



SPECIAL NOTICE
PUBLIC ATTENDANCE & PARTICIPATION AT PUBLIC MEETINGS
Operations Committee Meeting
Wednesday, June 7, 2023
5:00 p.m.

Your participation is always welcome. OC San offers several ways in which to interact during meetings. You will find information as to these opportunities below.

IN-PERSON MEETING ATTENDANCE

You may attend the meeting in-person at the following location:

Orange County Sanitation District
Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708

ONLINE MEETING PARTICIPATION

You may join the meeting live via Teams on your computer or similar device or web browser by using the link below:

[Click here to join the meeting](#)

We suggest testing joining a Teams meeting on your device prior to the commencement of the meeting. For recommendations, general guidance on using Teams, and instructions on joining a Teams meeting, [please click here](#).

Please mute yourself upon entry to the meeting. Please raise your hand if you wish to speak during the public comment section of the meeting. The Clerk of the Board will call upon you by using the name you joined with.

Meeting attendees are not provided the ability to make a presentation during the meeting. Please contact the Clerk of the Board at least 48 hours prior to the meeting if you wish to present any items. Additionally, camera feeds may be controlled by the meeting moderator to avoid inappropriate content.

HOW TO PARTICIPATE IN THE MEETING BY TELEPHONE

To join the meeting from your phone: Dial (213) 279-1455
When prompted, enter the Phone Conference ID: 790 755 750#

All meeting participants may be muted during the meeting to alleviate background noise. If you are muted, please use *6 to unmute. You may also mute yourself on your device.

Please raise your hand to speak by use *5, during the public comment section of the meeting. The Clerk of the Board will call upon you by using the last 4 digits of your phone number as identification.

NOTE: All attendees will be disconnected from the meeting at the beginning of Closed Session. If you would like to return to the Open Session portion of the meeting, please login or dial-in to the Teams meeting again and wait in the Lobby for admittance.

WATCH THE MEETING ONLINE

The meeting will be available for online viewing at:

<https://ocsd.legistar.com/Calendar.aspx>

SUBMIT A COMMENT

You may submit your comments and questions in writing for consideration in advance of the meeting by using the eComment feature available online at: <https://ocsd.legistar.com/Calendar.aspx> or sending them to OCSanClerk@ocsan.gov with the subject line "PUBLIC COMMENT ITEM # (insert the item number relevant to your comment)" or "PUBLIC COMMENT NON-AGENDA ITEM".

You may also submit comments and questions for consideration during the meeting by using the eComment feature available online at: <https://ocsd.legistar.com/Calendar.aspx>. The eComment feature will be available for the duration of the meeting.

All written public comments will be provided to the legislative body and may be read into the record or compiled as part of the record.

For any questions and/or concerns, please contact the Clerk of the Board's office at 714-593-7433. Thank you for your interest in OC San!

May 31, 2023

NOTICE OF REGULAR MEETING

**OPERATIONS COMMITTEE
ORANGE COUNTY SANITATION DISTRICT**

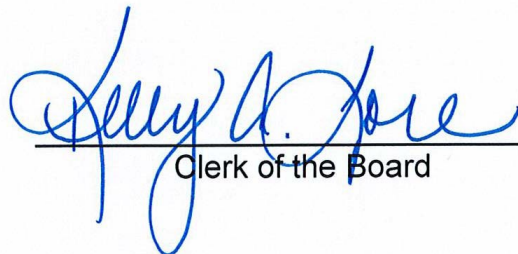
Wednesday, June 7, 2023 – 5:00 P.M.

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708

ACCESSIBILITY FOR THE GENERAL PUBLIC

Your participation is always welcome. Specific information as to how to participate in this meeting is detailed on the Special Notice attached to this agenda. In general, OC San offers several ways in which to interact during this meeting: you may participate in person, join the meeting live via Teams on your computer or similar device or web browser, join the meeting live via telephone, view the meeting online, and/or submit comments for consideration before or during the meeting.

The Regular Meeting of the Operations Committee of the Orange County Sanitation District will be held at the above location and in the manner indicated on Wednesday, June 7, 2023 at 5:00 p.m.



Clerk of the Board

Serving:

Anaheim

Brea

Buena Park

Cypress

Fountain Valley

Fullerton

Garden Grove

Huntington Beach

Irvine

La Habra

La Palma

Los Alamitos

Newport Beach

Orange

Placentia

Santa Ana

Seal Beach

Stanton

Tustin

Villa Park

County of Orange

Costa Mesa
Sanitary District

Midway City
Sanitary District

Irvine Ranch
Water District

Yorba Linda
Water District

OPERATIONS COMMITTEE MEETING DATE	BOARD MEETING DATE
06/07/23	06/28/23
07/05/23	07/26/23
AUGUST DARK	08/23/23
09/06/23	09/27/23
10/04/23	10/25/23
11/01/23	11/15/23 *
12/06/23	12/14/23 **
JANUARY DARK	01/24/24
02/07/24	02/28/24
03/06/24	03/27/24
04/03/24	04/24/24
05/01/24	05/22/24

**** Meeting will be held on the third Wednesday of the month***

***** Meeting will be held on the second Thursday of the month***

ROLL CALL

OPERATIONS COMMITTEE Engineering and Operations & Maintenance

Meeting Date: June 7, 2023

Time: 5:00 p.m.

Adjourn: _____

COMMITTEE MEMBERS (14)

Marshall Goodman (Chair)	
Bob Ooten (Vice-Chair)	
Brad Avery	
Doug Chaffee	
Jon Dumitru	
Stephen Faessel	
Phil Hawkins	
Johnathan Ryan Hernandez	
Steve Jones	
Scott Minikus	
Schelly Sustarsic	
Bruce Whitaker	
Chad Wanke (Board Chair)	
Ryan Gallagher (Board Vice-Chair)	

OTHERS

Brad Hogin, General Counsel	
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STAFF

Rob Thompson, General Manager	
Lorenzo Tyner, Assistant General Manager	
Mike Dorman, Acting Director of Engineering	
Laura Maravilla, Director of Human Resources	
Riaz Moinuddin, Director of Operations & Maintenance	
Wally Ritchie, Director of Finance	
Lan Wiborg, Director of Environmental Services	
Kelly Lore, Clerk of the Board	

ORANGE COUNTY SANITATION DISTRICT
BOARD OF DIRECTORS
Complete Roster

Effective 03/13/2023

AGENCY/CITIES	ACTIVE DIRECTOR	ALTERNATE DIRECTOR
Anaheim	Stephen Faessel	Natalie Meeks
Brea	Christine Marick	Cecilia Hupp
Buena Park	Susan Sonne	Art Brown
Cypress	Scott Minikus	Bonnie Peat
Fountain Valley	Glenn Grandis	Ted Bui
Fullerton	Bruce Whitaker	Nick Dunlap
Garden Grove	Steve Jones	John O'Neill
Huntington Beach	Pat Burns	Gracey Van Der Mark
Irvine	Farrah N. Khan	Tammy Kim
La Habra	Rose Espinoza	Jose Medrano
La Palma	Marshall Goodman	Debbie Baker
Los Alamitos	Jordan Nefulda	Emily Hibard
Newport Beach	Brad Avery	Erik Weigand
Orange	Jon Dumitru	John Gyllenhammer
Placentia	Chad Wanke	Ward Smith
Santa Ana	Johnathan Ryan Hernandez	Benjamin Vazquez
Seal Beach	Schelly Sustarsic	Nathan Steele
Stanton	David Shawver	Carol Warren
Tustin	Ryan Gallagher	Austin Lumbard
Villa Park	Robbie Pitts	Jordan Wu

Sanitary/Water Districts

Costa Mesa Sanitary District	Bob Ooten	Art Perry
Midway City Sanitary District	Andrew Nguyen	Mark Nguyen
Irvine Ranch Water District	John Withers	Douglas Reinhart
Yorba Linda Water District	Phil Hawkins	Tom Lindsey

County Areas

Board of Supervisors	Doug Chaffee	Donald P. Wagner
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OPERATIONS COMMITTEE
Regular Meeting Agenda
Wednesday, June 7, 2023 - 5:00 PM
Board Room
Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

ACCOMMODATIONS FOR THE DISABLED: If you require any special disability related accommodations, please contact the Orange County Sanitation District (OC San) Clerk of the Board's office at (714) 593-7433 at least 72 hours prior to the scheduled meeting. Requests must specify the nature of the disability and the type of accommodation requested.

