUTED TO MEMBERS OF THE ENGINEERING COMMITTEE LESS THAN SEVENTY-TWO (72) HOURS PRIOR TO THE MEETING, THEY WILL BE AVAILABLE IN THE RECEPTION AREA OF THE AUTHORITY OFFICE AT THE SAME TIME AS THEY ARE DISTRIBUTED TO THE ENGINEERING COMMITTEE AND SENT TO ANY REMOTE PARTICIPANTS REQUESTING EMAIL DELIVERY OR POSTED ON SOCWA'S WEBSITE. IF SUCH WRITINGS ARE DISTRIBUTED IMMEDIATELY PRIOR TO, OR DURING, THE MEETING, THEY WILL BE AVAILABLE IN THE MEETING ROOM OR IMMEDIATELY UPON VERBAL REQUEST TO BE DELIVERED VIA EMAIL TO REQUESTING PARTIES PARTICIPATING REMOTELY.

**THE PUBLIC MAY PARTICIPATE REMOTELY BY VIRTUAL MEANS. FOR AUDIO OF MEETING USE
THE CALL IN PHONE NUMBERS BELOW AND FOR VIDEO USE THE ZOOM LINK BELOW.**

Join Zoom Meeting
<https://socwa.zoom.us/>

Meeting ID: 836 5108 8027
Passcode: 892000

Dial by your location:
+1 669 900 6833 US (San Jose) +1 253 215 8782 US (Tacoma)
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Find your local number: <https://socwa.zoom.us/j/kcvxUgomOH>

AGENDA

1. Call Meeting to Order

2. Public Comments

THOSE WISHING TO ADDRESS THE ENGINEERING COMMITTEE ON ANY ITEM LISTED ON THE AGENDA WILL BE REQUESTED TO IDENTIFY AT THE OPENING OF THE MEETING AND PRIOR TO THE CLOSE OF THE MEETING. THE AUTHORITY REQUESTS THAT YOU STATE YOUR NAME WHEN MAKING THE REQUEST IN ORDER THAT YOUR NAME MAY BE CALLED TO SPEAK ON THE ITEM OF INTEREST. THE CHAIR OF THE MEETING WILL RECOGNIZE SPEAKERS FOR COMMENT AND GENERAL MEETING DECORUM SHOULD BE OBSERVED IN ORDER THAT SPEAKERS ARE NOT TALKING OVER EACH OTHER DURING THE CALL.

PAGE NO.

3. Operations Report..... 1

Recommended Action: Information Item.

4. Capital Improvement Construction Projects Progress and Change Order Report (March) [Project Committees 2, 15, & 17] 2

Recommended Action: Staff recommends that the Engineering Committee approve the following Olsson Construction Change Order No. 72 for a total of \$10,831.51, with no additional days, and a revised contract value of \$18,626,867.89 for the J.B. Latham Package B Project.

5. Contract Award for Coastal Treatment Plant (CTP) AWMA Road Guardrail Replacement Project [Project Committee 15] 14

Recommended Action: Staff recommends that the Engineering Committee recommend that the PC 15 Board of Directors award the contract to Danny C. Hubbs in the amount of \$48,770 for the Coastal Treatment Plant AWMA Road Guardrail Replacement Project with a contingency of \$10,000.

6. Draft Capital Improvement Program (CIP) Budget for Fiscal Year 2023/24 16

Recommended Action: Information Item.

7. Contract Award for Regional Treatment Plant (RTP) Cogen Engine Black Start Operation Upgrade [Project Committee 17] 24

Recommended Action: Staff recommends that the Engineering Committee recommend that the PC 17 Board of Directors award the contract to Wester Energy in the amount of \$75,000 for the Cogen Engine Black Start Operation Upgrade Project.

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8. Coastal Treatment Plant (CTP) Funding Strategy and Implementation Plan Proposal
[Project Committee 15] 29

Recommended Action: Committee Discussion and Direction to Staff.

9. Contract Award for Coastal Treatment Plant (CTP) Drainage Pump Station
Conceptual Design [Project Committee 15] 36

Recommended Action: Staff recommends that the Engineering Committee recommend to the PC 15 Board of Directors to award the contract to Tetra Tech in the amount of \$176,000 for the Coastal Treatment Plant Drainage Pump Station Conceptual Design Project.

Adjournment

I hereby certify that the foregoing Notice was personally emailed or mailed to each member of the SOCWA Engineering Committee at least 72 hours prior to the scheduled time of the Regular Meeting referred to above.

I hereby certify that the foregoing Notice was posted at least 72 hours prior to the time of the above-referenced Engineering Committee meeting at the usual agenda posting location of the South Orange County Wastewater Authority and at www.socwa.com.

Dated this 3rd day of March 2023.



Danita Hirsh, Assistant Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Agenda Item

3

Engineering Committee Meeting

Meeting Date: March 9, 2023

TO: Engineering Committee

FROM: Jim Burror, Acting General Manager/Director of Operations

SUBJECT: Operations Report

Overview

Verbal update on operations and maintenance activities.

Recommended Action: Information Item.

Agenda Item

4

Engineering Committee Meeting

Meeting Date: March 9, 2023

TO: Engineering Committee

FROM: David Baranowski, Director of Engineering

SUBJECT: Capital Improvement Construction Projects Progress and Change Order Report (*March*) [Project Committees 2, 15 & 17]

Overview

Active Construction Project Updates:

Attached are the updated CIP reports. Please note that there is one new change order for Olsson Construction for PC 2 J.B. Latham Package B project totaling \$10,831.51.

The Package B project is nearly complete. The contractor demobilized on February 6th and is currently working through the punch list. Staff is working with Butier, the Construction Management team, to close out all outstanding items. Two items worth noting are:

- 1) Olsson is compiling documentation for the final change orders. Staff has asked them to submit these as quickly as possible.
- 2) Butier is reviewing information submitted by the contractor related to a delay claim. Olsson submitted information requested by Butier. Staff is waiting for an update from Butier and will bring that information to the Committee when we have more information.

This is informational for PC 15 and PC 17 member agencies.

Recommended Action: Staff recommends that the Engineering Committee approve the following Olsson Construction Change Order(s):

- Change Order 72 for \$10,831.51, including 0 additional day(s)

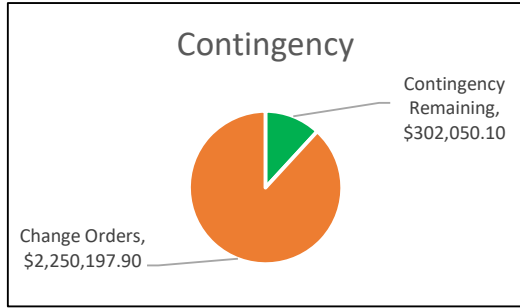
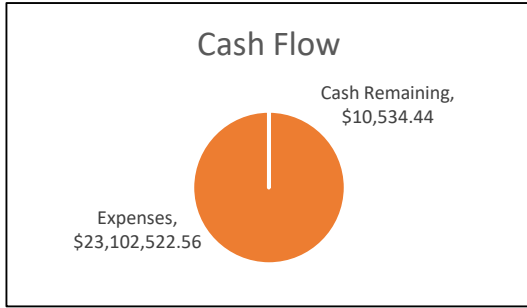
For a total of \$10,831.51, with no additional days, and a revised contract value of \$18,626,867.89 for the J.B. Latham Package B Project.

Project Financial Status

Project Committee	2
Project Name	Package B
Project Description	Plant 1 basin repairs, DAF rehabilitation, Energy Building seismic retrofit and minor rehabilitation, Digester 4 rehabilitation

Data Last Updated

February 27, 2023



Cash Flow

Collected	\$ 23,113,057.00
Expenses	\$ 23,102,522.56

Project Completion

Schedule	100%
Budget	96%

Contracts

Company	PO No.	Original	Change Orders*	Amendments	Total	Invoiced
Olsson	13497	\$ 17,325,000.00	\$ 1,301,867.89		\$ 18,626,867.89	\$ 18,405,627.59
Butier	13647	\$ 895,727.00		\$ 1,005,251.00	\$ 1,900,978.00	\$ 1,862,197.00
Carollo	13616	\$ 846,528.00		\$ 616,037.00	\$ 1,462,565.00	\$ 1,282,311.86
TetraTech	13605	\$ 94,000.00		\$ -	\$ 94,000.00	\$ 93,884.70
Ninyo & Moore	14279	\$ 49,399.00		\$ 30,000.00	\$ 79,399.00	\$ 47,005.27
ADS Environmental	16452	\$ 107,200.00	\$ -		\$ 107,200.00	\$ 57,375.00
Hallsten	16578	\$ 251,422.00	\$ 16,715.25		\$ 268,137.25	\$ -
Dudek	17401	\$ 48,360.00		\$ -	\$ 48,360.00	\$ 34,100.00
		\$ 19,617,636.00	\$ 1,318,583.14	\$ 1,651,288.00	\$ 22,587,507.14	\$ 21,782,501.42

*Values include change orders to be reviewed by Engineering Committee and deductive change orders

Contingency

Area	Project Code	Amount **	Change Orders	Total Remaining	Percent Used
Liquids	3220-000	\$ 969,679.00	\$ 868,639.46	\$ 101,039.54	89.6%
Common	3231-000	\$ 38,120.00	\$ 3,305.76	\$ 34,814.24	8.7%
Solids	3287-000	\$ 1,544,449.00	\$ 1,378,252.68	\$ 166,196.32	89.2%
		\$ 2,552,248.00	\$ 2,250,197.90	\$ 302,050.10	88.2%

** Amount reflects contingency for Construction Contracts only

Summary of New Change Orders

Change Order No	MNWD	SCWD	SMWD	\$ Amount
72	\$ 2,499.58	\$ 3,124.47	\$ 5,207.46	\$ 10,831.51
Grand Total	\$ 2,499.58	\$ 3,124.47	\$ 5,207.46	\$ 10,831.51

Change Orders and Amendments

Change Order No.	Vendor Name	Project ID	Description	Status Date	Days	Amount
Within Contingency, to be reviewed by Engineering Committee						\$ 10,831.51
72	Olsson	3220-000	Plant 1 Seal Influent Channel Openings and Helical Drives Temporary Covers	3/9/2023		\$ 10,831.51
Approved by Board of Directors						\$ 1,307,751.63
1	Olsson	3287-000	Addition of Loop Piping to the Existing Hot Water Lines Adjacent to Digester 3	12/12/2019	0	\$ 4,725.00
2	Olsson	3287-000	Asbestos Gaskets in Boiler hazardous disposal	6/4/2020	0	\$ 6,343.10
3	Olsson	3287-000	Add Analog Infrastructure and Cabling	6/4/2020	11	\$ 37,969.60
4	Olsson	3287-000	Digester 4 Coating Additional Sealant	6/4/2020	3	\$ 24,001.54
5	Olsson	3220-000	Valve Handwheel Ergonomic extension	8/6/2020	28	\$ 16,370.30
6	Olsson	3287-000	Change to DeZurik Plug Valves to match existing	8/6/2020	90	\$ 41,993.87

<u>Change Order No.</u>	<u>Vendor Name</u>	<u>Project ID</u>	<u>Description</u>	<u>Status Date</u>	<u>Days</u>	<u>Amount</u>
7	Olsson	3287-000	Digester 4 Additional Concrete Repair	8/6/2020	3	\$ 7,412.74
8	Olsson	3287-000	Repair Existing Damaged Electrical Box	8/6/2020	0	\$ (1,829.00)
9	Olsson	3220-000	Change the Telescoping Valve Boxes and Piping from Carbon Steel to Stainless Steel	8/6/2020	0	\$ 18,677.63
10	Olsson	3287-000	Duct bank J Interferences	12/17/2020	18	\$ 73,639.42
11	Olsson	3220-000	Blasting of Existing Influent Pipe Spools	12/17/2020	5	\$ 20,868.52
12	Olsson	3220-000	Duct bank K Interferences	12/17/2020	0	\$ 15,567.08
13	Olsson	3287-000	Digester 3/4 PLC Relocation	12/17/2020	14	\$ 41,367.51
14	Olsson	3287-000	Digester 4 Additional Tank Repair	12/17/2020	18	\$ 33,642.75
15	Olsson	3220-000	Duct bank O Interferences	12/17/2020	0	\$ 1,686.88
16	Olsson	3287-000	Digester 3/4 Control Building Roof Replacement	2/4/2021	0	\$ 42,780.00
17	Olsson	3287-000	MCC-D1 Modifications due to Change in Motor Size	5/6/2021	0	\$ 34,392.02
18	Olsson	3287-000	Integrator Additional Site Visits	5/6/2021	0	\$ 7,571.97
19	Olsson	3287-000	Multi-zone air conditioning unit in the Cogen MCC Room and Office	6/3/2021	0	\$ 29,417.20

<u>Change Order No.</u>	<u>Vendor Name</u>	<u>Project ID</u>	<u>Description</u>	<u>Status Date</u>	<u>Days</u>	<u>Amount</u>
20	Olsson	3220-000	Overhead Walkway Removal at Plant 1 Secondary Basins 5 through 9	6/3/2021	0	\$ 62,113.50
21	Olsson	3287-000	Cogeneration PLC Modifications and Integration	6/3/2021	0	\$ 42,922.67
22	Olsson	3220-000	Plant 1 Secondary Basins UV Rated Wear Strips	9/2/2021	0	\$ 28,965.33
23	Olsson	3287-000	MCC-F1 Design Change	9/2/2021		\$ 481,290.42
24	Olsson	3287-000	DAF 2 Investigation Work and Inspection Blast	10/7/2021		\$ 67,838.71
25	Olsson	3287-000	New Fiber Conduit in West Blower Building	10/7/2021		\$ 4,957.71
26	Olsson	3220-000	Plant 1 Primary Basin Conduit Obstruction	10/7/2021		\$ 8,444.20
27	Olsson	3220-000	Plant 1 Influent Channel Additional Coating between Primary Basins 5 and 6	10/7/2021		\$ 15,469.98
28	Olsson	3287-000	MCC-F1 Lighting Changes	10/7/2021		\$ 7,843.04
29	Olsson	3287-000	Digester 3 Ground Rod	10/14/2021		\$ 7,269.16
30	Olsson	3220-000	New Fiber Conduits at East Electrical and Storm Water Buildings	10/14/2021		\$ 8,045.43
31	Olsson	3220-000	Plant 2 Primary Influent Channel Repair Credit	12/9/2021		\$ (15,903.00)

<u>Change Order No.</u>	<u>Vendor Name</u>	<u>Project ID</u>	<u>Description</u>	<u>Status Date</u>	<u>Days</u>	<u>Amount</u>
32	Olsson	3220-000	Plant 1 and 2 Telescoping Valve Pipe Supports	12/9/2021		\$ 6,132.27
33	Olsson	3287-000	4" Gas Line Routing Modifications	12/9/2021		\$ 18,146.07
34	Olsson	3287-000	Gas Mixer Conduit Conflict	12/9/2021		\$ 12,383.89
35	Olsson	3220-000	P1 Primary Tanks 5 and 6 Temporary Power	3/10/2022		\$ 7,256.05
36	Olsson	3220-000	P1 Primary Tanks Skimmers Starter Modification	3/10/2022		\$ 45,374.13
37	Olsson	3220-000	P1 Primary Tanks Hopper Wall Coating	3/10/2022		\$ 34,505.41
38	Olsson	3220-000	P1 Effluent Channel Conduit Conflict	3/10/2022		\$ 9,274.98
39	Olsson	3220-000	P1 Primary Tanks Torque Limit Switch	3/10/2022		\$ 7,149.86
40	Olsson	3287-000	Multi-zone air conditioning unit in the Cogen MCC Room and Office	3/10/2022		\$ (2,309.09)
41	Olsson	3287-000	DAFT 2 Repair	3/10/2022		\$ 59,403.53
42	Olsson	3287-000	Digesters 1 and 2 Heat Exchanger Layout Reconfiguration Electrical	6/2/2022	1	\$ 12,885.18
43	Olsson	3287-000	Digester 3 Heat Exchanger Hot Water Loop Tie-In	6/2/2022		\$ 2,774.58
44	Olsson	3220-000	Plant 1 Primary Basin 1 Shutdown Repair Work	6/2/2022		\$ 1,009.86

<u>Change Order No.</u>	<u>Vendor Name</u>	<u>Project ID</u>	<u>Description</u>	<u>Status Date</u>	<u>Days</u>	<u>Amount</u>
45	Olsson	3287-000	Replace Compressor Line and Valve at Digester 4	6/2/2022		\$ 10,762.85
46	Olsson	3220-000	Plant 2 Influent Gates Removal and Concrete Demo	6/2/2022		\$ 5,389.66
47	Olsson	3287-000	DAFT 2 Launder Support Detail	6/9/2022		\$ 45,682.30
48	Olsson	3220-000	Plant 1 Primary Basins 1, 2, 5 and 6 Coating Removal	6/9/2022		\$ 111,101.16
49	Olsson	3220-000	Plant 1 Primary Basins 1, 2, 5 and 6 Existing Equipment Removal and Reinstallation	6/9/2022		\$ 71,864.17
50	Olsson	3287-000	Digester Mixing Pumps Control Programming Change	8/4/2022		\$ 4,397.77
51	Olsson	3220-000	Plant 1 Primary Basins Skimmers I/O Connection and Programming Change	8/4/2022		\$ 14,237.83
52	Olsson	3287-000	Fiber Patch Cables to Connect the Centrifuge PLC to the Centrifuge Patch Panel	8/4/2022		\$ 3,755.90
53	Olsson	3220-000	Plant 1 Primary Basins 3 and 4 Coating Removal	8/4/2022		\$ 43,222.24