AGENDA POSTING: In accordance with the requirements of California Government Code Section 54954.2, this agenda has been posted outside the main gate of the OC San's Administration Building located at 10844 Ellis Avenue, Fountain Valley, California, and on the OC San's website at www.ocsan.gov not less than 72 hours prior to the meeting date and time above. All public records relating to each agenda item, including any public records distributed less than 72 hours prior to the meeting to all, or a majority of the Board of Directors, are available for public inspection in the office of the Clerk of the Board.

AGENDA DESCRIPTION: The agenda provides a brief general description of each item of business to be considered or discussed. The recommended action does not indicate what action will be taken. The Board of Directors may take any action which is deemed appropriate.

MEETING RECORDING: A recording of this meeting is available within 24 hours after adjournment of the meeting at <https://ocsd.legistar.com/Calendar.aspx> or by contacting the Clerk of the Board at (714) 593-7433.

NOTICE TO DIRECTORS: To place items on the agenda for a Committee or Board Meeting, the item must be submitted in writing to the Clerk of the Board: Kelly A. Lore, MMC, (714) 593-7433 / klore@ocsan.gov at least 14 days before the meeting.

FOR ANY QUESTIONS ON THE AGENDA, BOARD MEMBERS MAY CONTACT STAFF AT:

General Manager: Rob Thompson, rthompson@ocsan.gov / (714) 593-7110
Asst. General Manager: Lorenzo Tyner, ltyner@ocsan.gov / (714) 593-7550
Director of Engineering: Mike Dorman, mdorman@ocsan.gov / (714) 593-7014
Director of Environmental Services: Lan Wiborg, lwiborg@ocsan.gov / (714) 593-7450
Director of Finance: Wally Ritchie, writchie@ocsan.gov / (714) 593-7570
Director of Human Resources: Laura Maravilla, lmavilla@ocsan.gov / (714) 593-7007
Director of Operations & Maintenance: Riaz Moinuddin, rmoinuddin@ocsan.gov / (714) 593-7269

CALL TO ORDER**PLEDGE OF ALLEGIANCE****ROLL CALL AND DECLARATION OF QUORUM:**

Clerk of the Board

PUBLIC COMMENTS:

Your participation is always welcome. Specific information as to how to participate in a meeting is detailed in the Special Notice attached to this agenda. In general, OC San offers several ways in which to interact during meetings: you may participate in person, join the meeting live via Teams on your computer or similar device or web browser, join the meeting live via telephone, view the meeting online, and/or submit comments for consideration before or during the meeting.

REPORTS:

The Chairperson and the General Manager may present verbal reports on miscellaneous matters of general interest to the Directors. These reports are for information only and require no action by the Directors.

CONSENT CALENDAR:

Consent Calendar Items are considered to be routine and will be enacted, by the Committee, after one motion, without discussion. Any items withdrawn from the Consent Calendar for separate discussion will be considered in the regular order of business.

1. APPROVAL OF MINUTES**[2023-3021](#)****RECOMMENDATION:**

Approve Minutes of the Regular meeting of the Operations Committee held May 3, 2023.

Originator: Kelly Lore

Attachments: [Agenda Report](#)
[05-03-2023 Operations Committee Minutes](#)

**2. INFLUENT PUMP STATION PLANT WATER PIPING REPAIR AT
PLANT NO. 2, PROJECT NO. FR2-0029****[2022-2619](#)****RECOMMENDATION:**

- A. Receive and file Bid Tabulation and Recommendation for Influent Pump Station Plant Water Piping Repair at Plant No. 2, Project No. FR2-0029;

B. Award a Construction Contract to W.A. Rasic Construction Company, Inc. for Influent Pump Station Plant Water Piping Repair at Plant No. 2, Project No. FR2-0029, for a total amount not to exceed \$177,063; and

C. Approve a contingency of \$35,400 (20%).

Originator: Mike Dorman

Attachments: [Agenda Report](#)
[FR2-0029 Contract Agreement](#)

3. ENGINEERING PROGRAM CONTRACT PERFORMANCE REPORT [2023-2849](#)

RECOMMENDATION: Recommend to the Board of Directors to:

Receive and file the Engineering Program Contract Performance Report for the period ending March 31, 2023.

Originator: Mike Dorman

Attachments: [Agenda Report](#)
[Engineering Program Contract Performance Report - Period Ending March 31, 2023](#)

**4. LIQUID OXYGEN (LOX) PURCHASE, SPECIFICATION NO. [2023-3001](#)
C-2023-1398BD**

RECOMMENDATION: Recommend to the Board of Directors to:

A. Approve a Chemical Supplier Agreement to Airgas USA, LLC for the purchase of liquid oxygen, Specification No. C-2023-1398BD for the period beginning August 21, 2023 through August 20, 2024, for a unit price of \$0.53 per centum cubic feet (ccf) delivered, plus applicable sales tax, for a total estimated annual amount of \$912,000; with four one-year renewal options; and

B. Authorize unit price adjustment of up to 15% annually using mutually acceptable price indices for subsequent agreement renewal periods.

Originator: Riaz Moinuddin

Attachments: [Agenda Report](#)
[Chemical Supplier Agreement C-2023-1398BD Airgas USA LLC](#)

5. MANHOLE REHABILITATION SERVICES, SPECIFICATION NO. S-2023-1391BD [2023-3022](#)

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve a General Services Contract to Ayala Engineering, Inc. to provide Manhole Rehabilitation Services, Specification No. S-2023-1391BD for a total amount not to exceed \$881,750 for the period beginning July 1, 2023 through June 30, 2024, with four one-year renewal options; and
- B. Approve an annual contingency of \$132,263 (15%).

Originator: Riaz Moinuddin

Attachments: [Agenda Report](#)
[Draft Contract - Ayala Engineering](#)

NON-CONSENT:

6. EPSA ELECTRICAL BUILDING AND DISTRIBUTION CENTER H HVAC SYSTEM REPLACEMENT AT PLANT NO. 2, PROJECT NO. SC22-01 [2023-2952](#)

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve a Purchase Order Contract to Trane U.S. Inc. for the EPSA Electrical Building and Distribution Center H HVAC System Replacement at Plant No. 2, Project No. SC22-01, utilizing the Omnia Cooperative Purchasing Agreement, Contract Number 3341, for a total amount not to exceed \$3,862,000; and
- B. Approve a contingency of \$386,200 (10%).

Originator: Mike Dorman

Attachments: [Agenda Report](#)
[SC22-01 Photos - Supplemental Attachment](#)

7. APPROVAL OF COOPERATIVE AGREEMENT WITH THE CITY OF FOUNTAIN VALLEY [2023-3005](#)

RECOMMENDATION: Recommend to the Board of Directors to:

Approve the Cooperative Agreement between Orange County Sanitation District and the City of Fountain Valley for installation of a traffic signal and authorize its execution and implementation.

Originator: Mike Dorman

Attachments: [Agenda Report](#)
[Fountain Valley Coop Agreement - Installation of Traffic Signal](#)
[Presentation - Mt. Langley Coop Agreement](#)

INFORMATION ITEMS:**8. FY 2023-24 BUDGET UPDATE PRESENTATION [2023-3004](#)****RECOMMENDATION:**

Information Item.

Originator: Wally Ritchie

Attachments: [Agenda Report](#)
[Presentation - Proposed FY 2023-24 Budget Update](#)

9. ORANGE COUNTY SANITATION DISTRICT ENVIRONMENTAL SERVICES LABORATORY AND OCEAN MONITORING UPDATE [2023-2997](#)**RECOMMENDATION:**

Information Item.

Originator: Lan Wiborg

Attachments: [Agenda Report](#)
[Presentation - Division 630](#)

10. STRATEGIC PLANNING - CORE VALUES [2023-3003](#)**RECOMMENDATION:**

Information Item.

Originator: Rob Thompson

Attachments: [Agenda Report](#)
[OC San Strategic Plan 2021](#)
[GM FY 2022-23 Work Plan](#)
[Presentation - Core Values](#)

DEPARTMENT HEAD REPORTS:**CLOSED SESSION:**

None.

OTHER BUSINESS AND COMMUNICATIONS OR SUPPLEMENTAL AGENDA ITEMS, IF ANY:**BOARD OF DIRECTORS INITIATED ITEMS FOR A FUTURE MEETING:**

At this time Directors may request staff to place an item on a future agenda.

ADJOURNMENT:

Adjourn the meeting until the Regular Meeting of the Operations Committee on July 5, 2023 at 5:00 p.m.



OPERATIONS COMMITTEE

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2023-3021

Agenda Date: 6/7/2023

Agenda Item No: 1.

FROM: Robert Thompson, General Manager
Originator: Kelly A. Lore, Clerk of the Board

SUBJECT:

APPROVAL OF MINUTES

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Approve Minutes of the Regular meeting of the Operations Committee held May 3, 2023.

BACKGROUND

In accordance with the Board of Directors Rules of Procedure, an accurate record of each meeting will be provided to the Directors for subsequent approval at the following meeting.

RELEVANT STANDARDS

- Resolution No. OC SAN 22-37

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Minutes of the Operations Committee meeting held May 3, 2023



CALL TO ORDER

A regular meeting of the Operations Committee of the Orange County Sanitation District was called to order by Committee Chairman Marshall Goodman on Wednesday, May 3, 2023 at 5:02 p.m. in the Administration Building of the Orange County Sanitation District.

ROLL CALL AND DECLARATION OF QUORUM:

The Clerk of the Board declared a quorum present as follows:

PRESENT: Doug Chaffee, Jon Dumitru, Ryan Gallagher, Marshall Goodman, Stephen Faessel, Johnathan Ryan Hernandez, Steve Jones, Robert Ooten, Schelly Sustarsic, Chad Wanke, Bruce Whitaker, Tom Lindsey (Alternate) and Bonnie Peat (Alternate)

ABSENT: Brad Avery

STAFF PRESENT: Rob Thompson, General Manager; Lorenzo Tyner, Assistant General Manager; Michael Dorman, Director of Engineering; Laura Maravilla, Director of Human Resources; Riaz Moinuddin, Director of Operations and Maintenance; Wally Ritchie, Director of Finance; Lan Wiborg, Director of Environmental Services; Kelly Lore, Clerk of the Board; Mo Abiodun; Jennifer Cabral; Tanya Chong; Raul Cuellar; Marianne DeGuzman; Thys DeVries; Brian Engeln; Justin Fenton; Al Garcia; Marianne Klein; Valerie Ratto; Don Stokes; Eros Yong; and Ruth Zintzun were present in the Board Room. Elisha Back; Martin Dix; Tina Knapp; Richard Leon; Diane Marzano; Rob Michaels; Giti Radvar; and Thomas Vu were present telephonically.

OTHERS PRESENT: Brad Hogin, General Counsel, and Jesus Gaona Perez were present in the Board Room.

PUBLIC COMMENTS:

None.

Clerk of the Board Kelly Lore announced late communication regarding Item Nos. 12 & 13 and stated that the documents were provided to the Committee and made available to the public today.

REPORTS:

Chair Goodman and General Manager Rob Thompson did not provide a report.

CONSENT CALENDAR:**1. APPROVAL OF MINUTES**[2023-2930](#)**Originator:** Kelly Lore

MOVED, SECONDED, AND DULY CARRIED TO:

Approve Minutes of the Special meeting of the Operations Committee held April 5, 2023.

AYES: Doug Chaffee, Jon Dumitru, Ryan Gallagher, Marshall Goodman, Stephen Faessel, Steve Jones, Robert Ooten, Schelly Sustarsic, Chad Wanke, Bruce Whitaker, Tom Lindsey (Alternate) and Bonnie Peat (Alternate)

NOES: None

ABSENT: Brad Avery and Johnathan Ryan Hernandez

ABSTENTIONS: None

2. APPROVE EASEMENT MODIFICATION WITH THE NAVY, PROJECT NO. 3-67[2022-2527](#)**Originator:** Mike Dorman

MOVED, SECONDED, AND DULY CARRIED TO: Recommend to the Board of Directors to:

A. Approve the First Amendment to Grant of Easement NF(R) - 13956 between the Orange County Sanitation District and the United States of America, Department of the Navy for the construction of Seal Beach Pump Station Replacement, Project No. 3-67, offset by improvements to other Department of the Navy facilities at the Naval Weapons Station, Seal Beach not to exceed \$290,000 in a form approved by Special Counsel; and

B. Direct the Clerk of the Board to accept and record the First Amendment to Grant of Easement NF(R) - 13956 with the Orange County Recorder's Office.

AYES: Doug Chaffee, Jon Dumitru, Ryan Gallagher, Marshall Goodman, Stephen Faessel, Steve Jones, Robert Ooten, Schelly Sustarsic, Chad Wanke, Bruce Whitaker, Tom Lindsey (Alternate) and Bonnie Peat (Alternate)

NOES: None

ABSENT: Brad Avery and Johnathan Ryan Hernandez

ABSTENTIONS: None

3. **AUDIOVISUAL NETWORK EQUIPMENT PURCHASE FOR HEADQUARTERS COMPLEX AT PLANT NO. 1, PROJECT NO. P1-128A** [2023-2903](#)

Originator: Mike Dorman

MOVED, SECONDED, AND DULY CARRIED TO: Recommend to the Board of Directors to:

A. Approve a Purchase Order Contract to SHI International Corp (SHI) for the purchase of audiovisual network equipment for the Headquarters Complex at Plant No. 1, Project No. P1-128A, utilizing the National Association of State Procurement Officials (NASPO) ValuePoint Data Communications Cooperative Agreement Contract No. AR3227 for a total amount not to exceed \$205,447, plus freight and sales tax; and

B. Approve a contingency of \$20,545 (10%).

AYES: Doug Chaffee, Jon Dumitru, Ryan Gallagher, Marshall Goodman, Stephen Faessel, Steve Jones, Robert Ooten, Schelly Sustarsic, Chad Wanke, Bruce Whitaker, Tom Lindsey (Alternate) and Bonnie Peat (Alternate)

NOES: None

ABSENT: Brad Avery and Johnathan Ryan Hernandez

ABSTENTIONS: None

4. **PROCESS CONTROL SYSTEMS UPGRADE, PROJECT NO. J-120** [2023-2916](#)

Originator: Mike Dorman

MOVED, SECONDED, AND DULY CARRIED TO: Recommend to the Board of Directors to:

A. Approve a Purchase Order to CDW-G Corporation for the purchase of computers and monitors, for the Process System Control Upgrade, Project No. J-120, using the Sourcewell cooperative contract number 081419-CDW for a total amount not to exceed \$334,058 plus applicable sales tax; and

B. Approve a contingency of \$33,406 (10%).

AYES: Doug Chaffee, Jon Dumitru, Ryan Gallagher, Marshall Goodman, Stephen Faessel, Steve Jones, Robert Ooten, Schelly Sustarsic, Chad Wanke, Bruce Whitaker, Tom Lindsey (Alternate) and Bonnie Peat (Alternate)