<u>Change Order No.</u>	<u>Vendor Name</u>	<u>Project ID</u>	<u>Description</u>	<u>Status Date</u>	<u>Days</u>	<u>Amount</u>
54	Olsson	3220-000	Plant 1 Secondary Basins Concrete Structural and Basins 2 and 3 Drive Plate Rework	8/4/2022		\$ 20,860.16
55	Olsson	3220-000	Plant 2 Primary Basins Repair and Rehab of Head-Shaft Bearings	8/4/2022		\$ 4,618.44
56	Olsson	3231-000	Board SOCWA Front Office with Plywood to Cover Windows	8/4/2022		\$ 3,305.76
57	Olsson	3220-000	Seal the Openings at Plant 1 Primary Influent and Effluent Channels	8/4/2022		\$ 25,491.03
58	Olsson	3220-000	Plant 1 Primary Basins 3 and 4 Existing Equipment Removal and Reinstallation	9/1/2022		\$ 26,498.32
59	Olsson	3220-000	Plant 1 Secondary Basins Existing Embedded Metal Plates	9/1/2022		\$ 4,290.48
60	Olsson	3220-000	Plant 2 Primary Baffle Frame Replacement	9/1/2022		\$ 18,291.57
61	Olsson	3287-000	Digester hatch connection, temperature guage adjustment, and potholing	11/3/2022		\$ 9,971.62

<u>Change Order No.</u>	<u>Vendor Name</u>	<u>Project ID</u>	<u>Description</u>	<u>Status Date</u>	<u>Days</u>	<u>Amount</u>
62	Olsson	3220-000	Plant 1 Primary and Secondary Basins crack injection, concrete repair, channel cleaning, solids removal	11/3/2022		\$ 146,734.55
63	Olsson	3287-000	Boiler Room Modifications	12/8/2022		\$ 14,797.83
64	Olsson	3287-000	DAFT 1 Repair	12/8/2022		\$ 66,992.33
65	Olsson	3220-000	Secondary Clarifier Telescoping Valve Modifications (Design Error)	12/8/2022		\$ 32,709.94
66	Olsson	3287-000	Digester Control Buildings Modifications	2/2/2023		\$ 9,746.81
67	Olsson	3220-000	Plant 1 and 2 Field Obstructions	2/2/2023		\$ 8,871.74
68	Olsson	3287-000	MCC-F1 Site Modifications	2/2/2023		\$ 57,233.12
69	Olsson	3287-000	DAFT and TWAS area additional slab modification and piping material change	2/2/2023		\$ 19,368.58
70	Olsson	3287-000	DAFT 1 Area Reconfiguration	3/2/2023		\$ 3,046.43
71	Olsson	3287-000	Digester 2 Hot Water Loop Change	3/2/2023		\$ 29,525.46
Duduct-Common	Olsson	3231-000	Energy Building Monorail System Descope (F1-F4)	8/4/2022		\$ (70,585.34)
Duduct-Liquids	Olsson	3220-000	Effluent Pump Station Descope (A1-A6)	8/4/2022		\$ (483,605.73)

<u>Change Order No.</u>	<u>Vendor Name</u>	<u>Project ID</u>	<u>Description</u>	<u>Status Date</u>	<u>Days</u>	<u>Amount</u>
Duduct-Solids	Olsson	3287-000	Energy Building Modifications Descope (G1-G2, & H1-H2)	8/4/2022		\$ (357,382.60)
HAL 01	Hallsten	3220-000	Cover Layout Modifications	8/4/2022		\$ 16,715.25
Approved by Board of Directors (Amendments)						\$ 1,651,288.00
1CM Common	Butier	3231-000	CM Change Order No. 1	7/13/2021		\$ 48,995.00
1CM Liquids	Butier	3220-000	CM Change Order No. 1	7/13/2021		\$ 294,125.00
1CM Solids	Butier	3287-000	CM Change Order No. 1	7/13/2021		\$ 269,595.00
1ESDC Common	Carollo	3231-000	ESDC Change Order No. 1	6/3/2021		\$ 18,210.00
1ESDC Liquids	Carollo	3220-000	ESDC Change Order No. 1	6/3/2021		\$ 109,256.00
1ESDC Solids	Carollo	3287-000	ESDC Change Order No. 1	6/3/2021		\$ 100,151.00
1G Common	Ninyo & Moore	3231-000	Geotechnical Services Change Order No. 1	2/3/2022		\$ 5,400.00
1G Liquids	Ninyo & Moore	3220-000	Geotechnical Services Change Order No. 1	2/3/2022		\$ 12,300.00
1G Solids	Ninyo & Moore	3287-000	Geotechnical Services Change Order No. 1	2/3/2022		\$ 12,300.00
2CM Liquids	Butier	3220-000	CM Change Order No 2	5/12/2022		\$ 196,268.00
2CM Solids	Butier	3287-000	CM Change Order No. 2	5/12/2022		\$ 196,268.00
2ESDC Common	Carollo	3231-000	ESDC Change Order No. 2	12/9/2021		\$ 11,075.00
2ESDC Liquids	Carollo	3220-000	ESDC Change Order No. 2	12/9/2021		\$ 196,440.00
2ESDC Solids	Carollo	3287-000	ESDC Change Order No. 2	12/9/2021		\$ 180,905.00
Potential Change						\$ 258,000.00
PCO 005	Olsson	3287-000	TWAS Slab Modifications	3/9/2023		\$ 50,000.00

<u>Change Order No.</u>	<u>Vendor Name</u>	<u>Project ID</u>	<u>Description</u>	<u>Status Date</u>	<u>Days</u>	<u>Amount</u>
PCO 038	Olsson	3287-000	Existing Valves at Digester 4 Heat Exchanger	(blank)		\$ 5,000.00
PCO 047	Olsson	3287-000	Digester 3/4 Control Building Tee Replacement	(blank)		\$ 5,000.00
PCO 054	Olsson	3220-000	Plant 1 Primary Effluent Channel Wall Corrosion	(blank)		\$ 5,000.00
PCO 055	Olsson	3287-000	Additional Concrete Repair behind Digesters 1 & 2	(blank)		\$ 7,500.00
PCO 057	Olsson	3220-000	Recoating of Basin Drive Shaft Steel Plates	(blank)		\$ 10,000.00
PCO 058	Olsson	3220-000	Aluminum Kickplate at Aeration Basins	(blank)		\$ 5,000.00
PCO 061	Olsson	3220-000	Steel Plate Coating and Blasting Extra Work	(blank)		\$ 7,000.00
PCO 063	Olsson	3220-000	Concrete Repair at Secondary Basin Drive Units	(blank)		\$ 8,000.00
PCO 064	Olsson	3220-000	Effluent Channel FA Duct Footing Conflicts	(blank)		\$ 5,000.00
PCO 068	Olsson	3287-000	Chopper Pump Impeller Issues	(blank)		\$ 5,000.00
PCO 070	Olsson	3220-000	Tread Plate-Slide Gate Conflicts at Effluent Channel	(blank)		\$ 5,000.00
PCO 071	Olsson	3220-000	Effluent Channel Unforeseen Existing Conduit	(blank)		\$ 5,000.00
PCO 072	Olsson	3287-000	Existing Conflicts at DAFT 2 Stairs	(blank)		\$ 2,000.00
PCO 075	Olsson	3220-000	Bypass Pumping Plan Issues	(blank)		\$ 100,000.00

<u>Change Order No.</u>	<u>Vendor Name</u>	<u>Project ID</u>	<u>Description</u>	<u>Status Date</u>	<u>Days</u>	<u>Amount</u>
PCO 083	Olsson	3220-000	Replacing the P1 Head Shaft Plate	(blank)		\$ 5,000.00
PCO 095	Olsson	3287-000	Foul Air Rerouting at DAFT 2	9/2/2021		\$ 5,000.00
PCO 106	Olsson	3287-000	DAFT 2 Isolation Valve	(blank)		\$ 5,000.00
PCO 109	Olsson	3220-000	P1P Influent Channel Scum Gate Openings	(blank)		\$ 2,500.00
PCO 121	Olsson	3287-000	DAFT 1 Additional Repair - Flange	(blank)		\$ 3,000.00
PCO 140	Olsson	3287-000	DAFT 1-TWAS Changes	(blank)		\$ 10,000.00
PCO 143	Olsson	3287-000	Revisions to DG Line	(blank)		\$ 3,000.00
Grand Total					191	\$ 3,227,871.14

Agenda Item

5

Engineering Committee Meeting

Meeting Date: March 9, 2023

TO: Engineering Committee

FROM: David Baranowski, Director of Engineering

SUBJECT: Contract Award for Coastal Treatment Plant (CTP) AWMA Road Guardrail Replacement Project [Project Committee 15]

Overview

Sections of the guardrail along AWMA Road near the Coastal Treatment Plant were damaged in the Coastal Fire in May 2022. Figure 1 below is an example of the burnt and damaged posts holding the guardrails.



Figure 1: Fire Damaged Guardrail

The purpose of the guardrail is to prevent vehicles from accidentally falling into the creek. The project scope is to replace 510 linear feet of damaged guardrail at two locations along the CTP Access Road. The new guardrail will be located in the same location as the existing one, and no clearing or earthwork is anticipated. Based on our previous California Coastal Commission permitting efforts, this work is considered exempt from coastal development permitting.

Bids

SOCWA solicited bids from qualified contractors through Planetbids. A pre-bid job walk was held on February 13, 2023, for potential bidders. Six bids were received and are summarized below in Table 1.

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Table 1 – Summary of Bids

AWMA Road Guardrail Replacement	Danny C. Hubbs	Oppenheimer National	SS Mechanical	Vicon Enterprise	Gentry General Engineering	Filanc
Replace 290 LF of Guardrail at Location 1	\$25,230	\$32,190	\$33,115	\$35,540	\$41,180	\$44,660
Replace 220 LF of Guardrail at Location 2	\$23,540	\$24,420	\$26,510	\$26,961	\$31,240	\$33,880
Total Bid	\$48,770	\$56,610	\$59,625	\$62,501	\$72,420	\$78,540

The bids ranged from \$48,770 to \$78,540. Staff believes the range in bids is because guardrail is a specialty work. The low bidder, Danny C. Hubbs Construction, lists guardrail installation as a core competency on their website. The other bidders listed subcontractors for the work, which is the reason for the variance in price.

Contingency

Staff is also requesting a project contingency of \$10,000 for items such as removing mud debris from the recent storms.

Cost Allocation

The cost allocation for the construction and contingency is shown in Table 2.

Table 2 – Cost Allocation by Member Agency

Agency	Construction	Contingency	Total
City of Laguna Beach	\$18,488.71	\$3,791.00	\$22,279.71
Emerald Bay Service District	\$1,455.78	\$298.50	\$1,754.28
Moulton Niguel Water District	\$14,267.18	\$2,925.40	\$17,192.58
South Coast Water District	\$14,558.33	\$2,985.10	\$17,543.43
Total	\$48,770.00	\$10,000.00	\$58,770.00

This work is funded by an existing project for AWMA Road (3528-000). The project has enough funds collected to cover this work. Table 3 shows the project funding.

Table 3 – Available Funds for Project 3528-000

Funds Available	Construction	Contingency	Remaining Funds
\$100,023	\$48,770	\$10,000	\$41,253

Recommended Action: Staff recommends that the Engineering Committee recommend that the PC 15 Board of Directors award the contract to Danny C. Hubbs in the amount of \$48,770 for the Coastal Treatment Plant AWMA Road Guardrail Replacement Project with a project contingency of \$10,000.

Agenda Item

6

Engineering Committee Meeting

Meeting Date: March 9, 2023

TO: Engineering Committee

FROM: David Baranowski, Director of Engineering

SUBJECT: Draft Capital Improvement Program (CIP) Budget for Fiscal Year 2023/2024

Overview

Staff will present the draft Capital Improvement Program budget for fiscal years 2023/2024 and 2024/2025. The following pages show the individual projects and costs that make up the budget for each Project Committee (PC). Staff is available to meet with members to discuss comments and feedback.

Fiscal Impact

The draft CIP budget is shown in Table 1. This budget includes Large Capital and Non-Capital projects. It does not include Small Capital projects.

Table 1 – Draft CIP Budget

	FY 2023/24	FY 2024/25	2-Year Total
Draft CIP Budget	\$9,925,000	\$15,700,000	\$25,625,000

Table 2 shows the allocation of these budgets by Member Agency.

Table 2 – CIP Budget Allocation

Member Agency	FY 2023/24	FY 2024/25	2-Year Total
City of Laguna Beach	\$1,292,685	\$1,930,629	\$3,223,315
City of San Clemente	\$41,550	\$174,510	\$216,060
Emerald Bay Service District	\$98,673	\$141,942	\$240,615
El Toro Water District	\$270,800	\$816,549	\$1,087,349
Irvine Ranch Water District	\$94,560	\$181,240	\$275,800
Moulton Niguel Water District	\$3,320,552	\$6,194,347	\$9,514,900
South Coast Water District	\$2,255,228	\$3,085,954	\$5,341,182
Santa Margarita Water District	\$2,550,951	\$3,174,829	\$5,725,780
Total	\$9,925,000	\$15,700,000	\$25,625,000

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Budget Schedule

The budget is scheduled to be considered for approval at the June 1 Regular Board meeting. The following is a list of key dates for the FY2023-24 CIP review and approval.

- March 9 – Engineering Committee Meeting (Draft Capital Budget Presentation)
- March 13 to 24 – Budget Reviewing Meetings with Member Agencies
- April 13 – Engineering Committee Meeting (Revised Capital Budget Presentation)
- April 18 – Finance Special Committee Meeting (Budget Review Meeting)
- May 16 – Finance Committee Meeting
- May 18 – Board Budget Workshop
- June 1 – Board Meeting (Budget Consideration for Approval)

Recommended Action: Information Item.

DRAFT FY 2023/2024 AND 2024/2025 CAPITAL BUDGET

PC	Facility	FY 2023/24 (Year 1)	FY 2024/25 (Year 2)	Total
<u>LARGE CAP</u>		\$9,290,000	\$15,155,000	\$24,445,000
PC-2	JBL	\$4,400,000	\$4,925,000	\$9,325,000
PC-15	CTP	\$2,925,000	\$3,805,000	\$6,730,000
PC-17	RTP	\$1,115,000	\$4,275,000	\$5,390,000
PC-5	SJCOO	\$250,000	\$1,000,000	\$1,250,000
PC-24	ACOO	\$500,000	\$1,050,000	\$1,550,000
PC-21	ETM	\$100,000	\$100,000	\$200,000
<u>NON-CAP</u>		\$635,000	\$545,000	\$1,180,000
	TOTAL	\$9,925,000	\$15,700,000	\$25,625,000

Member Agency	FY 2023/24 (Year 1)	FY 2024/25 (Year 2)	Total
CLB	\$1,292,685	\$1,930,629	\$3,223,315
CSC	\$41,550	\$174,510	\$216,060
EBSO	\$98,673	\$141,942	\$240,615
ETWD	\$270,800	\$816,549	\$1,087,349
IRWD	\$94,560	\$181,240	\$275,800
MNWD	\$3,320,552	\$6,194,347	\$9,514,900
SCWD	\$2,255,228	\$3,085,954	\$5,341,182
SMWD	\$2,550,951	\$3,174,829	\$5,725,780
TOTAL	\$9,925,000	\$15,700,000	\$25,625,000

PC-2 JB LATHAM

		TOTALS		\$ 4,400,000	\$ 4,925,000	\$ 9,325,000
Existing Project ID	Project Name	Phase(s)	WW Code	FY 2023/24 (Year 1)	FY 2024/25 (Year 2)	Total
ONGOING PROJECTS						
3220	Facility Improvements B Liquids	Construction	L	\$ 700,000		\$ 700,000
3231	Facility Improvements B Common	Construction	C	\$ 200,000		\$ 200,000
3287	Facility Improvements B Solids	Construction	S	\$ 1,500,000		\$ 1,500,000
32232C	Administration Building Roofing Reconstruction	Construction	C	\$ -		\$ -
3252	Electrical System Upgrades	Construction	L	\$ 1,000,000	\$ 2,000,000	\$ 3,000,000
3234	Centrate Piping Reconstruction	Construction	S	\$ 150,000		\$ 150,000
3216/3222	Energy Building Roof Upgrades	Construction	S		\$ 750,000	\$ 750,000
32234L	Chlorine Contact Basin Isolation Gates	Construction	L		\$ 200,000	\$ 200,000
32231C	Scum Line Replacement	Design	L	\$ 25,000		\$ 25,000
		Construction	L	\$ 100,000		\$ 100,000
						\$ -
NEW PROJECTS						
	Effluent Pump Station Upgrades	Design	L	\$ 200,000		\$ 200,000
		Construction	L		\$ 1,250,000	\$ 1,250,000
	Digester Gas and Flare Piping Improvements	Design	S	\$ 75,000	\$ 75,000	\$ 150,000
	Plant 2 Headworks Rehabilitation	Design	L	\$ 200,000	\$ 200,000	\$ 400,000
	Plant 2 Primary Clarifier Condition Assessment	Planning	L	\$ 50,000		\$ 50,000
	Old Effluent Pump Station Demolition	Design	C		\$ 100,000	\$ 100,000
	Cogen 60,000 Hour Overhaul	Construction	S		\$ 350,000	\$ 350,000
	SCADA Server Replacement	Construction	C	\$ 200,000		\$ 200,000
						\$ -

Notes

For contract closeout.

For contract closeout.

For contract closeout.

Construction budget collected in FY 2022/23

Design budget collected in FY 2022/23

Construction budget collected in FY 2022/23

Breakdown by Agency

	MNWD	SCWD	SMWD
\$ 161,539	\$ 201,922	\$ 336,539	
\$ 44,698	\$ 48,846	\$ 106,456	
\$ 324,330	\$ 300,000	\$ 875,670	
\$ -	\$ -	\$ -	
\$ 692,310	\$ 865,380	\$1,442,310	
\$ 32,433	\$ 30,000	\$ 87,567	
\$ 162,165	\$ 150,000	\$ 437,835	
\$ 46,154	\$ 57,692	\$ 96,154	
\$ 5,769	\$ 7,212	\$ 12,019	
\$ 23,077	\$ 28,846	\$ 48,077	
\$ 46,154	\$ 57,692	\$ 96,154	
\$ 288,463	\$ 360,575	\$ 600,963	
\$ 32,433	\$ 30,000	\$ 87,567	
\$ 92,308	\$ 115,384	\$ 192,308	
\$ 11,539	\$ 14,423	\$ 24,039	
\$ 22,349	\$ 24,423	\$ 53,228	
\$ 75,677	\$ 70,000	\$ 204,323	
\$ 44,698	\$ 48,846	\$ 106,456	

Breakdown by WW Code

Liquids	L	\$ 2,275,000	\$ 3,650,000	\$ 5,925,000
Common	C	\$ 400,000	\$ 100,000	\$ 500,000
Solids	S	\$ 1,725,000	\$ 1,175,000	\$ 2,900,000

Breakdown by Agency

MNWD	\$ 987,377	\$ 1,118,718	\$ 2,106,095
SCWD	\$ 1,098,939	\$ 1,312,302	\$ 2,411,241
SMWD	\$ 2,313,684	\$ 2,493,980	\$ 4,807,664
TOTAL	\$ 4,400,000	\$ 4,925,000	\$ 9,325,000

PC-15 COASTAL

		TOTALS		\$ 2,925,000	\$ 3,805,000	\$ 6,730,000	
Existing Project ID	Project Name	Phase(s)	WW Code	FY 2023/24 (Year 1)	FY 2024/25 (Year 2)	Total	Notes
ONGOING PROJECTS							
35228L	Aeration Diffusers Replacement	Construction	L	\$ 1,250,000		\$ 1,250,000	
3525	Personnel Building Improvements	Construction	L	\$ 400,000		\$ 400,000	
35221L	Auxiliary Blower Building Roofing Replacement	Construction	L	\$ 50,000		\$ 50,000	
NEW PROJECTS							
3522AL	Drainage Pump Station Rehabilitation	Planning	L	\$ -		\$ -	Planning budget collected in FY 2022/23
		Design	L	\$ 200,000		\$ 200,000	
		Construction	L		\$ 1,500,000	\$ 1,500,000	
	Grating Replacement on Aeration/Secondary Deck	Design	L	\$ 50,000		\$ 50,000	
		Construction	L		\$ 200,000	\$ 200,000	
	Environmental Mitigation (Export Sludge Force Main)	Design	L	\$ 200,000		\$ 200,000	
		Permitting	L	\$ 50,000	\$ 50,000	\$ 100,000	
		Construction	L		\$ 500,000	\$ 500,000	
35235L	Foul Air/Odor Scrubber Improvements	Planning	L			\$ -	Planning budget collected in FY 2022/23
		Design	L	\$ 100,000	\$ 150,000	\$ 250,000	
		Construction	L		\$ 500,000	\$ 500,000	
	West Primary Sludge Skimmers and Launderers/Weirs	Design	L	\$ 150,000		\$ 150,000	
		Construction	L		\$ 500,000	\$ 500,000	
	Aeration Blower System Upgrades	Planning	L	\$ -		\$ -	Planning budget collected in FY 2022/23
		Design	L	\$ 75,000	\$ 125,000	\$ 200,000	
	AWMA Road Repairs	Construction	L	\$ 200,000	\$ 200,000	\$ 400,000	
	Grit Chamber Condition Assessment	Planning	L		\$ 30,000	\$ 30,000	
	DAFT Stairs and Catwalk Replacement	Design	L		\$ 25,000	\$ 25,000	
	Site Drainage Improvements	Design	L		\$ 25,000	\$ 25,000	
	SCADA Server Replacement	Construction	L	\$ 200,000		\$ 200,000	
						\$ -	

Breakdown by Agency				
CLB	EBS	MNWD	SCWD	
\$ 473,875	\$ 37,313	\$ 365,675	\$ 373,138	
\$ 151,640	\$ 11,940	\$ 117,016	\$ 119,404	
\$ 18,955	\$ 1,493	\$ 14,627	\$ 14,926	
\$ -	\$ -	\$ -	\$ -	
\$ 75,820	\$ 5,970	\$ 58,508	\$ 59,702	
\$ 568,650	\$ 44,775	\$ 438,810	\$ 447,765	
\$ 18,955	\$ 1,493	\$ 14,627	\$ 14,926	
\$ 75,820	\$ 5,970	\$ 58,508	\$ 59,702	
\$ 75,820	\$ 5,970	\$ 58,508	\$ 59,702	
\$ 37,910	\$ 2,985	\$ 29,254	\$ 29,851	
\$ 189,550	\$ 14,925	\$ 146,270	\$ 149,255	
\$ -	\$ -	\$ -	\$ -	
\$ 94,775	\$ 7,463	\$ 73,135	\$ 74,628	
\$ 189,550	\$ 14,925	\$ 146,270	\$ 149,255	
\$ 56,865	\$ 4,478	\$ 43,881	\$ 44,777	
\$ 189,550	\$ 14,925	\$ 146,270	\$ 149,255	
\$ -	\$ -	\$ -	\$ -	
\$ 75,820	\$ 5,970	\$ 58,508	\$ 59,702	
\$ 151,640	\$ 11,940	\$ 117,016	\$ 119,404	
\$ 11,373	\$ 896	\$ 8,776	\$ 8,955	
\$ 9,478	\$ 746	\$ 7,314	\$ 7,463	
\$ 9,478	\$ 746	\$ 7,314	\$ 7,463	
\$ 75,820	\$ 5,970	\$ 58,508	\$ 59,702	
\$ -	\$ -	\$ -	\$ -	

Breakdown by WW Code				
Liquids	\$ 2,925,000	\$ 3,805,000	\$ 6,730,000	
AWT				
Breakdown by Agency				
CLB	\$ 1,108,868	\$ 1,442,476	\$ 2,551,343	
EBS	\$ 87,311	\$ 113,579	\$ 200,891	
MNWD	\$ 855,680	\$ 1,113,115	\$ 1,968,794	
SCWD	\$ 873,142	\$ 1,135,831	\$ 2,008,972	
TOTAL	\$ 2,925,000	\$ 3,805,000	\$ 6,730,000	

PC-17 REGIONAL

TOTALS \$ 1,115,000 \$ 4,275,000 \$ 5,390,000

Existing Project ID	Project Name	Phase(s)	WW Code	FY 2023/24 (Year 1)	FY 2024/25 (Year 2)	Total	Notes
ONGOING PROJECTS							
37236S & 3722AL	MCC Replacements/Power System Improvements	Design	C	\$ 200,000	\$ 200,000	\$ 400,000	Planning budget collected last FY
3742	Aeration Blower Study	Planning	L	\$ -		\$ -	
3750-000	Dewatering Room Floor Sealing	Construction	S		\$ 100,000	\$ 100,000	
						\$ -	
NEW PROJECTS							
	Digester Gas System Improvements	Design	S	\$ 200,000		\$ 200,000	
		Construction	S		\$ 500,000	\$ 500,000	
	Digester 1 Piping Replacement	Design	S	\$ 250,000		\$ 250,000	
		Construction	S		\$ 1,500,000	\$ 1,500,000	
	Grit/Primary Grating and Gate Replacement	Design	L	\$ 150,000		\$ 150,000	
		Construction	L		\$ 500,000	\$ 500,000	
	Aeration Influent/Effluent Gate Replacements	Design	L	\$ 100,000		\$ 100,000	
		Construction	L		\$ 500,000	\$ 500,000	
	Effluent Pond and Chlorine Contact Tank Gate Replacements	Design	L		\$ 100,000	\$ 100,000	
	Flare Improvements	Planning	S		\$ 50,000	\$ 50,000	
	Ferric Chloride PS Replacement	Design	L		\$ 75,000	\$ 75,000	
	RAS Wet Well Gate Replacement	Design	L		\$ 50,000	\$ 50,000	
	SET Piping Reconfiguration	Design	S		\$ 50,000	\$ 50,000	
	Odor Scrubber 1 Replacement	Planning	S	\$ 15,000		\$ 15,000	
		Design	S		\$ 300,000	\$ 300,000	
	Cogen 60,000 Hour Overhaul	Construction	S		\$ 350,000	\$ 350,000	
	SCADA Server Replacement	Construction	C	\$ 200,000		\$ 200,000	
						\$ -	

Breakdown by Agency

CLB	EBS	ETWD	MNWD	SCWD
\$ 25,080	\$ 1,320	\$ 41,040	\$ 312,516	\$ 20,044
\$ -	\$ -	\$ -	\$ -	\$ -
\$ 11,220	\$ 590	\$ 20,410	\$ 58,820	\$ 8,960
\$ 22,440	\$ 1,180	\$ 40,820	\$ 117,640	\$ 17,920
\$ 56,100	\$ 2,950	\$ 102,050	\$ 294,100	\$ 44,800
\$ 28,050	\$ 1,475	\$ 51,025	\$ 147,050	\$ 22,400
\$ 168,300	\$ 8,850	\$ 306,150	\$ 882,300	\$ 134,400
\$ -	\$ -	\$ -	\$ 150,000	\$ -
\$ -	\$ -	\$ -	\$ 500,000	\$ -
\$ -	\$ -	\$ -	\$ 100,000	\$ -
\$ -	\$ -	\$ -	\$ 500,000	\$ -
\$ -	\$ -	\$ -	\$ 100,000	\$ -
\$ 5,610	\$ 295	\$ 10,205	\$ 29,410	\$ 4,480
\$ -	\$ -	\$ -	\$ 75,000	\$ -
\$ -	\$ -	\$ -	\$ 50,000	\$ -
\$ 5,610	\$ 295	\$ 10,205	\$ 29,410	\$ 4,480
\$ 1,683	\$ 89	\$ 3,062	\$ 8,823	\$ 1,344
\$ 33,660	\$ 1,770	\$ 61,230	\$ 176,460	\$ 26,880
\$ 39,270	\$ 2,065	\$ 71,435	\$ 205,870	\$ 31,360
\$ 12,540	\$ 660	\$ 20,520	\$ 156,258	\$ 10,022

Breakdown by WW Code

Liquids	L	\$ 250,000	\$ 1,225,000	\$ 1,475,000
Common	C	\$ 400,000	\$ 200,000	\$ 600,000
Solids	S	\$ 465,000	\$ 2,850,000	\$ 3,315,000

Breakdown by Agency

CLB	\$ 77,253	\$ 332,310	\$ 409,563
EBS	\$ 4,064	\$ 17,475	\$ 21,539
ETWD	\$ 135,947	\$ 602,205	\$ 738,152
MNWD	\$ 836,029	\$ 3,057,628	\$ 3,893,657
SCWD	\$ 61,708	\$ 265,382	\$ 327,090
TOTAL	\$ 1,115,000	\$ 4,275,000	\$ 5,390,000

OUTFALLS AND ETM (PC-24, PC-5, PC-21)

		TOTALS		\$ 850,000	\$ 2,150,000	\$ 3,000,000	
Existing Project ID	Project Name	Phase(s)		FY 2023/24 (Year 1)	FY 2024/25 (Year 2)	Total	Notes
ALISO CREEK OCEAN OUTFALL							
3480	ACOO Internal Seal Replacement	Construction		\$ 250,000		\$ 250,000	
	ACOO Outfall Ballast Repairs	Design		\$ 250,000		\$ 250,000	
		Construction			\$ 1,000,000	\$ 1,000,000	
	ACOO Sample Station and Flow Meter Upgrade	Planning			\$ 50,000	\$ 50,000	
SAN JUAN CREEK OCEAN OUTFALL							
	SJCOO Outfall Ballast Repairs	Design		\$ 250,000		\$ 250,000	
		Construction			\$ 1,000,000	\$ 1,000,000	
EFFLUENT TRANSMISSION MAIN							
3101	Trail Bridge Crossing	Planning		\$ 50,000		\$ 50,000	
3107 & 3108	ETM Air Valve Replacements	Design		\$ 50,000		\$ 50,000	
		Construction		\$ -	\$ 100,000	\$ 100,000	

Breakdown by Agency

CLB	CSC	EBSD	ETWD	IRWD	MNWD	SCWD	SMWD
\$ 27,500	\$ -	\$ 1,950	\$ 40,750	\$ 39,400	\$ 109,625	\$ 30,775	\$ -
\$ 27,500	\$ -	\$ 1,950	\$ 40,750	\$ 39,400	\$ 109,625	\$ 30,775	\$ -
\$ 110,000	\$ -	\$ 7,800	\$ 163,000	\$ 157,600	\$ 438,500	\$ 123,100	\$ -
\$ 5,500	\$ -	\$ 390	\$ 8,150	\$ 7,880	\$ 21,925	\$ 6,155	\$ -
SAN JUAN CREEK OCEAN OUTFALL							
\$ -	\$ 41,550	\$ -	\$ -	\$ -	\$ 38,775	\$ 31,175	\$ 138,500
\$ -	\$ 166,200	\$ -	\$ -	\$ -	\$ 155,100	\$ 124,700	\$ 554,000
EFFLUENT TRANSMISSION MAIN							
\$ 5,500	\$ -	\$ 390	\$ 8,150	\$ 7,880	\$ 21,925	\$ 6,155	\$ -
\$ 5,500	\$ -	\$ 390	\$ 8,150	\$ 7,880	\$ 21,925	\$ 6,155	\$ -
\$ 11,000	\$ -	\$ 780	\$ 16,300	\$ 15,760	\$ 43,850	\$ 12,310	\$ -

Breakdown by WW Code

ETM	\$ 100,000	\$ 100,000	\$ 200,000
ACOO	\$ 500,000	\$ 1,050,000	\$ 1,550,000
SJCOO	\$ 250,000	\$ 1,000,000	\$ 1,250,000

Breakdown by Agency

CLB	\$ 66,000	\$ 126,500	\$ 192,500
CSC	\$ 41,550	\$ 166,200	\$ 207,750
EBSD	\$ 4,680	\$ 8,970	\$ 13,650
ETWD	\$ 97,800	\$ 187,450	\$ 285,250
IRWD	\$ 94,560	\$ 181,240	\$ 275,800
MNWD	\$ 301,875	\$ 659,375	\$ 961,250
SCWD	\$ 105,035	\$ 266,265	\$ 371,300
SMWD	\$ 138,500	\$ 554,000	\$ 692,500
TOTAL	\$ 850,000	\$ 2,150,000	\$ 3,000,000

NON-CAPITAL PROJECTS

TOTALS \$ 560,000 \$ 545,000 \$ 1,105,000

Existing Project ID	Project Name	Phase(s)	WW Code	FY 2023/24 (Year 1)	FY 2024/25 (Year 2)	Total	Notes
MULTI-PLANT							
	Asset Management Improvements	Planning		\$ 50,000	\$ 50,000	\$ 100,000	Asset Register Update
	Fall Protection Assessment Update	Planning		\$ 50,000		\$ 50,000	
	Engineering Team Staff Augmentation	Planning		\$ 175,000		\$ 175,000	
	Ten Year Plan Update	Planning			\$ 200,000	\$ 200,000	
						\$ -	
JBL (PC-2)							
	Safety Improvements	Design/Construction	C	\$ 10,000	\$ 10,000	\$ 20,000	
		Design/Construction	L	\$ 10,000	\$ 10,000	\$ 20,000	
		Design/Construction	S	\$ 10,000	\$ 10,000	\$ 20,000	
	Influent Flow Meter Feasibility Study	Planning	L		\$ 50,000	\$ 50,000	
						\$ -	
CTP (PC-15)							
	Safety Improvements	Design/Construction	L	\$ 10,000	\$ 10,000	\$ 20,000	
						\$ -	
RTP (PC-17)							
	Arc Flash 5-year Update	Planning	C	\$ 15,000		\$ 15,000	
	Laboratory Upgrade Study	Planning	C	\$ 200,000		\$ 200,000	
	Safety Improvements	Design/Construction	C	\$ 10,000	\$ 10,000	\$ 20,000	
		Design/Construction	L	\$ 10,000	\$ 10,000	\$ 20,000	
		Design/Construction	S	\$ 10,000	\$ 10,000	\$ 20,000	
	BioSpark Gas Conditioning System Performance Study	Planning	S		\$ 75,000	\$ 75,000	
	Influent Flow Meter Feasibility Study	Planning	L		\$ 50,000	\$ 50,000	
						\$ -	
SJCOO (PC-5)							
	SJCOO Sample Station Safety Evaluation	Planning			\$ 50,000	\$ 50,000	
						\$ -	