NOES: None

ABSENT: Brad Avery and Johnathan Ryan Hernandez

ABSTENTIONS: None

5. PROCUREMENT BLANKET PURCHASE ORDER WITH MCMASTER-CARR[2023-2905](#)**Originator:** Riaz Moinuddin

MOVED, SECONDED, AND DULY CARRIED TO:

A. Approve a Blanket Purchase Order with McMaster-Carr (McMaster) for the purchase of maintenance tools and supplies for the period beginning July 1, 2023, through June 30, 2024, for a total amount not to exceed \$175,000 per year; and

B. Approve four (4) optional one-year renewal periods in the amount of \$175,000 per year.

AYES: Doug Chaffee, Jon Dumitru, Ryan Gallagher, Marshall Goodman, Stephen Faessel, Steve Jones, Robert Ooten, Schelly Sustarsic, Chad Wanke, Bruce Whitaker, Tom Lindsey (Alternate) and Bonnie Peat (Alternate)

NOES: None

ABSENT: Brad Avery and Johnathan Ryan Hernandez

ABSTENTIONS: None

6. COOPERATIVE PROCUREMENT WITH W.W. GRAINGER, INC.[2023-2720](#)**Originator:** Riaz Moinuddin

MOVED, SECONDED, AND DULY CARRIED TO: Recommend to the Board of Directors to:

Approve a Blanket Purchase Order with W.W. Grainger, Inc. (Grainger, Inc.) for the purchase of maintenance tools and supplies, utilizing the National Association of State Procurement Officials (NASPO) Master Agreement No. 8496, for the period beginning July 1, 2023, through June 30, 2024, for a total amount not to exceed \$300,000.

AYES: Doug Chaffee, Jon Dumitru, Ryan Gallagher, Marshall Goodman, Stephen Faessel, Steve Jones, Robert Ooten, Schelly Sustarsic, Chad Wanke, Bruce Whitaker, Tom Lindsey (Alternate) and Bonnie Peat (Alternate)

NOES: None

ABSENT: Brad Avery and Johnathan Ryan Hernandez

ABSTENTIONS: None

7. **TRICKLING FILTER A AND B CENTER ROTATING ASSEMBLIES REPLACEMENT AT PLANT NO. 2, PROJECT NO. MP2-005** [2023-2907](#)

Originator: Riaz Moinuddin

MOVED, SECONDED, AND DULY CARRIED TO: Recommend to the Board of Directors to:

A. Approve a sole source General Services Contract to Jamison Engineering Contractors, Inc. for Trickling Filter A and B Center Rotating Assemblies Replacement at Plant No. 2, Project No. MP2-005, for a total amount not to exceed \$494,600; and

B. Approve a contingency of \$49,460 (10%).

AYES: Doug Chaffee, Jon Dumitru, Ryan Gallagher, Marshall Goodman, Stephen Faessel, Steve Jones, Robert Ooten, Schelly Sustarsic, Chad Wanke, Bruce Whitaker, Tom Lindsey (Alternate) and Bonnie Peat (Alternate)

NOES: None

ABSENT: Brad Avery and Johnathan Ryan Hernandez

ABSTENTIONS: None

8. **QUARTERLY ODOR COMPLAINT REPORT** [2023-2921](#)

Originator: Riaz Moinuddin

MOVED, SECONDED, AND DULY CARRIED TO:

Receive and file the Fiscal Year 2022-23 Third Quarter Odor Complaint Report.

AYES: Doug Chaffee, Jon Dumitru, Ryan Gallagher, Marshall Goodman, Stephen Faessel, Steve Jones, Robert Ooten, Schelly Sustarsic, Chad Wanke, Bruce Whitaker, Tom Lindsey (Alternate) and Bonnie Peat (Alternate)

NOES: None

ABSENT: Brad Avery and Johnathan Ryan Hernandez

ABSTENTIONS: None

Director Johnathan Ryan Hernandez arrived at the meeting at 5:15 p.m.

NON-CONSENT:**9. GISLER-RED HILL INTERCEPTOR AND BAKER FORCE MAIN REHABILITATION, PROJECT NO. 7-65**[2022-2457](#)**Originator:** Mike Dorman

Engineering Supervisor Marianne Klein provided a PowerPoint presentation which described the project location, the condition and driver of the project, bid results & evaluation, and the request for additional funds.

MOVED, SECONDED, AND DULY CARRIED TO: Recommend to the Board of Directors to:

- A. Receive and file Bid Tabulation and Recommendation for Gisler-Red Hill Interceptor and Baker Force Main Rehabilitation, Project No. 7-65;
- B. Approve a project budget increase of \$11,100,000 for Gisler-Red Hill Interceptor and Baker Force Main Rehabilitation, Project No. 7-65, for a new total project budget of \$55,500,000;
- C. Award a Construction Contract to Steve P. Rados, Inc. for Gisler-Red Hill Interceptor and Baker Force Main Rehabilitation, Project No. 7-65, for a total amount not to exceed \$44,706,000; and
- D. Approve a contingency of \$4,470,600 (10%).

AYES: Doug Chaffee, Jon Dumitru, Ryan Gallagher, Marshall Goodman, Stephen Faessel, Johnathan Ryan Hernandez, Steve Jones, Robert Ooten, Schelly Sustarsic, Chad Wanke, Bruce Whitaker, Tom Lindsey (Alternate) and Bonnie Peat (Alternate)

NOES: None

ABSENT: Brad Avery

ABSTENTIONS: None

10. GISLER-RED HILL INTERCEPTOR AND BAKER FORCE MAIN REHABILITATION, PROJECT NO. 7-65[2022-2421](#)**Originator:** Mike Dorman

MOVED, SECONDED, AND DULY CARRIED TO: Recommend to the Board of Directors to:

A. Approve a Professional Construction Services Agreement with CDM Smith, Inc. to provide construction support services for Gisler-Red Hill Interceptor and Baker Force Main Rehabilitation, Project No. 7-65, for a total amount not to exceed \$988,460; and

B. Approve a contingency of \$98,846 (10%).

AYES: Doug Chaffee, Jon Dumitru, Ryan Gallagher, Marshall Goodman, Stephen Faessel, Johnathan Ryan Hernandez, Steve Jones, Robert Ooten, Schelly Sustarsic, Chad Wanke, Bruce Whitaker, Tom Lindsey (Alternate) and Bonnie Peat (Alternate)

NOES: None

ABSENT: Brad Avery

ABSTENTIONS: None

INFORMATION ITEMS:

**11. HEADQUARTERS COMPLEX AT PLANT NO. 1, PROJECT NO. [2023-2848](#)
P1-128A - QUARTERLY UPDATE**

Originator: Mike Dorman

Director of Engineering Mike Dorman provided a PowerPoint presentation regarding the Headquarters Complex at Plant No. 1 project. The presentation included an overview of the project site, the site plan, the main and lobby entrances, the employee workspace, a comparison from the last update to now, upcoming activities, the procurement and project status, and an overview of the live camera feed.

ITEM RECEIVED AS AN:

Information Item.

Director Bruce Whitaker departed the meeting at 5:40 p.m.

**12. CAPITAL IMPROVEMENT PROGRAM PROPOSED BUDGET FOR FY [2023-2763](#)
2023-24**

Originator: Mike Dorman

Engineering Manager Justin Fenton and Director of Finance Wally Ritchie provided a PowerPoint presentation regarding the Capital Improvement Program (CIP) FY 2023-24 Budget Update which included an overview of the CIP budget book, the FY 2023-24 budget update, the CIP, CIP activities, the FY 2022-23 CIP performance, the 10-year net CIP outlay, the total CIP budget authority, new projects, top budget increases and decreases, potential budget risks, 10-year net CIP outlay, projected FY 2023-24 net CIP outlay, and an overview of the 20-year net CIP outlay.

ITEM RECEIVED AS AN:

Information Item.