Breakdown by Agency

CLB	CSC	EBSD	ETWD	IRWD	MNWD	SCWD	SMWD
\$ 6,156	\$ -	\$ 434	\$ 3,408	\$ -	\$ 39,511	\$26,835	\$23,657
\$ 3,078	\$ -	\$ 217	\$ 1,704	\$ -	\$ 19,756	\$13,417	\$11,828
\$ 10,772	\$ -	\$ 759	\$ 5,964	\$ -	\$ 69,145	\$46,961	\$41,399
\$ 12,311	\$ -	\$ 868	\$ 6,816	\$ -	\$ 79,022	\$53,670	\$47,313
\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,470	\$ 4,885	\$10,646
\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,615	\$ 5,769	\$ 9,615
\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,324	\$ 4,000	\$11,676
\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,539	\$14,423	\$24,039
\$ 7,582	\$ -	\$ 597	\$ -	\$ -	\$ 5,851	\$ 5,970	\$ -
\$ 941	\$ -	\$ 50	\$ 1,539	\$ -	\$ 11,719	\$ 752	\$ -
\$ 12,540	\$ -	\$ 660	\$20,520	\$ -	\$156,258	\$10,022	\$ -
\$ 1,254	\$ -	\$ 66	\$ 2,052	\$ -	\$ 15,626	\$ 1,002	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000	\$ -	\$ -
\$ 2,244	\$ -	\$ 118	\$ 4,082	\$ -	\$ 11,764	\$ 1,792	\$ -
\$ 8,415	\$ -	\$ 443	\$15,308	\$ -	\$ 44,115	\$ 6,720	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,000	\$ -	\$ -
\$ -	\$8,310	\$ -	\$ -	\$ -	\$ 7,755	\$ 6,235	\$27,700

Breakdown by WW Code

JBL	\$ 30,000	\$ 80,000	\$ 110,000
CTP	\$ 10,000	\$ 10,000	\$ 20,000
RTP	\$ 245,000	\$ 155,000	\$ 400,000
SJCOO	\$ -	\$ 50,000	\$ 50,000
MULTI-PLANT	\$ 275,000	\$ 250,000	\$ 525,000

Breakdown by Agency

CLB	\$ 35,948	\$ 29,344	\$ 65,292
CSC	\$ -	\$ 8,310	\$ 8,310
EBSD	\$ 2,293	\$ 1,918	\$ 4,211
ETWD	\$ 34,497	\$ 26,894	\$ 61,391
IRWD	\$ -	\$ -	\$ -
MNWD	\$ 309,958	\$ 245,512	\$ 555,470
SCWD	\$ 96,279	\$ 106,174	\$ 202,453
SMWD	\$ 81,024	\$ 126,849	\$ 207,873
TOTAL	\$ 560,000	\$ 545,000	\$ 1,105,000

Agenda Item

7

Engineering Committee Meeting

Meeting Date: March 9, 2023

TO: Engineering Committee

FROM: David Baranowski, Director of Engineering

SUBJECT: Contract Award for Regional Treatment Plant (RTP) Cogen Engine Black Start Operation Upgrade [Project Committee 17]

Overview

At the November 10, 2022, Engineering Committee meeting, staff gave a presentation about the RTP emergency power system. The current configuration of the cogeneration engine (cogen) does not allow for it to power the plant during a utility power outage. In order for the cogen system to provide power during a utility power outage, it needs to be modified to allow for a “black start.” This is the ability to start and run the engine without utility power.

Western Energy is the only authorized representative for the cogen equipment, and staff requested a quote from Western Energy to upgrade the cogen system. The quote includes:

- Modifying the existing control panel and installing a new controller and program.
- Modifying breakers and relays.
- Verifying breaker functions during a power loss
- Verifying the engine will start on batteries.

Analysis/Discussion

Staff is currently reviewing the draft findings of a power system study. The study analyzed various emergency power configurations that can be implemented at RTP. “Black start” capabilities were one of the options considered and recommended by Carollo.

The project will allow additional critical facilities to be powered during utility outages and will expedite the recovery of RTP once power is restored. Thus, staff is requesting to move forward with the effort.

Fiscal Impact

The cost allocation for the construction and contingency is shown in Table 2. This is a PC 17 Solids project. This work is funded by an existing project for cogeneration system modifications (3773-000). The project has enough funds collected to cover this work.

The Western Energy quote is for \$71,828.51, but it excludes shipping, fees, and tax. Staff requests a contract value of \$75,000 to cover these expenses.

Contract Award for Regional Treatment Plant (RTP) Cogen Engine Black Start Operation Upgrade
March 9, 2023

Table 1 – Cost Allocation

Member Agency	Allocation
City of Laguna Beach	\$8,415.00
El Toro Water District	\$15,307.50
Emerald Bay Service District	\$442.50
Moulton Niguel Water District	\$44,115.00
South Coast Water District	\$6,720.00
Total	\$75,000.00

Recommended Action: Staff recommends that the Engineering Committee recommend that the PC 17 Board of Directors award the contract to Wester Energy in the amount of \$75,000 for the Cogen Engine Black Start Operation Upgrade Project.

1/26/2023

South Orange County Wastewater
34156 Del Obispo Street
Dana Point, CA 92629

Dear Mike Matson:

We are pleased to submit this proposal for your consideration. This proposal includes the scope of supply as in only section 3. All additional work, if any, has not been considered and is excluded from this proposal.

1. Project Name: Regional Treatment Plant – Blackstart Operation & XT4 Light Upgrade
Address: 29201 La Paz Road
City, State, Zip Code Laguna Niguel, CA 92677

2. Type Equipment:	Unit #	Model	Serial
	1	JMS316	1162700

3. Definition of project: Blackstart Operation & XT4 Light Upgrade Commissioning

WES Commissioning Engineer will perform the following:

- Shutdown unit
- Perform LOTO procedure
- Disconnect all cables and plug connections to the display
- Label all disconnected cables.
- Remove display XT3
- Remove control cabinet door
- Mark areas to be cut
- Make cut-out using angle grinder
- Deburr edges
- Clean control cabinet door from grinding dust
- Install and Fasten Diane XT4
- Connect all labeled wiring.
- Install new software and parameter downloads provided by INNIO factory.
- Perform start-up checklist for XT4.
- Disconnect plant from the public power grid.
- Verify engine start with only 24VDC auxiliary power from the starter batteries.
- Verify generator breaker closed at rated speed to power customers equipment
- Load Bank Rental (5 – 10 Days)

SOCWA RTP - Blackstart Island Mode EPSII FIELD SUPPORT:

- Download Existing Settings for Three (3) Relays
- 1 x SEL-700G
- 2 x SEL-351S)
- Upload New Relay Settings (per System Protection Group)
- Test Newly Programmed Relays
- Offsite Report

EPS Engineering Scope of Work:

Divisions of Penn Power Group

NES Main Office: 1 Pearl Buck Court, Bristol, PA 19007 (T) 267.878.0011 (F) 215.785.5500

WES Main Office: 499 Nibus Street, Unit B, Brea, CA 92821 (T) 714.529.9700 (F) 714.529.9701

Corporate Office: 8330 State Road, Philadelphia, PA 19136-2986 (T) 215.335.5010 (F) 215.335.2163

www.neesys.com / www.weesys.com

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- EPS E&D to provide recommendations, and implement if applicable, to update to their one (1) existing SEL-700G settings to ensure the system is able to perform a black start / island mode operation. The changes to the settings will allow the generator breaker to close on a dead bus during black start and other settings such as frequency and voltage will be updated so that when the generator breaker is closed during black start it will not trip on frequency or voltage elements. Additionally, upstream there are two (2) SEL-351S relays (primary and backup) at the main breaker of MSG-1 SWGR that may need to be modified to ensure the black start / island mode capability.
- Relays:
 - 1 x SEL-700G
 - 2 x SEL-351S

Deliverables:

- Updated SEL-700G & SEL-351S Relay Setting Files
- Typewritten report detailing relay updates.
- Remote Commissioning Support
- EPSii field support
- Mobilization / download 3 relay setting files
- Mobilization to upload 3 new relay setting files
- Test & Commissioning files

Schedule:

- To be mutually agreed on during project kickoff
- Standard lead time = six (6) to eight (8) weeks

Information Required to Begin Project:

- Single line, three line, and DC schematics of system
- Existing relay settings files
- Go by setting files for similar project

Project Assumptions:

- Proposal is based on equipment shown on drawing S_1L_01 (Sh. 3 of 13) dated 9-16-15 and 1_1L_01 (Sh. 3 of 13) dated 9/16/15
- Changes in one-line, riser diagram or specifications may result in additional charges or schedule adjustment.
- EPS has included time for a review of the final report with the owner via conference call.
- EPS presumes additional reviews with owner to include initial scheduling review, equipment approval, and review of study results.
- Pricing based on working consecutive, weekday hours with one mobilization.
- Protective device testing and calibration are not included in this scope of work.

4. Total Cost: \$ 71,828.51

5. Payment Terms: Net 30 days

6. Delivery: DAP customers site, Dana Point CA, Incoterms 2010.

7. Cancellation charges: Less than 15 days from signed proposal 10%.
16-30 days from signed proposal 30%.
31 days from order of shipment 70%.
After shipment of parts 100%.

8. Delivery Time: 35 weeks once purchase order is received.

Divisions of Penn Power Group

NES Main Office: 1 Pearl Buck Court, Bristol, PA 19007 (T) 267.878.0011 (F) 215.785.5500

WES Main Office: 499 Nibus Street, Unit B, Brea, CA 92821 (T) 714.529.9700 (F) 714.529.9701

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9. Validity of Proposal: This proposal is valid for (60) days from the date of this proposal.

10. Freight and Tax: Freight and Taxes are not included.

Kind Regards,

Noe Zepeda
Product Support Manager
Western Energy Systems

Terms and Conditions:

Those outlined within the Master Services Agreement between South Orange County Wastewater and Western Energy Systems apply to this proposal.

Customer Acceptance of Proposal:

Name:

Signature:

Date

Divisions of Penn Power Group

NES Main Office: 1 Pearl Buck Court, Bristol, PA 19007 (T) 267.878.0011 (F) 215.785.5500

WES Main Office: 499 Nibus Street, Unit B, Brea, CA 92821 (T) 714.529.9700 (F) 714.529.9701

Corporate Office: 8330 State Road, Philadelphia, PA 19136-2986 (T) 215.335.5010 (F) 215.335.2163

Agenda Item

8

Engineering Committee Meeting

Meeting Date: March 9, 2023

TO: Engineering Committee

FROM: David Baranowski, Director of Engineering

SUBJECT: Coastal Treatment Plant (CTP) Funding Strategy and Implementation Plan Proposal [Project Committee 15]

Overview

At the November 13, 2022, Special Meeting for PC 15, Hazen and Sawyer (Hazen) gave a presentation about their approach to identifying and obtaining funding sources. Hazen submitted the attached proposal to provide a comprehensive funding strategy and implementation plan for the Coastal Treatment Plant. The proposed fee is \$60,140.

The proposal does not specify a project or potential future project for funding. SOCWA has performed studies that have looked at a wide range of potential projects, including process changes and biosolids handling. Possible projects include:

- Conventional Activated Sludge with Biological Nutrient Removal
- Membrane Bioreactor
- Aerobic Granular Sludge
- AWT upgrade
- Solids handling capabilities

Staff requests feedback from the Committee about the proposal and how to proceed. Funds would need to be budgeted for next fiscal year.

Recommended Action: Committee Discussion and Direction to Staff.



Hazen and Sawyer
 7700 Irvine Center Drive, Suite 200
 Irvine, CA 92618 • 949.951.8549

January 5, 2023

Mr. David Baranowski
 Project Manager
 South Orange County Wastewater Authority (SOCWA)
 34156 Del Obispo Street
 Dana Point, CA 92629

Re: Coastal Treatment Plant – Funding Strategy and Implementation Plan

Dear David:

Thank you for arranging our presentation before SOCWA’s PC-15 Committee Meeting recently. We very much appreciate the opportunity to present our experience and qualifications in assisting our water agency clients in obtaining funding for projects like the future improvements needed at your Coastal Treatment Plant. As requested by the Committee, here is our proposal to provide a comprehensive funding strategy and implementation plan.

Firm Experience

Hazen is a proven, experienced, and responsive team. Our funding experts have developed infrastructure funding solutions totaling over \$4.1B over the last 10 years for utilities across the country. Hazen’s comprehensive approach to funding assistance for grant and favorable financing programs has enabled other utilities to effectively obtain water and wastewater infrastructure funding assistance from over 30 unique funding programs across the country. Hazen has been assisting utilities with the identification of projects eligible for various local, state, and federal funding sources. Likewise, we have experience helping our municipal clients prioritize projects to optimize use of new and evolving funding programs to maximize available funding efforts in securing this funding, and importantly, ensuring clients meet all grant administration criteria. To provide the best information to clients and ensure the highest opportunity for success, Hazen draws upon our extensive experience engaging program staff, developing a detailed understanding of funding programs’ current priorities, and assisting utilities in determining which capital projects best fit various funding program opportunities.

Snapshot of the Proposed Hazen’s Funding Team’s Successful Funding Efforts

Project Name and Location	Total Funding
Nature-based Mitigation to Adapt in an Era of Megafire, Sonoma County, CA	\$37,000,000
Groundwater Supply Treatment, East Orange Water Commission, NJ	\$9,600,000
NYC Wastewater Resiliency Plan, NYCDEP, NY	\$350,000,000
Nutrient Reduction Project, South Central Wastewater Authority, VA	\$195,000,000
West Hickman WWTP Wet Weather Storage Tank, Lexington-Fayette Urban County Government, KY	\$66,000,000

Job no. 20007-006

Winsor Water treatment Plan Rehabilitation, City of North Miami, FL	\$20,000,000
Multiple Consent Decree Projects, City of Raleigh, NC	\$181,000,000
Neuse River RRF Bioenergy Recovery Program, City of Raleigh, NC	\$50,000,000
WWTP Improvements, City of Bedford Heights, OH	\$44,000,000
Brook Hollow Interceptor, Dallas Water Utilities, TX	\$22,000,000
WTP Upgrade Phase I, Greenville Utilities Commission, NC	\$69,000,000

Our team has been instrumental in providing the technical support and program development necessary for local governments and utilities to submit competitive grant proposals, including highly competitive programs such as FEMA’s Building Resilient Infrastructure and Communities (BRIC) program. Members of our team secured over \$64 million in FEMA Hazard Mitigation Program Grants to offset impacts related to natural hazards and were successful in securing a \$37 million dollar FEMA BRIC grant, which remains the nation's largest FEMA grant to mitigate impacts from wildfire.

Hazen is particularly adept at developing successful applications for new funding opportunities, ensuring that utility partners are immediately able to take advantage of available programs and do not miss potential opportunities. One example of this success is the EPA administered WIFIA program, which was established in 2017. To provide the best information to clients and ensure the highest opportunity for success, Hazen immediately engaged WIFIA program staff, developed a detailed understanding of program priorities, and assisted clients in determining which capital projects best fit the program priorities. Hazen’s proven approach has helped clients receive WIFIA funding in each of the four years the program has existed, with approvals ranging from \$29 million to over \$400 million and totaling \$1.4 billion. We are also assisting clients in leveraging new and evolving funding water, wastewater, and resiliency opportunities presented by the enactment of the Bipartisan Infrastructure Law (BIL), including additional grant-like money through the Department of Water Resources (DWR), the Federal Emergency Management Agency (FEMA) and the State Water Resources Control Board State Revolving Fund (SRF) programs.

Hazen’s team has an extensive history of managing and administering grants. Our team’s experience and expertise include a solid understanding of local, state, and federal programs requirements (i.e., Code of Federal Regulations Title 44 Section 200 (2CFR200) and Section 404). Our team recognizes that sound project monitoring will improve the efficiency of project implementation and the obligations associated with the funding process. As part of our standard procedures, Hazen’s team can upon request, monitor and evaluate the progress of any funded project in accordance with the approved statement of work and budget, administrative requirements of 2CFR200 and any applicable state requirements.

Experience of Project Manager

Lisa Hulette, MBA, PMP will serve in the role of Project Manager. Lisa brings more than 20 years of leadership in the non-profit and public sectors with proven experience at leveraging multi-pronged, well-funded efforts designed to broaden support and create collaboration among diverse stakeholders. She is an expert fundraiser and has led teams that secured over \$350 million in public and private funds for water resource planning, stream restoration, hazard mitigation and land conservation projects throughout California.