**13. PROPOSED CHANGES TO THE PURCHASING ORDINANCE NO. OC [2023-2890](#)
SAN-56**

Originator: Wally Ritchie

Mr. Ritchie introduced Purchasing and Contracts Manager Ruth Zintzun who provided a brief report regarding proposed changes to Purchasing Ordinance No. OC SAN-56.

ITEM RECEIVED AS AN:

Information Item.

14. STRATEGIC PLANNING LEVELS OF SERVICE [2023-2937](#)

Originator: Rob Thompson

General Manager Thompson provided a PowerPoint presentation reviewing the Orange County Sanitation District's levels of service which included an overview of the commitment to rate payers, regulators, employees, Board of Directors, and stakeholders; the four categories monitored: environmental stewardship, wastewater management, business principles, and workplace environment; and the upcoming Committee meeting topics of discussion which include the core values and the risk register.

ITEM RECEIVED AS AN:

Information Item.

DEPARTMENT HEAD REPORTS:

None.

CLOSED SESSION:

None.

OTHER BUSINESS AND COMMUNICATIONS OR SUPPLEMENTAL AGENDA ITEMS, IF ANY:

None.

BOARD OF DIRECTORS INITIATED ITEMS FOR A FUTURE MEETING:

None.

ADJOURNMENT:

Chair Goodman declared the meeting adjourned at 6:29 p.m. to the next Regular Operations Committee meeting to be held on Wednesday, June 7, 2023 at 5:00 p.m.

Submitted by:

Kelly A. Lore, MMC
Clerk of the Board

File #: 2022-2619

Agenda Date: 6/7/2023

Agenda Item No: 2.

FROM: Robert Thompson, General Manager
Originator: Mike Dorman, Director of Engineering

SUBJECT:

INFLUENT PUMP STATION PLANT WATER PIPING REPAIR AT PLANT NO. 2, PROJECT NO. FR2-0029

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

- A. Receive and file Bid Tabulation and Recommendation for Influent Pump Station Plant Water Piping Repair at Plant No. 2, Project No. FR2-0029;
- B. Award a Construction Contract to W.A. Rasic Construction Company, Inc. for Influent Pump Station Plant Water Piping Repair at Plant No. 2, Project No. FR2-0029, for a total amount not to exceed \$177,063; and
- C. Approve a contingency of \$35,400 (20%).

BACKGROUND

The Orange County Sanitation District's (OC San) Headworks Bar Screen Facility provides vital preliminary treatment to all incoming wastewater by removing trash and debris that would otherwise damage downstream treatment equipment. Water is supplied from the adjacent Influent Pump Station and used in the sluiceways to remove and transport the debris from the bar screens for disposal. Plant No. 2 Headworks was constructed in 2012 under Project No. P2-66, Headworks at Plant No. 2.

RELEVANT STANDARDS

- Comply with California Public Contract Code Section 20103.8, award construction contract to lowest responsive, responsible bidder
- 24/7/365 treatment plant reliability

PROBLEM

An 8-inch pipeline supplies water to the Influent Pump Station, which then supplies water to the bar screen sluiceways through two 6-inch pipelines. The 8-inch and one of the 6-inch pipelines have failed. The facility is currently relying on a temporary supply line and a 6-inch pipeline.

PROPOSED SOLUTION

Award a construction contract for Influent Pump Station Plant Water Piping Repair at Plant No. 2, Project No. FR2-0029. This project will replace existing, failed underground sections of pipe to provide reliable sluice water to the Bar Screen Facility.

Due to the unknown location of reinforcement steel in the building walls, adjustments to pipe routing may be required to find suitable points of penetration into the building during construction. Because of the relatively small construction value and additional work that may arise if the penetration locations must be changed, staff is requesting a higher than usual contingency of 20%.

TIMING CONCERNS

The remaining 6-inch pipe is at a high risk of failure due to the failure of multiple other pipes in the area over time. A delay in replacing existing sections of pipe would increase the chance of failure of the in-service pipe.

RAMIFICATIONS OF NOT TAKING ACTION

Failure of the single remaining 6-inch water supply to the bar screen sluiceways would impact the ability to clear debris, potentially impacting flow into headworks. An emergency response would be needed to manually remove the debris until temporary pipe repairs are performed.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

OC San advertised Project No. FR2-0029 for bids on February 7, 2023 and six sealed bids were received on March 23, 2023. A summary of the bid opening follows:

Engineer's Estimate	\$ 225,000*
<u>Bidder</u>	<u>Amount of Bid</u>
W.A. Rasic Construction Company, Inc.	\$ 177,063
Innovative Construction Solutions	\$ 188,500
RE Chafee Construction Inc.	\$ 196,800
Vicon Enterprise	\$ 210,000
Arnaz Engineering Contractors, Inc.	\$ 247,500
Mehta Mechanical Company dba MMC Inc.	\$ 344,000

**The engineer's estimate correctly calculated the individual costs, but incorrectly summed up the total costs, resulting in a lower published engineer's estimate of \$142,000. The corrected engineer's estimate is \$225,000.*

The bids were evaluated in accordance with OC San's policies and procedures. A notice was sent to all bidders on May 17, 2023 informing them of the intent of OC San staff to recommend award of the Construction Contract to W.A. Rasic Construction Company, Inc.

Staff recommends awarding a Construction Contract to the lowest responsive and responsible bidder, W.A. Rasic Construction Company, Inc., for a total amount not to exceed \$177,063.

CEQA

The project is exempt from CEQA under the Class 1 categorical exemptions set forth in California Code of Regulations Section 15301. A Notice of Exemption will be filed with the OC Clerk-Recorder after OC San Board of Directors approval of the construction contract.

FINANCIAL CONSIDERATIONS

This request complies with the authority levels of OC San's Purchasing Ordinance. This recommendation would be funded under the Repairs and Maintenance line item for Division 880, Plant No. 2 Maintenance (Adopted Budget, Fiscal Years FY 2022-2023 and 2023-2024, Section 6, Page 96), and the available funding is sufficient for this action.

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Construction Contract

BT:tk

PART A
CONTRACT AGREEMENT

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CONTRACT AGREEMENT
ORANGE COUNTY SANITATION DISTRICT

PROJECT NO. FR2-0029

INFLUENT PUMP STATION PLANT WATER PIPING REPAIR AT PLANT NO. 2

THIS AGREEMENT is made and entered into, to be effective, this June 7, 2023, by and between W.A. Rasic Construction Company, Inc., hereinafter referred to as "CONTRACTOR" and the Orange County Sanitation District, hereinafter referred to as "OC SAN".

WITNESSETH

That for and in consideration of the promises and agreements hereinafter made and exchanged, OC SAN and CONTRACTOR agree as follows:

SECTION – 1 GENERAL

CONTRACTOR certifies and agrees that all the terms, conditions and obligations of the Contract Documents as hereinafter defined, the location of the job site, and the conditions under which the Work is to be performed have been thoroughly reviewed, and enters into this Contract based upon CONTRACTOR's investigation of all such matters and is in no way relying upon any opinions or representations of OC SAN. It is agreed that this Contract represents the entire agreement. It is further agreed that the Contract Documents are each incorporated into this Contract by reference, with the same force and effect as if the same were set forth at length herein, and that CONTRACTOR and its Subcontractors, if any, will be and are bound by any and all of said Contract Documents insofar as they relate in any part or in any way, directly or indirectly, to the Work covered by this Contract.

A. Contract Documents Order of Precedence

"Contract Documents" refers to those documents identified in the definition of "Contract Documents" in the General Conditions, "Definitions".

1. In the event of a conflict between one Contract Document and any of the other Contract Documents, the provisions in the document highest in precedence shall be controlling. The order of precedence of the Contract Documents is as follows:
 - a. Supplemental Agreements – the last in time being the first in precedence
 - b. Addenda issued prior to the date for submittal of Bids – the last in time being the first in precedence
 - c. Contract Agreement
 - d. Permits and other regulatory requirements
 - e. Special Provisions
 - f. General Conditions (GC)
 - g. Notice Inviting Bids and Instruction to Bidders
 - h. Geotechnical Baseline Report (GBR), if attached as a Contract Document
 - i. Plans and Specifications – in these documents the order of precedence shall be:
 - i. Specifications (Divisions 01-17)
 - ii. Plans
 - iii. General Requirements (GR)
 - iv. Standard Drawings and Typical Details
 - j. CONTRACTOR's Bid
2. In the event of a conflict between terms within an individual Contract Document, the conflict shall be resolved by applying the following principles as appears applicable:
 - a. Figured dimensions on the Contract Documents shall govern. Dimensions not specified shall be as directed by the ENGINEER. Details not shown or specified shall be the same as similar parts that are shown or specified, or as directed. Full-size details shall take precedence over scale Drawings as to

shape and details of construction. Specifications shall govern as to material and workmanship.

- b. The Contract Documents calling for the higher quality material or workmanship shall prevail. Materials or Work described in words, which so applied, have a well-known technical or trade meaning shall be deemed to refer to such recognized standards. In the event of any discrepancy between any Drawings and the figures thereon, the figures shall be taken as correct.
- c. Scale Drawings, full-size details, and Specifications are intended to be fully complementary and to agree. Should any discrepancy between Contract Documents come to the CONTRACTOR's attention, or should an error occur in the efforts of others, which affect the Work, the CONTRACTOR shall notify the ENGINEER, in writing, at once. In the event any doubts or questions arise with respect to the true meaning of the Contract Documents, reference shall be made to the ENGINEER whose written decision shall be final. If the CONTRACTOR proceeds with the Work affected without written instructions from the ENGINEER, the CONTRACTOR shall be fully responsible for any resultant damage or defect.
- d. Anything mentioned in the Specifications and not indicated in the Plans, or indicated in the Plans and not mentioned in the Specifications, shall be of like effect as if indicated and mentioned in both. In case of discrepancy in the Plans or Specifications, the matter shall be immediately submitted to OC SAN's ENGINEER, without whose decision CONTRACTOR shall not adjust said discrepancy save only at CONTRACTOR's own risk and expense. The decision of the ENGINEER shall be final.

In all matters relating to the acceptability of material, machinery or plant equipment; classifications of material or Work; the proper execution, progress or sequence of the Work; and quantities interpretation of the Contract Documents, the decision of the ENGINEER shall be final and binding, and shall be a condition precedent to any payment under the Contract, unless otherwise ordered by the Board of Directors.

B. Definitions

Capitalized terms used in this Contract are defined in the General Conditions, "Definitions". Additional terms may be defined in the Special Provisions.

SECTION – 2 MATERIALS AND LABOR

CONTRACTOR shall furnish, under the conditions expressed in the Plans and Specifications, at CONTRACTOR'S own expense, all labor and materials necessary, except such as are mentioned in the Specifications to be furnished by OC SAN, to construct and complete the Project, in good workmanlike and substantial order. If CONTRACTOR fails to pay for labor or materials when due, OC SAN may settle such claims by making demand upon the Surety to this Contract. In the event of the failure or refusal of the Surety to satisfy said claims, OC SAN may settle them directly and deduct the amount of payments from the Contract Price and any amounts due to CONTRACTOR. In the event OC SAN receives a stop payment notice from any laborer or material supplier alleging non-payment by CONTRACTOR, OC SAN shall be entitled to deduct all of its costs and expenses incurred relating thereto, including but not limited to administrative and legal fees.

SECTION – 3 PROJECT

The Project is described as:

PROJECT NO. FR2-0029

INFLUENT PUMP STATION PLANT WATER PIPING REPAIR AT PLANT NO. 2

SECTION – 4 PLANS AND SPECIFICATIONS

The Work to be done is shown in a set of Plans and Specifications entitled:

PROJECT NO. FR2-0029

INFLUENT PUMP STATION PLANT WATER PIPING REPAIR AT PLANT NO. 2

Said Plans and Specifications and any revision, amendments and addenda thereto are attached hereto and incorporated herein as part of this Contract and referred to by reference.

SECTION – 5 TIME OF COMMENCEMENT AND COMPLETION

CONTRACTOR agrees to commence the Project within 15 calendar days from the date set forth in the "Notice to Proceed" sent by OC SAN, unless otherwise specified therein and shall diligently prosecute the Work to completion within two hundred forty (240) calendar days from the date of the "Notice to Proceed" issued by OC SAN, excluding delays caused or authorized by OC SAN as set forth in Sections 7, 8, and 9 hereof, and applicable provisions in the General Conditions. The time for completion includes ten (10) calendar days determined by OC SAN likely to be inclement weather when CONTRACTOR will be unable to work.

SECTION – 6 TIME IS OF THE ESSENCE

Time is of the essence of this Contract. As required by the Contract Documents, CONTRACTOR shall prepare and obtain approval of all shop drawings, details and samples, and do all other things necessary and incidental to the prosecution of CONTRACTOR's Work in conformance with an approved construction progress schedule. CONTRACTOR shall coordinate the Work covered by this Contract with that of all other contractors, subcontractors and of OC SAN, in a manner that will facilitate the efficient completion of the entire Work and accomplish the required milestone(s), if any, by the applicable deadline(s) in accordance with Section 5 herein. OC SAN shall have the right to assert complete control of the premises on which the Work is to be performed and shall have the right to decide the time or order in which the various portions of the Work shall be installed or the priority of the work of subcontractors,

and, in general, all matters representing the timely and orderly conduct of the Work of CONTRACTOR on the premises.

SECTION – 7 EXCUSABLE DELAYS

CONTRACTOR shall only be excused for any delay in the prosecution or completion of the Project as specifically provided in General Conditions, “Extension of Time for Delay”, and the General Requirements, “By CONTRACTOR or Others – Unknown Utilities during Contract Work”. Extensions of time and extra compensation arising from such excusable delays will be determined in accordance with the General Conditions, “Extension of Time for Delay” and “Contract Price Adjustments and Payments”, and extensions of time and extra compensation as a result of incurring undisclosed utilities will be determined in accordance with General Requirements, “By CONTRACTOR or Others – Unknown Utilities during Contract Work”. OC SAN’s decision will be conclusive on all parties to this Contract.

SECTION – 8 EXTRA WORK

The Contract Price as set forth in Section 11, includes compensation for all Work performed by CONTRACTOR, unless CONTRACTOR obtains a Change Order signed by a designated representative of OC SAN specifying the exact nature of the Extra Work and the amount of extra compensation to be paid all as more particularly set forth in Section 9 hereof and the General Conditions, “Request for Change (Changes at CONTRACTOR’s Request)”, “OWNER Initiated Changes”, and “Contract Price Adjustments and Payments”.

In the event a Change Order is issued by OC SAN pursuant to the Contract Documents, OC SAN shall extend the time fixed in Section 5 for completion of the Project by the number of days, if any, reasonably required for CONTRACTOR to perform the Extra Work, as determined by OC SAN’s ENGINEER. The decision of the ENGINEER shall be final.

SECTION – 9 CHANGES IN PROJECT

OC SAN may at any time, without notice to any Surety, by Change Order, make any changes in the Work within the general scope of the Contract Document, including but not limited to changes:

1. In the Specifications (including Drawings and designs);
2. In the time, method or manner of performance of the Work;
3. In OC SAN-furnished facilities, equipment, materials, services or site; or
4. Directing acceleration in the performance of the Work.

No change of period of performance or Contract Price, or any other change in the Contract Documents, shall be binding until the Contract is modified by a fully executed Change Order.

All Change Orders shall be issued in accordance with the requirements set forth in the General Conditions, "Request for Change (Changes at CONTRACTOR's Request)" and "OWNER Initiated Changes".