Prior to joining Hazen and Sawyer, Ms. Hulette was the Lead Program Manager and Designer for the \$37 million FEMA Building Resilient Infrastructure and Communities (BRIC) grant awarded to Sonoma

County by United States President Biden on June 30, 2021, during a press conference. This is the largest wildfire project the federal government has funded to date and provides the foundation for FEMA's wildfire mitigation program. In addition to the FEMA BRIC award, Ms. Hulette was the lead in securing \$64 million from FEMA's Hazard Mitigation Grant Program to reduce risk from natural disasters in Sonoma County. In addition to hazard mitigation project design and facilitation, she has advanced several successful legislative actions to successfully streamline permitting for watershed restoration projects at the state level and managed a wide variety of projects from initial planning, through design, construction, and operation.

Approach

Hazen will work closely with the South Orange County Water Authority (SOCWA) to provide a comprehensive funding strategy and implementation plan to plot a course to obtain and administer the best available funding opportunities. To do this, we will identify multiple potential funding options to provide the flexibility necessary to adapt to emerging funding programs, leverage existing programs, and to maximize the return on SOCWA's capital investment. Hazen will provide SOCWA with comprehensive funding consulting services aimed at maximizing grant opportunities to minimize the financial burden on SOCWA. Hazen will leverage both our in-house engineering expertise and knowledge of funding programs to ensure project planning, design, and implementation can be integrated to balance funding program priorities with project and schedule objectives.

Hazen uses the steps below to in our approach to identify and secure infrastructure funding for water utilities:

1. Strategize applicable, available, achievable, funding options

An initial evaluation of SOCWA's current funding priorities will create a foundation for grant funding research and identification of feasible opportunities. Hazen will work closely with SOCWA to first develop an overall strategy to weigh the benefits and risks of all viable sources of grant funding and financing identified during the strategizing phase. This step will include analysis of the total program cost (e.g., including any federal cross cutter requirements), cashflow modeling, and comparing changes to rates under various funding scenarios. Understanding that SOCWA's goals – and funding opportunities – may shift over the course of the contract, this strategy will be revisited and revised, as needed, to remain a relevant guide.

2. Inform CIP design decisions to maximize available funding sources and amounts

Hazen will use the outcomes of step 1 to inform any project design elements that will make a project or program more competitive for identified funding strategies. This step will also account for established application cycles of each grant program, and how they relate to existing or planned projects.

3. Conform to all funding agency requirements

To ensure successful funding application efforts, Hazen will coordinate closely with SOCWA staff, our insight and knowledge of funding program "language," and our multidisciplinary staff to develop funding applications that fully integrate design, schedule, permitting, and stakeholder considerations.

4. Secure funds by developing competitive proposals/grant applications

Based on our experience establishing relationships with funding agency staff (and existing knowledge of local, state, and federal programs), Hazen will work diligently to prepare successful grant applications that strike the balance between technical rigor and narrative building.

The discrete tasks we anticipate undertaking for this effort are described below.

Task 1 – Funding Strategy Plan Development

Hazen will identify potential funding opportunities through iBank, SRF, WIFI, DWR, the Bureau of Reclamation, FEMA and any additional programs such as those related to BIL. The funding strategy will evaluate the benefit of each feasible funding alternative while considering impacts on schedule and total project costs of additional State and Federal processes and compliance requirements. Consideration will be given to the benefit of combining or separating projects or groups of projects for funding strategy purposes. An implementation plan will be developed based upon the evaluation. This task includes:

- Conducting an initial meeting to establish projects goals, schedule requirements, and financial capability.
- Based upon input from SOCWA, developing a funding strategy that will provide a plan for securing state and federal funding that identifies each potential source, application requirements and deadlines, and a submittal schedule to maximize funds with the greatest benefit to SOCWA.
- Preparing a memorandum detailing the results of the analysis and presenting the information to SOCWA.
- Up to three meetings and one presentation of the funding strategy.

Task 2 - Funding Application & Grant Writing Services.

Hazen’s proposal development services are built on the highest quality research, writing, and problem-solving skills. Hazen backs its program planning and design capacity with solid financial and budgeting skills, resulting in final products that communicate compelling visions and well-conceived budgets. Hazen organizes projects around agreed upon schedules with built-in milestones for conceptual, programmatic, and financial review and approval. Hazen’s comprehensive proposal development sequence will involve the key steps listed below:

- Prepare a detailed proposal development checklist and work plan that: a) describes key proposal development activities such as document development, review, and feedback, b) outlines a timeline for completion, and c) identifies responsible parties.
- Ensure required system registrations such as Grants.gov and other submission platforms used by federal and state funders.
- Establish and schedule regular meetings with an application team that includes key Hazen and SOCWA staff. The first meeting of this Team will be a strategy session to review the funding opportunity, review and refine the work plan, and discuss the proposed approach to responding to proposal requirements.
- Develop a concept paper and concept budget in collaboration with relevant SOCWA staff. This step is particularly useful for projects involving multiple partners. Depending on the complexity and timeline of the individual grant proposal, this step may be abbreviated or skipped.
- Work with SOCWA staff to produce successive drafts of the project narrative, budget, attachments, and forms. Application attachments may include letters of support or commitment, memoranda of understanding or other partnership agreements, logical models, management plans, etc.

Task 3 – Agency Coordination and General Support

- Coordinate with identified funding agencies to solicit early buy-in and support of application materials.
- Perform follow-up activities including sharing submission confirmation and updating SOCWA with any follow-up items.
- Hazen is also available to provide more targeted proposal development services as desired or requested by SOCWA. For example, Hazen can assist with kickoff activities such as developing a work plan, checklist of application components, and a proposal narrative outline based on the

RFP guidance and/or review application drafts both for quality and technical completeness. This flexibility may help maximize SOCWA's return on investment in Hazen funding services.

Task 4 – Project Management

- Administrative duties and meetings to ensure project execution
- Monthly progress reports
- Invoicing and budget management

Estimated Fees

The attached table presents our estimated level-of-effort and fee to conduct the above tasks. The total not-to-exceed fee for the proposed scope of work is \$60,140.

Estimated Schedule

Hazen estimates that we can complete the above scope of work within 4 months after receiving the Notice to Proceed from SOCWA.

We sincerely appreciate the opportunity to submit this proposal. If you should have any questions or wish to discuss our proposal, please contact me at DRJones@HazenandSawyer.com or (916) 769-8753. Thank you.

Sincerely,



Dave Jones, PE
Vice President

Enclosure

South Orange County Wastewater Authority	Funding Strategy Plan - Fee Estimate							
							Total	
	Project Director	Technical Advisors QA/QC	Project Manager	Admin. Support	Total Hours	Labor		
	Jones	Robertson	Hulette	Baruda			ODC	Total
	\$325	\$325	\$280	\$130				
TASK 1 - Funding Strategy Development								
1.1 Conduct project kick-off meeting	2	1	4	0	7	\$ 2,095		\$2,095
1.2 Identify potential funding opportunities	0	0	2	4	6	\$ 1,080		\$1,080
1.3 Conduct comparison of funding opportunities specific to project	1	1	5	0	7	\$ 2,050		\$2,050
1.4 Prepare memo summarizing comparison	1	1	4	2	8	\$ 2,030		\$2,030
1.5 Meet with SOCWA to review memo	2	0	4	0	6	\$ 1,770		\$1,770
1.6 Develop draft funding strategy	2	1	8	2	13	\$ 3,475		\$3,475
1.7 Prepare memo on funding strategy	1	1	4	2	8	\$ 2,030		\$2,030
1.8 Meet with SOCWA to discuss memo	2	0	4	0	6	\$ 1,770		\$1,770
1.9 Finalize funding strategy memo	2	1	5	2	10	\$ 2,635		\$2,635
SUBTOTAL TASK 1	13	6	40	12	71	\$ 18,935	\$0	\$18,935
TASK 2 - Funding Application and Grant Writing Services	<i>(Estimate for per funding application/Final cost for each application to be approved via email prior to start of Task 2)</i>							
2.1 Prepare funding proposal development checklist and work plan	0	0	1	3	4	\$ 670		\$670
2.2 Confirm required system registrations	0	0	1	2	3	\$ 400		\$400
2.3 Conduct strategy session to refine work plan	2	2	6	2	12	\$ 3,240		\$3,240
2.4 Develop concept paper and budget	2	1	6	4	13	\$ 3,175		\$3,175
2.5 Produce successive drafts of funding application(s). Assume 4 drafts.	4	4	32	8	48	\$ 12,600		\$12,600
SUBTOTAL TASK 2	8	7	46	19	80	\$20,085	\$0	\$20,085
TASK 3 - Agency Coordination and General Support								
3.1 Coordinate with funding agencies	0	0	4	0	4	\$ 1,120		\$1,120
3.2 Perform follow-up activities	1	1	2	1	5	\$ 1,340		\$1,340
SUBTOTAL TASK 3	1	1	6	1	9	\$ 2,460	\$ -	\$ 2,460
TASK 9 - Meetings and Project Management								
1.1 Administrative Duties	0	0	12	12	24	\$ 4,920		\$4,920
1.2 Monthly Progress Reports (assume 3 reports)	2	0	6	6	14	\$ 3,110		\$3,110
1.3 Project Progress Meetings (assume 4 meetings)	4	0	8	4	16	\$ 4,060	\$1,000	\$5,060
1.4 Budget and Schedule Management	2	0	12	12	26	\$ 5,570		\$5,570
SUBTOTAL TASK 9	8	0	38	34	80	\$ 17,660	\$1,000	\$18,660
TOTAL	30	14	130	66	240	\$ 59,140	\$ 1,000	\$ 60,140

Agenda Item

9

Engineering Committee Meeting

Meeting Date: March 9, 2023

TO: Engineering Committee

FROM: David Baranowski, Director of Engineering

SUBJECT: Contract Award for Coastal Treatment Plant (CTP) Drainage Pump Station Conceptual Design [Project Committee 15]

Overview

The Drainage Pump Station (DPS) at the Coastal Treatment Plant was planned to be replaced by a new station as part of the 2019 Facility Improvements Project. However, during construction, it was discovered that field conditions would not allow for the construction of the new station as designed. Engineering and Operations staff have met to discuss various options to repair or replace the DPS and have agreed that rehabilitating the existing station is the preferred approach. The DPS was last modified in 1987, and the equipment has reached the end of its useful life. A full station rehabilitation would include new pumps, piping, electrical equipment, and structural modifications.

The scope of work for the project includes the following:

- Condition assessment of the wet well, including concrete cores and pH testing
- Evaluations of various facility features, including pump configuration, discharge piping location, electrical equipment, code compliance, containment, and construction sequencing
- Preliminary designs and layouts
- Construction cost estimate
- Workshops, memos, and reports

Proposals

SOCWA requested proposals from the following firms to provide a condition assessment of the existing facility and provide a conceptual design for a station rehabilitation.

- Black and Veatch
- Brown and Caldwell
- Hazen and Sawyer
- Tetra Tech

One proposal was received and is summarized below in Table 1. Staff reached out to the firms that did not propose and were told that the timing of the work did not fit with their workloads.

Table 1 – Summary of Proposal(s)

Firm	Tetra Tech
Project Manager	Tom Epperson
Total Labor Hours	1,445
Total Cost	\$284,000

The proposed fee was greater than the expected budget of \$175,000. Staff met with Tetra Tech to discuss reasons for the higher-than-expected fee. The primary reasons were the effort in the condition assessment task and the preliminary design tasks. Due to some of the project challenges, especially the electrical system, Tetra Tech’s proposal reflected a 30% design effort. Staff’s expectation for the project was only a conceptual design to assess feasibility before proceeding with a more detailed design.

Staff requested a revised fee from Tetra Tech for only a conceptual design. The revised fee was \$176,000 and had the following changes: reduced effort for Task 1 (Project Management), removed Task 6 (Preliminary Design), reduced effort for Task 7 (Cost Estimate), and removed Task 8 (Preliminary Design Report). In addition, these changes reduced the project schedule by approximately 2 months. Staff believes the conceptual design and fee better align with their project expectations.

Cost Allocation

Cost allocations for the proposed fee and revised fee are shown in Table 2. Staff recommends proceeding with the conceptual design fee, but staff included the preliminary design fee in the table in case the committee prefers the preliminary design. The available funds for this project are shown in Table 3.

Table 2 – Cost allocation by member agency

Agency	Drainage Pump Station Preliminary Design	Drainage Pump Station Conceptual Design
	3522AL-000	3522AL-000
City of Laguna Beach	\$107,665.67	\$66,722.39
Emerald Bay Service District	\$8,477.61	\$5,253.73
Moulton Niguel Water District	\$83,080.60	\$51,486.57
South Coast Water District	\$84,776.12	\$52,537.31
Total	\$284,000.00	\$176,000.00

Table 3 – Available budget for 3522AL-000

Carryover Funds	FY 22/23 Budget	Total Available Budget	Additional Budget Needed for Preliminary Design
\$49,200	\$125,000	\$174,200	\$109,800

If necessary, additional budget will be included in the next fiscal year. The available funds will cover the project effort throughout this fiscal year.

Recommended Action: Staff recommends that the Engineering Committee recommend to the PC 15 Board of Directors to award the contract to Tetra Tech in the amount of \$176,000 for the Coastal Treatment Plant Drainage Pump Station Conceptual Design Project.



January 26, 2023

Jeanette Cotinola, Procurement/Contracts Manager
South Orange County Wastewater Authority
34156 Del Obispo Street
Dana Point, CA 92629

Reference: Proposal to Provide Engineering Services for the Coastal Treatment Plant Drainage Pump Station Rehabilitation Preliminary Design Project

Dear Ms. Cotinola,

Tetra Tech is pleased to submit our proposal for the Coastal Treatment Plant (CTP) Drainage Pump Station (DPS) Rehabilitation Preliminary Design project. We value the relationship we have built with the South Orange County Wastewater Authority (SOCWA) and we desire to once again provide SOCWA with the same diligent, high-quality, and responsive service that you expect and deserve. Tetra Tech has assembled an outstanding team that can provide the following distinct advantages for this project:

- ▶ **Extensive Sewer Lift Station Design Experience:** During the last twenty (20) years, members of our project team have been involved in the **design and/or construction of more than twenty (20) sewer lift station projects** for various Southern California agencies including several for your member agencies.
- ▶ **Submersible Pump Experience:** Our project team has recent design experience with sewage and drainage submersible pumps within wet wells. This experience includes three separate facilities for IRWD's Peters Canyon Channel Water Capture Project, MNWD's North Aliso Lift Station Reconstruction, ETWD's Oso Lift Station, and a sewage submersible wet well package station for OCWD's Burriss Pump Station.
- ▶ **SOCWA Experience:** Tetra Tech has been working with SOCWA on multiple projects since 2004. CTP projects include Conceptual Evaluation of DPS; Storm Water Control Study; Miscellaneous Stormwater Compliance Upgrades; North Side Drainage Evaluation; and the Design/Build Export Sludge Equalization Basin.
- ▶ **Local In-House, Structural, Electrical and Control Capabilities:** Tetra Tech has in-house local, registered structural, electrical and control engineers with vast lift station design experience.
- ▶ **Dedication to the District:** Our approach will include a "teamwork and partnering" relationship. We will do this by exceeding your expectations through innovative and smart solutions, attention to detail, and our understanding of your design processes and requirements.

Our proposal will remain in full force and effect for one-hundred and twenty (120) days after the above submittal date. Thank you for giving us the opportunity to submit our proposal, we look forward to working with SOCWA. Should you require additional information or have any questions, please contact me at 949/809-5156 or via email at tom.epperson@tetrattech.com.

Sincerely,

A handwritten signature in blue ink that reads 'Tom Epperson'.

Tom Epperson, PE
Vice President

TLE/de

M:\Marketing\Proposals\FY 2023\SOCWA_CTP-PS Rehab

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FIRM OVERVIEW

Tetra Tech’s goal is to provide the necessary expertise and resources to deliver projects on time, within budget, and in compliance with the design and construction standards of our clients and approval agencies. Leveraging our national presence, multi-disciplinary team, and client focused service, we apply lessons learned from our vast experience to each and every challenge. Clients benefit from this approach by receiving high-quality service, innovative designs, and functional solutions that are responsive to their needs and often exceed their expectations. A cornerstone of our success is our client-focused service, staff qualifications, firm commitment, and desire to successfully complete each assignment to the satisfaction of our clients.