SECTION – 10 LIQUIDATED DAMAGES FOR DELAY

Liquidated Damages shall be payable in the amounts and upon the occurrence of such events or failure to meet such requirements or deadlines as provided in the Special Provisions, "Liquidated Damages and Incentives."

SECTION – 11 CONTRACT PRICE AND METHOD OF PAYMENT

A. OC SAN agrees to pay and the CONTRACTOR agrees to accept as full consideration for the faithful performance of this Contract, subject to any additions or deductions as provided in approved Change Orders, the sum of One Hundred Seventy-Seven Thousand Sixty-Three Dollars (\$177,063) as itemized on the attached Exhibit "A".

Upon satisfaction of the conditions precedent to payment set forth in the General Requirements, Additional General Requirements, and General Conditions (including but

not limited to Sections entitled “Mobilization Payment Requirements” and “Payment Itemized Breakdown of Contract Lump Sum Prices”), there shall be paid to the CONTRACTOR an initial Net Progress Payment for mobilization. OC SAN shall issue at the commencement of the job a schedule which shows:

1. A minimum of one payment to be made to the CONTRACTOR for each successive four (4) week period as the Work progresses, and
2. The due dates for the CONTRACTOR to submit requests for payment to meet the payment schedule.

After the initial Net Progress Payment, and provided the CONTRACTOR submits the request for payment prior to the end of the day required to meet the payment schedule, the CONTRACTOR shall be paid a Net Progress Payment on the corresponding monthly payment date set forth in the schedule.

Payments shall be made on demands drawn in the manner required by law, accompanied by a certificate signed by the ENGINEER, stating that the Work for which payment is demanded has been performed in accordance with the terms of the Contract Documents, and that the amount stated in the certificate is due under the terms of the Contract.

Payment applications shall also be accompanied with all documentation, records, and releases as required by the Contract; Exhibit A, Schedule of Prices; and General Conditions, “Payment for Work – General”. The Total amount of Progress Payments shall not exceed the actual value of the Work completed as certified by OC SAN’s ENGINEER. The processing of payments shall not be considered as an acceptance of any part of the Work.

- B. As used in this Section, the following defined terms shall have the following meanings:
1. **“Net Progress Payment”** means a sum equal to the Progress Payment less the Retention Amount and other qualified deductions (Liquidated Damages, stop payment notices, etc.).
 2. **“Progress Payment”** means a sum equal to:
 - a. the value of the actual Work completed since the commencement of the Work as determined by OC SAN;
 - b. plus the value of material suitably stored at the worksite, treatment plant or approved storage yards subject to or under the control of OC SAN since the commencement of the Work as determined by OC SAN;
 - c. less all previous Net Progress Payments;
 - d. less all amounts of previously qualified deductions;
 - e. less all amounts previously retained as Retention Amounts.
 3. **“Retention Amount”** for each Progress Payment means the percentage of each Progress Payment to be retained by OC SAN to assure satisfactory completion of the Contract. The amount to be retained from each Progress Payment shall be determined as provided in the General Conditions, “Retained Funds; Substitution of Securities.”

SECTION – 12 SUBSTITUTION OF SECURITIES IN LIEU OF RETENTION OF FUNDS

Pursuant to Public Contract Code Section 22300 et seq., the CONTRACTOR may, at its sole expense, substitute securities as provided in General Conditions, “Retained Funds; Substitution of Securities.”

SECTION – 13 COMPLETION

Final Completion and Final Acceptance shall occur at the time and in the manner specified in the General Conditions, “Final Acceptance and Final Completion”, “Final Payment”; and Exhibit A, Schedule of Prices.

Upon receipt of all documentation, records, and releases as required by the Contract from the CONTRACTOR, OC SAN shall proceed with the Final Acceptance as specified in General Conditions.

SECTION – 14 CONTRACTOR’S EMPLOYEES COMPENSATION

A. Davis-Bacon Act:

CONTRACTOR will pay and will require all Subcontractors to pay all employees on said Project a salary or wage at least equal to the prevailing rate of per diem wages as determined by the Secretary of Labor in accordance with the Davis-Bacon Act for each craft or type of worker needed to perform the Contract. The provisions of the Davis-Bacon Act shall apply only if the Contract is in excess of Two Thousand Dollars (\$2,000.00) and when twenty-five percent (25%) or more of the Contract is funded by federal assistance. If the aforesaid conditions are met, a copy of the provisions of the Davis-Bacon Act to be complied with are incorporated herein as a part of this Contract and referred to by reference.

B. General Prevailing Rate:

OC SAN has been advised by the State of California Director of Industrial Relations of its determination of the general prevailing rate of per diem wages and the general prevailing rate for legal holiday and overtime Work in the locality in which the Work is to be performed for each craft or type of Work needed to execute this Contract, and copies of the same are on file in the Office of the ENGINEER of OC SAN. The CONTRACTOR

agrees that not less than said prevailing rates shall be paid to workers employed on this public works Contract as required by Labor Code Section 1774 of the State of California. Per California Labor Code 1773.2, OC SAN will have on file copies of the prevailing rate of per diem wages at its principal office and at each job site, which shall be made available to any interested party upon request.

C. Forfeiture for Violation:

CONTRACTOR shall, as a penalty to OC SAN, forfeit Two Hundred Dollars (\$200.00) for each calendar day or portion thereof for each worker paid (either by the CONTRACTOR or any Subcontractor under it) less than the prevailing rate of per diem wages as set by the Director of Industrial Relations, in accordance with Sections 1770-1780 of the California Labor Code for the Work provided for in this Contract, all in accordance with Section 1775 of the Labor Code of the State of California.

D. Apprentices:

Sections 1777.5, 1777.6, 1777.7 of the Labor Code of the State of California, regarding the employment of apprentices are applicable to this Contract and the CONTRACTOR shall comply therewith if the prime contract involves Thirty Thousand Dollars (\$30,000.00) or more.

E. Workday:

In the performance of this Contract, not more than eight (8) hours shall constitute a day's work, and the CONTRACTOR shall not require more than eight (8) hours of labor in a day from any person employed by him hereunder except as provided in paragraph (B) above. CONTRACTOR shall conform to Article 3, Chapter 1, Part 7 (Section 1810 et seq.) of the Labor Code of the State of California and shall forfeit to OC SAN as a penalty, the sum of Twenty-five Dollars (\$25.00) for each worker employed in the execution of this Contract by CONTRACTOR or any Subcontractor for each calendar day during which any worker is

required or permitted to labor more than eight (8) hours in any one calendar day and forty (40) hours in any one week in violation of said Article. CONTRACTOR shall keep an accurate record showing the name and actual hours worked each calendar day and each calendar week by each worker employed by CONTRACTOR in connection with the Project.

F. Registration; Record of Wages; Inspection:

CONTRACTOR shall comply with the registration requirements of Labor Code Section 1725.5. Pursuant to Labor Code Section 1771.4, the Work is subject to compliance monitoring by the California Department of Industrial Relations. CONTRACTOR shall maintain accurate payroll records and shall submit payroll records to the Labor Commissioner pursuant to Labor Code Section 1771.4(a)(3). Penalties for non-compliance with the requirements of Section 1776 may be deducted from progress payments per Section 1776.

CONTRACTOR shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations Section 16461(e).