Tetra Tech is a leader in water/wastewater/recycled water facility design and consistently ranks among the top engineering firms annually according to the *Engineering News-Record*, a highly regarded news magazine. **In 2022, Tetra Tech was rated 1st in the “Water” category, 2nd in the “Sewer/Waste” category, and 4th among the “Top 500 design firms” nationwide!**

This project will be managed from our Irvine office located at:

Company Legal Name: Tetra Tech, Inc.
Address: 17885 Von Karman Avenue, Suite 500
Irvine, CA 92614

Project Manager: Tom Epperson, PE
Telephone: 949/809-5156
E-Mail: tom.epperson@tetrattech.com

WHY TETRA TECH

Tetra Tech has assembled an outstanding team that can provide the following distinct advantages for this project:

- **Extensive Sewer Lift Station Design Experience.** During the last twenty (20) years, members of our project team have been involved in the **design and/or construction of more than twenty (20) sewer lift station projects** for various Southern California agencies including several for your member agencies.
- **Submersible Pump Experience.** Our project team has recent design experience with sewage and drainage submersible pumps within wet wells. This experience includes three separate facilities for IRWD’s Peters Canyon Channel Water Capture Project, MNWD’s North Aliso Lift Station Reconstruction, ETWD’s Oso Lift Station, and a sewage submersible wet well package station for OCWD’s Burris Pump Station.
- **SOCWA Experience.** Tetra Tech has been working with SOCWA on multiple projects since 2004. CTP projects include Conceptual Evaluation of DPS; Storm Water Control Study; Miscellaneous Stormwater Compliance Upgrades; North Side Drainage Evaluation; and the Design/Build Export Sludge Equalization Basin.
- **Local In-House, Structural, Electrical and Control Capabilities.** Tetra Tech has in-house local, registered structural, electrical and control engineers with vast lift station design experience.
- **Dedication to the District.** Our approach will include a “teamwork and partnering” relationship. We will do this by exceeding your expectations through innovative and smart solutions, attention to detail, and our understanding of your design processes and requirements.

Our extensive experience with similar projects will ensure that SOCWA will receive a high level of service. We have assigned a team that are currently or recently worked on similar lift station projects: MNWD (North Aliso Lift Station Reconstruction) and ETWD’s Oso Lift Station. This previous experience will help our team be cost effective and successful on this project.



UNDERSTANDING OF PROJECT

The Drainage Pump Station (DPS) was originally built in 1967 and modified in 1987. The original purpose of the DPS was to handle all incoming flows from the north influent sewer. The DPS is located adjacent to the facility property line, next to the Aliso Creek, and is potentially within the flood zone of the creek.

Currently, there are no flows from the north influent sewer, but the DPS still handles all drainage flows at the facility. Flows include storm water, process return flows (tank drains, AWT backwash, etc.) and building drains. Originally, the DPS discharged into an influent force main just before it entered the headworks facility. In 2019, the influent force main was rehabilitated and the DPS discharge location was changed to the primary influent channel.

The pump station is constructed with a wet-pit/dry-pit configuration. There are two 50 HP dry-pit submersible pumps, each with a capacity of 2,300 gallons per minute at 54 feet of total dynamic head, and one submersible pump, with a capacity of 350 gallons per minute at 30 feet of total dynamic head. The wet well has a capacity of roughly 9,000 gallons.

No major upgrades have occurred since 1987 and the DPS is now in need of rehabilitation and modifications to ensure proper and effective operation. Over the last 10 years, the DPS has been the focus of the following evaluations:

- 2013 Replacement Alternatives Evaluation
- 2019 Replacement Design Memorandum and Design Drawings (not constructed)
- 2020 Flood Protection Evaluation

The purpose of this project is to rehabilitate the DPS by replacing aging equipment, upgrading the structure, and bringing it up to code, especially NFPA 820. The goals for the engineering services for the DPS Rehabilitation are as follows:

1. Perform a wet well condition assessment to determine the type of rehabilitation needed to the structure and interior components.
2. Evaluate options for a new discharge location. The current location causes issues with treatment during periods of high usage.
3. Design a facility that meets current functional needs and code requirements (e.g., NFPA).
4. Evaluate construction feasibility, bypassing and sequencing options to minimize disruption to the DPS and the treatment plant.

PROJECT APPROACH

Tetra Tech fully understands the importance of your project. We are offering an outstanding team, which combines the experience, depth, and understanding needed for the successful delivery of this project. Our core principles establish how we plan to work together with SOCWA to successfully complete this project:

- ❖ **Service.** Tetra Tech puts its clients first. We listen to better understand our clients' needs and deliver smart, cost-effective solutions that meet those needs. Our philosophy is to "Do it Right."
- ❖ **Value.** Tetra Tech takes on our clients' problems as if they were our own. We develop and implement real-world solutions that are cost-effective, efficient, and practical.
- ❖ **Excellence.** Tetra Tech brings superior technical capability, disciplined project management, and excellence in safety and quality to all of our work.
- ❖ **Opportunity.** Our people are our number one asset. Our workforce is diverse and includes leading experts in our fields. Our entrepreneurial nature and commitment to success provides challenges and opportunities.

We value the relationship that has been established with SOCWA and look forward to continuing and further developing this association in the future.

SEWER LIFT STATION EXPERIENCE

The following is a summary of the various lift station projects that members of our Project Team have designed during the last twenty (20) years.

New Lift Stations

City of Santa Ana San Lorenzo Lift Station: replaced an existing submersible lift station with a masonry building containing a separate electrical/control room, dry pit housing the pumps/motors, odor control facilities, emergency bypass facility, meter, grinders, and emergency generator.

El Toro Water District Oso Lift Station: while maintaining existing lift station in service, constructed a new 10-foot diameter wet well containing two submersible pumps, valve vault with check valves and meter, emergency bypass connection, new electrical/control equipment, backfilled existing dry pit with slurry and located emergency generator on top of structure, and emergency overflow connection to Moulton Niguel Water District sewer within El Toro Road.

NAVFAC Package 2 (Camp Pendleton) Replacement Lift Station: consisted of a new wet well, submersible pumps, valve vault, and emergency generator. The existing lift station must remain in operation, without interruption, throughout the construction of the new lift station.

NAVFAC Coronado Sewer Pump Station Replacement (Coronado): replaced three (3) existing submersible pumps with new above ground packaged pumping station, including adding a back-up natural gas emergency pump, bypass pumping facilities, and re-coating of the existing wet well.

Irvine Ranch Water District Coastal Ridge Lift Station: new lift station with adjacent wet well, dry pit, separate electrical/control room, bypass piping, and emergency generator. The dry pit was located below ground due to the aesthetics of the surrounding residences.

Upgrade Existing Lift Stations

MNWD Regional Lift Station Enhancements: replaced one of the pumps with a smaller pump to handle low flows, constructed additional wet well capacity and added an on-site standby pump.

NAVFAC Package 1 (Camp Pendleton) Upgrades: upgraded nine (9) existing lift stations including the addition of emergency generators, added new grinders, improve SCADA capabilities, and site safety improvements.

NAVFAC Package 2 (Camp Pendleton) Upgrades: upgraded two (2) existing lift stations including the addition of emergency generators, improved SCADA capabilities, and site safety improvements.

Long Beach Water Department Pump/Motor/Valves Upgrades: designed the replacement of pumps/motors, valves, and added a bypass connection at the S-25 Lift Station.

Odor Control Upgrades: added oxygenation odor control facilities at Lower Salada and Upper Salada Lift Stations for MNWD.

Pump/Motor/Valves Upgrades: replaced Fairbanks Morse pumps/motors with Cornell pumps/motors as well as replaced existing check valves, gate valves, and added a meter at Lower Salada, Upper Salada, Del Avion, Regional and Aliso Creek Lift Stations for MNWD.

Expand Wet Well Capacity: the wet well capacity at Upper Salada was increased by expanding the existing wet well structure. At Upper Boundary Oak and at Aliso Creek Lift Station, the wet well capacity was expanded by constructing new buried fiber reinforced plastic tanks.

SUBMERSIBLE PUMP EXPERIENCE

The following is a summary of several recent projects where Tetra Tech's Project Team has designed wet well facilities with submersible pumps:

ETWD Oso Lift Station Improvements: constructed new 10-foot diameter wet well containing two submersible pumps, valve vault with check valves and meter, and new electrical and control equipment.

IRWD’s Peters Canyon Channel Water Capture: three diversion structures, each with 6 foot ID precast concrete wet well (20 to 25 feet deep); dual submersible pumps with slide rail disconnect assemblies; valve vault (check and gate valves); meter vault; and electrical and control equipment.

OCWD’s Burris Pump Station: included a packaged lift station including wet well, dual submersible pumps with guide rail system, valve vault and electric/control equipment.

SIMILAR LIFT STATION PROJECTS

During the last twenty (20) years, members of our project team have been involved in the design and/or construction of more than twenty (20) sewer lift station projects. The following is a summary of these lift station projects:

Client	Project Name	Design Complete
Moulton Niguel Water District	North Aliso Lift Station Reconstruction (Final Design)	Under Design
Moulton Niguel Water District	North Aliso Lift Station Evaluation (Preliminary Design)	2022
City of Santa Ana	San Lorenzo Lift Station	Under Construction
El Toro Water District	Oso Lift Station Improvements	2021
NAVFAC Southwest	Camp Pendleton Sewer Lift Station Package #1	2014
NAVFAC Southwest	Camp Pendleton Sewer Lift Station Package #2	2014
NAVFAC Southwest	Naval Base Coronado Sewer Lift Station	2013
Moulton Niguel Water District	Lower and Upper Salada Lift Station Oxygenation Upgrades	2008/2006/2000
South Coast Water District	Sewer Lift Station Evaluation	2007
City of San Clemente	Cypress Shores Lift Station	2007
City of San Clemente	La Pata Lift Station	2007
Moulton Niguel Water District	Del Avion Lift Station Pump/Motor Replacement	2006
South Coast Water District	Blue Lagoon Lift Station	2006
Long Beach Water Department	S-25 Lift Station Modifications	2004
Moulton Niguel Water District	Regional Lift Station Pump/Motor Replacement	2004/2000
Long Beach Water Department	S-25 Lift Station Modifications	2004
Moulton Niguel Water District	Upper Boundary Oak Lift Station Expansion	2003
Moulton Niguel Water District	Aliso Creek Lift Station Upgrades	2002
Irvine Ranch Water District	Coastal Ridge Lift Station	2002

In addition, our Project Team recently completed the design of the Peters Canyon Channel Water Capture and Reuse Pipeline for Irvine Ranch Water District. This project included three (3) separate diversion structures, with each diversion facility including a wet well, submersible pumps, valve vault and meter vaults. The construction was just completed and the lift stations have been placed into service.

UNDERSTANDING OF ISSUES

Tetra Tech has an excellent understanding of the project **due to our previous work on the 2020 Flood Protection Evaluation**. For that project, our Team already reviewed the 2013 Replacement Alternatives Evaluation, 2019 Replacement Design Memorandum and Design Drawings, and the original construction plans as well as performed an extensive field visit.

PROJECT MANAGEMENT

Over the years, Tetra Tech has established well defined, rigorous procedures for project management. These techniques have been developed and refined and have contributed to our success and reputation. The keys to our project management system are communications, project planning, monitoring, and quality assurance.

The Tetra Tech team’s goal is to keep SOCWA’s staff “in the loop” from Day One of the project. Communication tools include the formal progress reports afforded through our project management system and an informal give-and-take approach starting with **Tom Epperson, PE, our Project Manager**, and extending to every member of the Tetra Tech team.

At the project’s outset, the chain of command and appropriate communication methods will be agreed upon and can be as formal or as informal as SOCWA desires. We will use the entire communication spectrum. We will conduct formal meetings with agenda and typewritten notes, and we will use informal meetings with notes to file. We will also have documentation of telephone communications, with notes to file or letters of understanding as appropriate follow-up.

We are proposing to use e-mail to keep SOCWA aware of the status of the project. Every two weeks, Tetra Tech will prepare a brief (one or two paragraphs or bullet items) e-mail summarizing the following:

- activities completed in the previous two weeks
- activities planned for the upcoming weeks
- any critical decisions that need to be made
- schedule of upcoming events/meetings

In addition, each month we will prepare a project status memorandum containing the following: summary of project schedule; description of key issues/concerns which have surfaced along with proposed options and solutions; and a project status summary report showing current schedule and budget.



SCOPE OF SERVICES

The scope of services for this project consists of the following tasks.

Task 1: Project Management and Progress Meetings

Tetra Tech will include in the scope of work sufficient time and budget to administer/manage the services provided. Project management/administration shall include, but not be limited to:

- Project kick-off meeting conducted in person at CTP.
- Conduct virtual monthly progress meetings with SOCWA staff. The primary purpose of the meetings is to review schedule, task progress, and outstanding action items. Tetra Tech will prepare the agenda, the action item list, and the decision log for each meeting. For this proposal, we have assumed a maximum of 9 progress meetings.
- Prepare and maintain a project schedule.
- Prepare bi-weekly status e-mails and monthly invoicing.

Task 2: Data Collection and Document Review

SOCWA will provide available record drawings and previous studies involving the DPS. Drawings do not exist for all modifications to the DPS. SOCWA will also provide operating data for the DPS and treatment plan such as wet well level and pump run times. Tetra Tech will perform two site visits to verify drawings and existing conditions.

Task 3: Wet Well Condition Assessment

Tetra Tech will have V&A (subconsultant to Tetra Tech) perform a condition assessment of the inside of the wet well to assess the integrity of the structure, condition of surfaces and coatings, and look for issues that need to be remedied during the rehabilitation. The work will include concrete core drilling, chipping, pH testing and associated lab analysis. The assessment will be able to occur during normal business hours. SOCWA will bypass flows to the station for a period of up to 4 hours to allow for the assessment. The wet well is considered a confined space and only properly trained individuals with proper safety equipment and fall protection may enter. The only access to the wet well is through a hatch on the top of the structure (there are no stairs). The following is a summary of the work to be performed by V&A:

- a. Duration of V&A's scope of work is three months.
- b. Prepare a Health and Safety Work Plan.
- c. V&A will subcontract with Jamison Engineering Contractors (JEC) to provide confined space entry support and concrete coring and repair of concrete core holes.
- d. V&A will use the following methods to perform the condition assessment of the wet well:
 - Visual Assessment (documented with digital photographs and field notes) and the condition will be rated using the VANDA[®] Concrete Condition Index (Table 1-1 and 1-2).
 - Concrete Sounding on accessible concrete surfaces.
 - Concrete Penetration Testing at two locations within the structure.
 - Concrete Surface pH Testing, at up to two will be taken within the structure.
 - Surface Penetrating Radar (SPR) will be used to measure the depth of concrete cover, identify placement of reinforcing steel and to detect coarse voids and defects. One SPR scan (3-feet wide by 3-feet tall) will be performed within the structure.

- Ultrasonic Thickness Testing at accessible metallic surfaces. Up to 8 measurements will be performed within the structure.
 - Dry Film Thickness (DFT) Testing will be performed on coated metallic surfaces. Up to 8 DFT measurements will be taken within the structure.
 - Concrete Core Sampling and Testing consisting of two (1 pair) of core samples from the wet well. JEC will patch the core holes with a concrete repair product. One core sample will be laboratory tested by Voss Laboratories for compressive strength per ASTM C—42. One core sample will be used by Voss Laboratories to take four ½ - inch incremental chloride, carbonation and pH tests.
- e. V&A will use the following methods to perform the condition assessment of the influent force main:
- Visual Assessment of the metallic surfaces (documented with digital photographs and field notes) and the condition will be rated using the VANDA® Concrete Condition Index (Table 1-2).
 - Ultrasonic Thickness Testing at accessible metallic surfaces. Up to 16 measurements will be performed on the force main.
 - Dry Film Thickness Testing will be performed on coated metallic surfaces. Up to 20 DFT measurements will be taken on the force main.
- f. V&A will prepare a Condition Assessment Report that describes the field assessment methods, activities, results, conclusions, potential causes of degradation of materials, and recommendation for repair, rehabilitation, and/or replacement.

Task 4: Preliminary Evaluations

Tetra Tech will evaluate and analyze the following:

- a. **Wet Well Rehabilitation Plan:** based on the finding of Task 3, Tetra Tech will recommend a plan to rehabilitate the wet well.
- b. **Compliance Evaluation:** The existing building is not physically separated from the wet well and is not in compliance with NFPA 820. Tetra Tech will conduct an analysis of NFPA and any other building codes that might need to be considered as part of the rehabilitation. Tetra Tech will summarize the necessary modifications to bring the DPS into compliance. One option might include reconstructing the top floor of the DPS building. Based on our previous investigation, the whole electrical room may need to be relocated.
- c. **Containment Wall Plan:** Tetra Tech will use our previous 2021 Memorandum “Conceptual Evaluation for the Protection of the CTP Drainage Pump Station” to determine the basic requirements for the wall to be constructed and to properly protect the facility from a flood. This will include determining the height, size of footing, wall material, and shoring/excavation to construct the wall. Tetra Tech will determine the best method of handling the water that might get trapped in the containment area. Tetra Tech will review any permitting or inter-agency coordination that will need to occur but this does not include any actual coordination, just research into potential requirements.
- d. **Pump Alternatives:** Tetra tech will evaluate alternative pump size, types, configurations, and operational/control strategies to meet the needs of the station. This will include considering the maximum flow (including potential influent flow from the north sewer), maximum flow (not including flow from the north sewer), typical daily flow, and the minimum flow scenarios.
- e. **Discharge Piping Modifications:** Tetra Tech will evaluate different options to relocate or modify the discharge piping to better diffuse flow. The current discharge location sends too much flow to one primary clarifier.

- f. ***Influent Force Main Condition Assessment:*** This work was included within the above Task 3 as it will be done by V&A. The assessment will be performed from the chemical injection manhole and as the pipe enters the headworks building. The condition of the pipe and sample port will be included within V&A's Condition Assessment Report.
- g. ***Bypassing and Construction Sequencing:*** The DPS cannot be taken out of service for extended periods of time. Tetra Tech will evaluate options to bypass flows and/or sequence the construction to minimize impacts to the plant. This will include evaluation of relocating the DPS to alternative site.

Task 5: Preliminary Evaluations Memo and Workshop

Tetra Tech will provide a draft technical memorandum documenting the findings and conclusions of the Preliminary Evaluations Tasks. Tetra Tech will conduct a workshop at the Coastal Treatment Plant to present the findings and recommendations from the draft memo. No final memo is required. Comments will be incorporated into the Preliminary Design Report summarized in Task 8 below.

Task 6: Conceptual Design and Layout

Based on the feedback from SOCWA from the previous tasks, Tetra Tech will prepare a conceptual design of a Drainage Pump Station Rehabilitation. This includes a layout and basic sections that show the conceptual design of the DPS, the major equipment, changes to the structure or building, changes to the electrical and instrumentation systems, and other significant changes.

Due to the option of potentially having to relocate the whole electrical room, we are anticipating performing the following electrical scope of work:

- Perform preliminary electrical design and contact suppliers for equipment replacement
- Generate the following electrical sheets to 30% completion
 - Legend Sheet
 - Site Plan
 - Single Line Diagram
 - I&C Sheet
 - Detail Sheet
 - Electrical Room Lighting Upgrade
 - Equipment Elevation (switchboard, MCC, control panel)
 - Pump control Schematic

Task 7: Cost Estimate

Tetra Tech will estimate the construction cost for the proposed changes. The Class 5 cost estimate will include cost markups, construction contingency, and estimate for the design fees, an estimate for the engineering services during construction fee, and an estimate for construction management. The cost estimate shall be submitted along with the preliminary design in the previous task.

Task 8: Preliminary Design Report

Tetra Tech will combine the work from all previous tasks into a draft Preliminary Design Report. SOCWA will review and provide comments on the draft report. Tetra Tech will incorporate comments and produce a final Preliminary Design Report. No printed copies of the draft or final report are required.

PROJECT TEAM

Tetra Tech has a depth of resources for staffing this project with experienced and qualified personnel. The following team has had extensive experience working on sewage/drainage lift stations. The following paragraphs provide a brief summary of the qualifications of our key staff. Brief resumes are included within the Appendix.

Project Manager – Mr. Tom Epperson, PE will be the Project Manager and will provide project oversight and ensure that the necessary resources are committed to the project to get the job done. Mr. Epperson will apply more than 41 years of experience which includes a myriad of projects which required finding solutions to complex issues within wastewater facilities.

Assistant Project Manager – Neha Gajjar, PE will be the Assistant Project Manager and will provide support to Mr. Epperson with project oversight. Ms. Gajjar has over 30 years of experience in water and wastewater facilities design and played a major role on the 2021 Memorandum “Conceptual Evaluation for the Projection of the CTP Drainage Pump Station”.

Project Engineer – Matt Vera, PE will be the lead design engineer on this project. He is currently playing the same role on MNWD’s North Aliso Lift Station Reconstruction project.

Structural Engineer – Eric Yuen, PE, SE will be the lead structural engineer on this project. He is currently playing the same role on MNWD’s North Aliso Lift Station Reconstruction project.

Electrical/Controls – Mazen Kassar, PE will be the lead electrical/controls engineer on this project. He is currently playing the same role on MNWD’s North Aliso Lift Station Reconstruction project.

Subconsultant: To provide the services requested in the RFP, Tetra Tech has added V&A as our Condition Assessment Consultant to our project team. Tetra Tech will be responsible for coordinating and integrating their efforts for the required condition assessment of the wet well and influent force main. V&A will serve SOCWA as Subconsultants to Tetra Tech.

SATISFIED CLIENTS

Client satisfaction is a major objective for Tetra Tech. This commitment to our clients has earned us the privilege of providing continuous service to several of our below listed references. We believe that our clients will attest to our technical experience and responsive staff, and we encourage you to contact our references to verify our past performance firsthand.

<p>City of Santa Ana Rudy Rosas, PE 714/647-3379 rrosas@santa-ana.org</p> <p>2 Lift Stations</p>	<p>El Toro Water District Dennis Cafferty, PE 949/837-7050 dcafferty@etwd.com</p> <p>Oso Lift Station and Recycled Water Expansion</p>	<p>Orange County Water District Mike Markus, PE 714/378-3305 mmarkus@ocwd.com</p> <p>2 Pump Stations and Well Injection</p>	<p>Irvine Ranch Water District Richard Mori, PE 949/453-5571 Mori@irwd.com</p> <p>2 Lift Stations and 4 Diversion Structures</p>	<p>Moulton Niguel Water District Todd Dmytryshyn 949/425-3549</p> <p>Multiple Lift Stations</p>
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SCHEDULE

Tetra Tech has reviewed current and planned workload schedules for our project team, and are available to immediately begin work on this project. The following is a summary of our significant milestones:

Milestone	Date (assuming NTP by Mid-March 2023)
Draft Condition Assessment Report	End of June 2023
Draft Technical Memo (Evaluations)	Mid-July 2023
Draft PDR	Mid-August 2023
Final PDR	Mid-September 2023

PRICING

Attached Fee Spreadsheet presents the estimate of hours and budget to complete the work in accordance with the Scope of Services provided within the RFP and within this proposal. The budget includes all costs required to complete the work requested by the RFP. We have also attached our Hourly Rate Schedule for 2023.

MISCELLANEOUS ITEMS

Tetra Tech certifies that it is not aware of any actual or potential conflict of interest that exists or may arise by executing the contract or performing the work that is the subject of this proposal.

Attached to the proposal is signed Attachment B (Non-Collusion Affidavit).

Tetra Tech certifies that it is willing and able to obtain all insurance required by the form contract included as Attachment C.

Tetra Tech certifies that it has conducted a reasonable and diligent inquiry concerning the minimum and/or prevailing wages required to be paid in connection with the performance of the work for this proposal.

Tetra Tech certifies that the proposed pricing includes sufficient funds to allow Tetra Tech to comply with all applicable local, state, and federal laws or regulations governing the labor or services to be provided.

Tetra Tech acknowledges and agrees with all terms and conditions stated in the RFP and certifies that all information provided in connection with our proposal is true, complete and correct.

Price Proposal																	Price Summary / Totals								
CTP DPS Rehabilitation Preliminary Design																	Task Pricing Totals		284,000						
																	Specify Add'l Fees on Setup		0						
																	Technology Use Fee								
Submitted to: South Orange County Wastewater Authority Attn: Jeanette Cotinola, Procurement/Contracts Manager																	Total Price				284,000				
Contract Type: T&M																	Pricing by Resource								
																	Labor Rate Esc.		Labor		ODCs		Task Pricing Totals		
Project Phases / Tasks		Total Labor Hrs	Program Manager (Tom Epperson)	Project Manager 2 (Neha Gajjar)	Project Engineer 2 (Matt Vera)	Engineer 3 (Jamie McEvea)	Engineer 2 (Samuel Ortiz)	Sr Project Administrator (Deana Escamilla)	Sr Project Manager (Mazen Kassar)	Project Engineer 2 (Doug Seaman)	Engineer 2 (Johnson Le)	Project Manager 1 (Eric Yuen)	Project Engineer 1 (Jose Quiroz)	Sr CAD Designer 2 (Eric Hutchins)	Senior Project Manager (Senior Project Manager)	Project Manager (Project Manager)	Associate Engineer (Associate Engineer)	Graduate Engineer (Graduate Engineer)	0.00%						
Task 1: Project Management and Progress Meetings		108	18	34	18	6			8						8	8	8					29,072	128	29,200	
PM (6 months)		18	6	12																			5,460		5,460
Meetings (Kickoff and 9 progress meetings)		66	10	14	10				8						8	8	8						18,452	128	18,580
Project Schedule		8			2	6																	1,140		1,140
Bi-weekly status e-mails/monthly invoice (12/6)		16	2	8	6																		4,020		4,020
Task 2: Data Collection and Document Review		112	4		20	24	16		12	20	16												19,060	140	19,200
Document and operating data review		44	4		12	12	8		4	4													7,980		7,980
Two site visits		68			8	12	8		8	16	16												11,080	140	11,220
Task 3: Wet Well Condition Assessment		183													8	57	64	54					44,126	14,774	58,900
Health & Safety Plan		35													1	13	21						8,973		8,973
Wet Well Condition Assessment		41													2	13	13	13					9,887	14,774	24,661
Influent Force Main Condition Assessment		40													2	13		25					9,170		9,170
Condition Assessment Report		67													3	18	30	16					16,096		16,096
Task 4: Preliminary Evaluations		290	10	4	56	84	48		24	24	8	8	24										49,380	120	49,500
Wet Well Rehabilitation Plan		29	1		4	8						4	12										4,950		4,950
Compliance Evaluation (NFPA 820)		65	1		8				24	24	8												14,350	44	14,394
Containment Wall Plan		61	1	4	8	16	16					4	12										9,670		9,670
Pump Alternatives		21	1		8	12																	3,350		3,350
Discharge Piping Modifications		25	1		8	8	8																3,750		3,750
Influent Force Main Condition Assessment Plan		13	1		4	8																	2,110		2,110
Bypassing and Construction Sequencing		34	2		8	16	8																5,140	34	5,174
Relocating BPS to Alternative Site		42	2		8	16	16																6,060	42	6,102
Task 5: Preliminary Evaluations Memo and Workshop		116	6	12	20	8	8		20	24	8	2	8										24,100	100	24,200
Preliminary Evaluation Memo		102	4	8	16	8	8		16	24	8	2	8										20,340		20,340
Workshop		14	2	4	4				4														3,760	100	3,860
Task 6: Conceptual Design and Layout		434	8		52	96	72		24	64	88	2	12	16									66,580	20	66,600
Conceptual Design of DPS: layout		37	1		8	16	12																5,250		5,250
Conceptual Design of DPS: Sections		21	1		4	8	8																3,030		3,030
Recommended Siting of DPS		33	1		8	12	12																4,730		4,730
Containment Wall Plan and Details		41	1		8	16	16																5,710		5,710
Site Drainage		41	1		8	16	16																5,710		5,710
Bypass and Sequence Plan		29	1		8	12	8																4,270	20	4,290
Major Equipment		58	2		8	16			8	16	8												10,460		10,460
Building Upgrades		22										2	8	12									3,480		3,480
Structural Details - wall, sumps, etc.		8											4	4									1,220		1,220
Electrical Sheets to 30% level (8 sheets)		144							16	48	80												22,720		22,720
Task 7: Cost Estimate		68	8	4	12	12	8		4	8	8	2	2										12,920	80	13,000
Construction Cost Estimate		56	4		8	12	8		4	8	8	2	2										9,680	80	9,760
Design Fee/Construction Engineering/CM		12	4	4	4																		3,240		3,240
Task 8: Preliminary Design Report		134	6	6	22	30	18	8	8	16	8	4	8										23,230	170	23,400
Preliminary Design Report		116	6	6	18	22	14	6	8	16	8	4	8										20,740		20,740
Processing of PDR		18			4	8	4	2															2,490	170	2,660
Totals		1,445	60	60	200	260	170	8	100	156	136	18	54	16	16	65	72	54	0.00%	268,468	15,532		284,000		284,000



2023

HOURLY CHARGE RATE AND EXPENSE REIMBURSEMENT SCHEDULE

Project Management

Project Manager 1	\$230.00
Project Manager 2	\$280.00
Sr Project Manager	\$305.00
Program Manager	\$350.00
Principal in Charge	\$350.00

Engineers

Engineering Technician	\$80.00
Engineer 1	\$105.00
Engineer 2	\$115.00
Engineer 3	\$130.00
Project Engineer 1	\$160.00
Project Engineer 2	\$180.00
Sr Engineer 1	\$200.00
Sr Engineer 2	\$210.00
Sr Engineer 3	\$220.00
Principal Engineer	\$300.00

Planners

Planner 1	\$105.00
Planner 2	\$115.00
Sr Planner 1	\$125.00
Sr Planner 2	\$150.00
Sr Planner 3	\$175.00

Designers & Technicians

CAD Technician 1	\$65.00
CAD Technician 2	\$75.00
CAD Technician 3	\$90.00
CAD Designer	\$100.00
Sr CAD Designer 1	\$135.00
Sr CAD Designer 2	\$145.00
CAD Director	\$150.00
Survey Tech 1	\$50.00

Health & Safety

H&S Administrator	\$95.00
Sr H&S Administrator	\$115.00
H&S Manager	\$145.00

Construction

Construction Project Rep 1	\$78.00
Construction Project Rep 2	\$85.00
Sr Constr Project Rep 1	\$100.00
Sr Constr Project Rep 2	\$115.00
Construction Manager 1	\$165.00
Construction Manager 2	\$185.00
Construction Director	\$233.00

General & Administrative

Project Assistant 1	\$70.00
Project Assistant 2	\$75.00
Project Administrator	\$95.00
Sr Project Administrator	\$135.00
Sr. Graphic Artist	\$150.00
Technical Writer 1	\$97.00
Technical Writer 2	\$124.00
Sr Technical Writer	\$155.00

Information Technology

Systems Analyst / Programmer 1	\$77.00
Systems Analyst / Programmer 2	\$115.00
Sr Sys Analyst / Programmer 1	\$130.00
Sr Systems Analyst / Programmer 2	\$196.00

Project Accounting

Project Analyst 1	\$90.00
Project Analyst 2	\$114.00
Sr Project Analyst	\$155.00

Reimbursable In-House Costs:

Photo Copies (B&W 8.5"x11")	\$ 0.15/Each
Photo Copies (B&W 11"x17")	\$ 0.40/Each
Color Copies (up to 8.5"x11")	\$ 2.00/Each
Color Copies (to 11"x17")	\$ 3.00/Each
Compact Discs	\$10/each
Large format copies	\$0.40 S.F.

Mileage-Company Vehicle	\$0.80/mile
Mileage-POV	\$0.55/mile*

*current GSA POV mileage rate subject to change

All other direct costs, such as production, special photography, postage, delivery services, overnight mail, printing and any other services performed by subconsultant will be billed at cost plus 15%.

APPENDIX

Resumes

Education

BS, Environmental Engineering, University of California, Irvine, 1978

Registration

Professional Civil Engineer, California, No. 36399, 1983

Years of Experience

41

Years with Tetra Tech

30

Tom Epperson, PE Project Manager

Mr. Epperson has more than 41 years of professional experience in water, wastewater, and reclaimed water engineering. Tom has been responsible for the preparation of water, wastewater, and reclaimed water master plans; project design reports for various water, wastewater, and reclaimed water facilities; and the planning and design of water, wastewater, and reclaimed water pipelines, along with pump stations and reservoirs.

Mr. Epperson's experience includes completing the design, bidding, and construction management of over 200 miles of water/reclaimed water/sewer mains, 36 water/reclaimed water pump stations, 18 wellhead facilities, 12 sewer lift stations, and 25 water and reclaimed water storage

reservoirs throughout Southern California.

PROJECT EXPERIENCE

Regional Lift Station Force Main Replacement, Moulton Niguel Water District. Project Manager. Provided engineering services for the replacement of approximately 15,000 linear feet of 20-inch and 24-inch Techite sewer force main within Laguna Niguel Regional Park. Regional Lift Station and Force Mains are critical wastewater facilities that pump flow from MNWD sewer collection system to South Orange County Wastewater Authority Regional Treatment Plant. The replacement force main consists of dual 24-inch pipeline approximately 8,000 feet length and will be constructed within Laguna Niguel Regional Park. Scope of services include preliminary design, final design and construction phase services.

Oso Lift Station Improvement Project, El Toro Water District. Mr. Epperson is the project manager providing engineering services for the relocation of the existing lift station to a new property within Laguna Woods. The work includes a preliminary analysis of sewer flows for the basis of design, evaluating pumps to select the most efficient for the lift station demands, configuring the site to accommodate new construction while the existing remains in service, evaluating on-site storage and response times, considering odor control alternatives and converting the existing wet well into an emergency storage basin.

San Lorenzo Sewage Lift Station, City of Santa Ana. Project Manager. Prepared plans, specifications, and cost estimates to construct a new sewer lift station on San Lorenzo Avenue within the City of Santa Ana. The improvements included a wet well, dry well, three variable frequency drive pumps, aboveground CMU block control room, emergency generator, hardscape and landscape improvements and approximately 1,300 linear feet of new sewer main.

Lower Salada Lift Station Rehabilitation, Moulton Niguel Water District. Project Manager. Design and construction of a rehabilitation of the Lower Salada Lift Station, including rehab of the existing wet well and replacement of existing valves.

Coastal Ridge Lift Station, Irvine Ranch Water District. Project Manager. Design of a 260 gpm lift station with a required lift of approximately 285 feet. The project included the design of a wet well, dry well pump room, and meter vault.

Regional Lift Station Force Main Replacement Study, Moulton Niguel Water District. Project Manager for the preparation of the Regional Lift Station Force Main Replacement Study which included: developing design criteria; trenchless rehabilitation of the existing force mains; alternative alignments; hydraulic analysis; impacts of each alternative on the existing lift station; selection of the recommended alternative; summary of creek crossings, construction issues, and regulatory issues; and preliminary cost estimates and schedule for the force main replacement.

Education

BS, Civil Engineering,
University of California at
Berkeley, 1991

Registration

Professional Civil
Engineer, California, No.
55574, 1996

Years of Experience

30

Years with Tetra Tech

4

Neha Gajjar, PE

Assistant Project Manager

Ms. Gajjar has more than 30 years of professional experience providing project management, planning, and design of water transmission, distribution, and storage facilities projects. Neha has significant experience preparing plans and specifications for water/sewer mains, storm drains, pipelines, and has an intimate understanding of these requirements for many municipalities. Ms. Gajjar's responsibilities as engineering lead include establishing design parameters, managing project schedules, and handling required appropriate technical resources necessary for each project.

PROJECT EXPERIENCE

Upper Salada Sewer Lift Station, Moulton Niguel Water District, Laguna

Niguel, CA. Project Manager. Assumed position of Project Manager after preliminary design report was complete. Duties included coordination with MNWD to assess a new scope for the project based on current needs, preparation of plans and specifications to install a permanent generator on site, including documentation (plats and legal descriptions) for the District to use in acquiring portions of adjacent property, coordination and research at OCFA to determine the latest setback requirements and establishing the optimal location for the facilities to meet state and federal guidelines.

Washington Well Drilling Phase 2, Drilling and CEQA, City of Santa Ana, CA. Project Manager. Design included drilling and equipping plans of a new well within a vacant City property near the intersection of Washington/Penn. The first phase of the project identified the drill location and facility configuration within the lot. This is the second phase and focuses on the final well site layout and renderings for the new well facility. The work also includes coordination with environmental and cultural requirements in advance of any drilling efforts.

La Palma Avenue and Tustin Avenue Watermain Replacements at OCTA Crossing, City of Anaheim, CA. Project Manager. The OCTA planned to construct an additional railroad track for the Metrolink within its existing right-of-way as part of the Anaheim Canyon Station Metrolink Project. The new tracks cross City of Anaheim water mains at La Palma Avenue and Tustin Avenue and therefore the mains must be rerouted and placed within a steel casing. Tetra Tech prepared plans and specifications to replace the existing 36-inch CCP with a 36-inch steel in a 48-inch steel casing in La Palma Avenue, the existing 12-inch CIP with a 12-inch DIP in a 24-inch steel casing in La Palma Avenue, and the existing 12-inch CIP with a 12-inch DIP in a 24-inch steel casing in Tustin Avenue. The project also included coordination with OCTA.

1951 Cohort Pipeline Replacement Design, Mesa Water District, Costa Mesa CA. Project Manager. Mesa Water District wishes to upgrade existing 4-inch to 8-inch CML&C steel pipelines within its jurisdiction that was originally part of Fairview County Water District at acquisition in 1950. The existing facilities were built in 1951 and currently has break rates and is thus part of Mesa Water's CIP replacement program. The project consists of about 22,000 linear feet of pipe replacement within the City of Costa Mesa, including replacement of existing 1-inch/2-inch services lines, meter boxes and outdated "dry barrel" fire hydrants. We are preparing the design documents for these replacements.

Spinnaker Bay Drive Water Main Replacement Phase 2, Long Beach Water Department, Long Beach, CA. Project Manager. LBWD is replacing corroded ductile iron water mains installed in the 1980s with PVC pipe material within the Spinnaker Bay neighborhood. Prepared design documents for about 2,500 linear feet of 8-inch and 12-inch pipe, including domestic service reconnections, associated new valves and new fire hydrants.

Education

BS, Civil Engineering,
University of California,
Irvine, 2013

Registration

Professional Civil Engineer,
California, No. 86663, 2016

Years of Experience

10

Years with Tetra Tech

5

Matt Vera, PE

Project Engineer

Mr. Vera has provided design engineering in various water and wastewater projects including domestic and reclaimed water pipelines, gravity sewer mains, sewer main rehabilitations, pump stations, lift stations, wells, flow control facilities, and pressure reducing valve vaults. Responsibilities have included preparation of construction plans, specifications, and design calculations; assisted supervisors in preparing project reports and memorandums.

PROJECT EXPERIENCE

Regional Lift Station Force Main Replacement, Moulton Niguel Water

District. Project Engineer providing engineering services for the replacement of approximately 15,000 linear feet of 20-inch and 24-inch Techite sewer force main with Laguna Niguel Regional Park. Regional Lift Station and Force Mains are critical wastewater facilities that pump flow from MNWD sewer collection system to South Orange County Wastewater Authority Regional Treatment Plant. The replacement force main consists of dual 24-inch pipeline approximately 8,000 feet length and will be constructed with Laguna Niguel Regional Park. Scope of services include preliminary design, final design and construction phase services.

Regional Treatment Plant Southerly Influent Sewer Improvements, Moulton Niguel Water District. Design Engineer for the modification and rehabilitation of to the southerly influent sewers for South Orange County Wastewater Authority's Regional Treatment Plant. The project consisted of the demolition and replacement of the existing influent structures to consolidate flows into the plant, the rehabilitation of approximately 700 LF of existing 36-inch diameter sewers with cured-in-place pipe lining, the installation of a new cast-in-place diversion structure and the rehabilitation of the existing 72-inch manholes. A flow metering structure and flow metering equipment were also added to the influent sewers to allow for more accurate pre-treatment chemical dosing. Site improvements were made to improve egress and ingress for the District including the addition of a supplemental access gate and access road. Conceptual bypass plans and construction sequence were of key importance as the Regional Treatment Plant influent sewers cannot be off-line.

2018-2019 Reservoir Management Systems Replacement, Moulton Niguel Water District. Project Engineer for a bulk sodium hypochlorite dosing system at five of its 20 potable water reservoir sites. This project was third phase of the District's system-wide improvements to standardize its chemical facility buildings and equipment types. The improvements consisted of the removal of the existing ClorTec facility and construction of a reservoir management system (RMS) building with separate ammonia and sodium hypochlorite rooms, including chemical tanks, metering pumps, reservoir mixers, piping to and from the reservoirs, spill containment, emergency shower and eyewashes, return mixing pumps and grading to ensure the new building lies seamlessly within the existing on-site facilities.

Crown Valley Pipeline Replacement, Moulton Niguel Water District. Project Engineer for the replacement of the I.D. No. 1 Master Meter and the accompanying interconnecting piping between the South Coast Water District's Joint Transmission Main and the MNWD's proposed Crown Valley Transmission Main. The Crown Valley Pipeline Replacements Project consists of three components: Lower Salada Lift Station Force Main Replacement (approximately 9,400 LF of dual force mains), Crown Valley Parkway Transmission Main Lower Reach Replacement (approximately 9,700 LF of transmission main), and I.D. No. 1 Master Meter Relocation. The Master Meter Relocation consists of existing utility relocations; new below-grade vault; new mechanical piping and appurtenances; retaining wall; 16-inch steel piping; site grading; miscellaneous electrical and SCADA improvements.

Education

BS, Civil Engineering,
California State Polytechnic
University, Pomona, 2007

MS, Structural Engineering,
California State Polytechnic
University Pomona, 2016

Registrations

Professional Civil Engineer,
California, No. 75983, 2009

Professional Structural
Engineer, California,
No. 6177, 2014

Years of Experience

16

Years with Tetra Tech

16

Eric Yuen, PE, SE

Structural Design

Mr. Yuen has more than 16 years of experience in the design, analysis and detailing in structural engineering. Eric is knowledgeable in reinforced concrete, masonry, structural steel and wood frame design, and construction for a variety of building and infrastructure projects including reservoirs, water/wastewater treatment facilities, as well as seismic retrofit of existing structures.

PROJECT EXPERIENCE

Regional Lift Station Force Main Replacement, Moulton Niguel Water District. Structural Project Engineer providing engineering services for the replacement of approximately 15,000 linear feet of 20-inch and 24-inch Techite sewer force main with Laguna Niguel Regional Park. Regional Lift Station and Force Mains are critical wastewater facilities that pump flow from MNWD sewer collection system to South Orange County Wastewater Authority Regional Treatment Plant. The replacement force main consists of dual 24-inch pipeline approximately 8,000 feet length and will be constructed

with Laguna Niguel Regional Park. Scope of services include preliminary design, final design and construction phase services.

Burris Pump Station, Orange County Water District. Structural Project Engineer. Design of the new Burris Pump Station which consists of four 1,750 horsepower vertical turbine pumps delivering a maximum flow rate of 200 cfs to the Santiago Basins from Burris Basin. Work consisted of reviewing the existing Burris Pump Station Evaluation Report, assisting OCWD with selecting a replacement option, performing final design of the selected option and providing bid and construction phase services. The project also includes unique designs, such as 190,000 cubic yards of earthwork to be completed prior to pump station construction, the construction of a 55-foot diameter by 55-foot-high circular wet well which was computer and physically modeled during design for flow characteristics, and the construction of an 180,000-gallon surge suppression system.

Timber Ridge Booster Pump Station Replacement, Yorba Linda Water District. Structural Project Manager. Project includes engineering planning, design and construction-phase services for the replacement of an existing 35-year old booster pump station. The District contracted Tetra Tech to design and construct a new CMU block pump station building; replace the existing gas engine pump and enclosure with a new electric driven pump/motor with the same or greater rated capacity; install an emergency natural gas engine driven generator set; install two bladder tanks for surge protection for the 1000 Zone and 1300 Zone; replace existing direct buried mag meters on the 1300 Zone and 1160 Zone discharge piping with above ground meters; and replace and upgrade the existing electrical equipment.

Fleming Zone 8 Tank and Zone 8 to 9 Booster Pump Station Demolition and Replacement, Irvine Ranch Water District. Structural Project Manager. Engineering design services for demolition and replacement of an existing above ground 0.15 MG Zone 8 steel tank and Zone 8 to 9 pump station consisting of two 600 gpm vertical turbine pumps each equipped with a 60 horsepower motor. The Fleming pump station site also contains an existing administrative building with a conference room and restroom, two storage buildings, and an AT&T cellular antenna facility. Services also include storage building replacement; reservoir management system building with sodium hypochlorite and aqueous ammonia storage and feed systems and an "in-tank" chemical injection and mixing system; a 2,000 gallon diesel fuel storage tank and dispensing system; and site electrical service, controls, and telemetry improvements.

Education

BS, Electrical Engineering,
California State University,
Long Beach, 1990

Registrations

Professional Electrical
Engineer, California,
No. 15809, 1998

General Construction,
Class B, California,
No. 777845, 2008

Years of Experience

31

Years with Tetra Tech

14

Mazen Kassar, PE

Electrical/Controls

Mr. Kassar has more than 31 years of experience in electrical engineering and industry standards that include electrical engineering staff management, project management, construction management and supervision, water and wastewater treatment, petro-chemical design, and environmental soil and groundwater treatment. Mazen's background includes designing medium and low voltage power distribution, instrumentation design, control systems and SCADA systems for a wide variety of projects, and the installation of electrical systems for remediation projects, including soil vapor extraction systems, and groundwater pump and-treat systems.

PROJECT EXPERIENCE

Regional Lift Station Force Main Replacement, Moulton Niguel Water District. Electrical Project Manager providing engineering services for the replacement of approximately 15,000 linear feet of 20-inch and 24-inch Techite sewer force main within Laguna Niguel Regional Park. Regional Lift Station and Force Mains are critical wastewater facilities that pump flow from MNWD sewer collection system to South Orange County Wastewater Authority Regional Treatment Plant. The replacement force main consists of dual 24-inch pipeline approximately 8,000 feet length and will be constructed within Laguna Niguel Regional Park. Scope of services include preliminary design, final design and construction phase services.

San Lorenzo Sewage Lift Station, City of Santa Ana. Electrical Project Manager. San Lorenzo Sewage Lift Station improvements include a wet well, dry well, three variable frequency drive pumps, aboveground CMU block control room, emergency generator, hardscape and landscape improvements, and approximately 1,300 linear feet of new sewer main. As the Electrical Engineer Mr. Kassar performed electrical power system studies that included load flow, short circuit, and arc flash calculations.

Maxine Lift Station Bypass Connection, City of Santa Ana. Electrical Project Manager. The purpose of the Maxine Lift Station Bypass Connection Project was to install a connection on the existing force main that would allow the City to bypass sewer flows around the existing lift station utilizing a portable pump from the existing wet well to the force main. Managed the electrical power system studies which included load flow, short circuit, and arc flash calculations.

Burriss Pump Station, Orange County Water District. Electrical Engineer for the design of the new Burriss Pump Station which consists of four 1,750 horsepower vertical turbine pumps delivering a maximum flow rate of 200 cfs to the Santiago Basins from Burriss Basin. Work consists of reviewing the existing Burriss Pump Station Evaluation Report, assisting OCWD with selecting a replacement option, performing final design of the selected option and providing bid and construction phase services. The project also includes unique designs, including 190,000 cubic yards of earthwork to be completed prior to pump station construction, the construction of a 55-foot diameter by 55-foot-high circular wet well which was computer and physically modeled during design for flow characteristics, and the construction of an 180,000-gallon surge suppression system.

Package 1 Sewer Lift Station Improvements, NAVFAC Southwest, Marine Corps Base, Camp Pendleton. Lead Electrical Engineer for the Package 1 sewer lift station improvements project includes providing all design-build services to upgrade nine existing lift stations. The design of the upgrades includes the addition of emergency generators and communication connections to NAVFAC's Unity system, as well as designing and installing site lighting. At two of the existing lift stations, new grinders were designed to replace an existing one. The project included design of plans and specifications.

**ATTACHMENT B
NON-COLLUSION AFFIDAVIT**

The undersigned declares:

I am the Vice President of Tetra Tech, Inc., the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on 1/26/23 [date], at Irvine [city], CA [state].

Signature: 

Title: Vice President

Price Proposal																	Price Summary / Totals			
CTP DPS Rehabilitation Conceptual Design																	Task Pricing Totals		176,000	
																	Specify Add'l Fees on Setup		0	
Submitted to: South Orange County Wastewater Authority Attn: Jeanette Cotinola, Procurement/Contracts Manager																	Technology Use Fee			
Contract Type: T&M																	Total Price		176,000	
REVISD FEE FOR CONCEPTUAL DESIGN TASKS ONLY																	Pricing by Resource			
																	Labor Rate Esc.	Labor	ODCs	Task Pricing Totals
Project Phases / Tasks																	0.00%	160,863	15,137	176,000
Bill Rate >																				
Proj Area >																				
350.00 280.00 180.00 130.00 115.00 135.00 305.00 180.00 115.00 230.00 160.00 145.00 322.00 302.00 225.00 184.00																				
Civil/Mechanical Project Management Civil/Mechanical Civil/Mechanical Civil/Mechanical Civil/Mechanical Electrical/Controls Electrical/Controls Electrical/Controls Structural Structural Structural V&A V&A V&A V&A																				
Program Manager (Tom Epperson) Project Manager 2 (Neha Gajjar) Project Engineer 2 (Matt Vera) Engineer 3 (Jamie McElyea) Engineer 2 (Samuel Ortiz) Sr Project Administrator (Deana Escamilla) Sr Project Manager (Mazen Kassar) Project Engineer 2 (Doug Seaman) Engineer 2 (Johnson Le) Project Manager 1 (Eric Yuen) Project Engineer 1 (Jose Quiroz) Sr CAD Designer 2 (Eric Hutchins) Senior Project Manager (Senior Project Manager) Project Manager (Project Manager) Associate Engineer (Associate Engineer) Graduate Engineer (Graduate Engineer)																				
Total Labor Hrs																				
866																				
Task 1: Project Management/Progress Meetings																				
PM (4 months)																				
Meetings (Kickoff and 6 progress meetings)																				
Project Schedule																				
Bi-weekly status e-mails/monthly invoice (8/4)																				
Task 2: Data Collection and Document Review																				
Document and operating data review																				
Two site visits																				
Task 3: Wet Well Condition Assessment																				
Health & Safety Plan																				
Wet Well Condition Assessment																				
Influent Force Main Condition Assessment																				
Condition Assessment Report																				
Task 4: Preliminary Evaluations																				
Wet Well Rehabilitation Plan																				
Compliance Evaluation (NFPA 820)																				
Containment Wall Plan																				
Pump Alternatives																				
Discharge Piping Modifications																				
Influent Force Main Condition Assessment Plan																				
Bypassing and Construction Sequencing																				
Relocating BPS to Alternative Site																				
Task 5: Preliminary Evaluation Memo and Workshop																				
Preliminary Evaluation Memo																				
Workshop																				
Task 6: Preliminary Design and Layout																				
Conceptual Design of DPS: layout																				
Conceptual Design of DPS: Sections																				
Recommended Siting of DPS																				
Containment Wall Plan and Details																				
Site Drainage																				
Bypass and Sequence Plan																				
Major Equipment																				
Building Upgrades																				
Structural Details - wall, sumps, etc.																				
Electrical Sheets to 30% level (8 sheets)																				
Task 7: Final Memo and Cost Estimate																				
Construction Cost Estimate																				
Finalize Memo																				
Task 8: Preliminary Design Report																				
Preliminary Design Report																				
Processing of PDR																				
Totals																	0.00%	160,863	15,137	176,000