SECTION – 15 SURETY BONDS

CONTRACTOR shall, before entering upon the performance of this Contract, furnish Bonds approved by OC SAN's General Counsel – one in the amount of one hundred percent (100%) of the Contract amount, to guarantee the faithful performance of the Work, and the other in the amount of one hundred percent (100%) of the Contract amount to guarantee payment of all claims for labor and materials furnished. As changes to the Contract occur via approved Change Orders, the CONTRACTOR shall assure that the amounts of the Bonds are adjusted to maintain 100% of the Contract Price. This Contract shall not become effective until such Bonds are supplied to and approved by OC SAN. Bonds must be issued by a Surety authorized by the State Insurance Commissioner to do business in California. The Performance Bond shall remain in full force and effect through the warranty period, as specified in Section 19 below. All

Bonds required to be submitted relating to this Contract must comply with California Code of Civil Procedure Section 995.630. Each Bond shall be executed in the name of the Surety insurer under penalty of perjury, or the fact of execution of each Bond shall be duly acknowledged before an officer authorized to take and certify acknowledgments, and either one of the following conditions shall be satisfied:

- A. A copy of the transcript or record of the unrevoked appointment, power of attorney, by-laws, or other instrument, duly certified by the proper authority and attested by the seal of the insurer entitling or authorizing the person who executed the Bond to do so for and on behalf of the insurer, is on file in the Office of the County Clerk of the County of Orange; or
- B. A copy of a valid power of attorney is attached to the Bond.

SECTION – 16 INSURANCE

CONTRACTOR shall purchase and maintain, for the duration of the Contract, insurance against claims for injuries to persons, or damages to property which may arise from or in connection with the performance of the Work hereunder, and the results of that Work by CONTRACTOR, its agents, representatives, employees, or Subcontractors, in amounts equal to the requirements set forth below. CONTRACTOR shall not commence Work under this Contract until all insurance required under this Section is obtained in a form acceptable to OC SAN, nor shall CONTRACTOR allow any Subcontractor to commence Work on a subcontract until all insurance required of the Subcontractor has been obtained. CONTRACTOR shall maintain all of the foregoing insurance coverages in force through the point at which the Work under this Contract is fully completed and accepted by OC SAN pursuant to the provisions of the General Conditions, "Final Acceptance and Final Completion". Furthermore, CONTRACTOR shall maintain all of the foregoing insurance coverages in full force and effect throughout the warranty period, commencing on the date of Final Acceptance. The requirement for carrying the foregoing insurance shall not derogate from the provisions for indemnification of OC SAN by

CONTRACTOR under Section 17 of this Contract. Notwithstanding nor diminishing the obligations of CONTRACTOR with respect to the foregoing, CONTRACTOR shall subscribe for and maintain in full force and effect during the life of this Contract, inclusive of all changes to the Contract Documents made in accordance with the provisions of the General Conditions, "Request for Change (Changes at CONTRACTOR's Request)" and/or "OWNER Initiated Changes", the following insurance in amounts not less than the amounts specified. OC SAN reserves the right to amend the required limits of insurance commensurate with the CONTRACTOR's risk at any time during the course of the Project. No vehicles may enter OC SAN premises/worksite without possessing the required insurance coverage.

CONTRACTOR's insurance shall also comply with all insurance requirements prescribed by agencies from whom permits shall be obtained for the Work and any other third parties from whom third party agreements are necessary to perform the Work (collectively, the "Third Parties"). The Special Provisions may list such requirements and sample forms and requirements from such Third Parties may be included in an attachment to the General Requirements. CONTRACTOR bears the responsibility to discover and comply with all requirements of Third Parties, including meeting specific insurance requirements, that are necessary for the complete performance of the Work. To the extent there is a conflict between the Third Parties' insurance requirements and those set forth by OC SAN herein, the requirement(s) providing the more protective coverage for both OC SAN and the Third Parties shall control and be purchased and maintained by CONTRACTOR.

If CONTRACTOR maintains higher limits than the minimums shown in this Section, OC SAN requires and shall be entitled to coverage for the higher limits maintained by the CONTRACTOR.

Where permitted by law, CONTRACTOR hereby waives all rights of recovery by subrogation because of deductible clauses, inadequacy of limits of any insurance policy, limitations or

exclusions of coverage, or any other reason against OC SAN, its or their officers, agents, or employees, and any other contractor or subcontractor performing Work or rendering services on behalf of OC SAN in connection with the planning, development and construction of the Project. In all its insurance coverages (except for Professional Liability/Errors and Omissions coverages, if applicable) related to the Work, CONTRACTOR shall include clauses providing that each insurer shall waive all of its rights of recovery by subrogation against OC SAN, its or their officers, agents, or employees, or any other contractor or subcontractor performing Work or rendering services at the Project. Where permitted by law, CONTRACTOR shall require similar written express waivers and insurance clauses from each of its Subcontractors of every tier. A waiver of subrogation shall be effective as to any individual or entity, even if such individual or entity (a) would otherwise have a duty of indemnification, contractual or otherwise, (b) did not pay the insurance premium, directly or indirectly, and (c) whether or not such individual or entity has an insurable interest in the property damaged.

A. Limits of Insurance

1. General Liability: One Million Dollars (\$1,000,000) per occurrence and a general aggregate limit of Two Million Dollars (\$2,000,000) for bodily injury, personal injury and property damage. If aggregate limits apply separately to this contract (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit. Coverage shall include each of the following:
 - a. Premises-Operations.
 - b. Products and Completed Operations, with limits of at least One Million Dollars (\$1,000,000) per occurrence and a general aggregate limit of Two Million Dollars (\$2,000,000) which shall be in effect at all times during the warranty period set forth in the Warranty section herein, and as set forth in the General

Conditions, "Warranty (CONTRACTOR's Guarantee)", plus any additional extension or continuation of time to said warranty period that may be required or authorized by said provisions. If aggregate limits apply separately to this contract (as evidenced by submission of ISO form CG 25 03 or CG 25 04), then the aggregate limit may be equivalent to the per occurrence limit.

- c. Broad Form Property Damage, expressly including damage arising out of explosion, collapse, or underground damage.
- d. Contractual Liability, expressly including the indemnity provisions assumed under this Contract.
- e. Separation of Insured Clause, providing that coverage applies separately to each insured, except with respect to the limits of liability.
- f. Independent CONTRACTOR's Liability.

To the extent first dollar coverage, including defense of any claim, is not available to OC SAN or any other additional insured because of any SIR, deductible, or any other form of self-insurance, CONTRACTOR is obligated to assume responsibility of insurer until the deductible, SIR or other condition of insurer assuming its defense and/or indemnity has been satisfied.

CONTRACTOR shall be responsible to pay any deductible or SIR.

- g. If a crane will be used, the general liability insurance will be endorsed to add Riggers Liability coverage or its equivalent to cover the usage of the crane and exposures with regard to the crane operators, riggers and others involved in using the crane.
- h. If divers will be used, the general liability insurance will be endorsed to cover marine liability or its equivalent to cover the usage of divers.

2. Automobile Liability: The CONTRACTOR shall maintain a policy of automobile liability insurance on a comprehensive form covering all owned, non-owned, and hired automobiles, trucks, and other vehicles providing the following minimum limit of liability coverage: combined single limit of One Million Dollars (\$1,000,000) for bodily injury, personal injury, and property damage.
3. Umbrella Excess Liability: The minimum limits of general liability and automobile liability insurance required, as set forth above, shall be provided for either in a single policy of primary insurance or a combination of policies of primary and umbrella excess coverage. Excess liability coverage shall be issued with limits of liability which, when combined with the primary insurance, will equal the minimum limits for general liability and automobile liability.
4. Drone Liability Insurance: If a drone will be used, drone liability insurance must be maintained by CONTRACTOR in the amount of One Million Dollars (\$1,000,000) in a form acceptable to OC SAN.
5. Workers' Compensation/Employer's Liability: CONTRACTOR shall provide such workers' compensation insurance as required by the Labor Code of the State of California, including employer's liability with a minimum limit of One Million Dollars (\$1,000,000) per accident for bodily injury or disease. If an exposure to Jones Act liability may exist, the insurance required herein shall include coverage with regard to Jones Act claims.

B. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by OC SAN. At the option of OC SAN, either: the Insurer shall reduce or eliminate such deductibles or self-insured retentions as respects OC SAN, its Directors, officers, agents, consultants, and employees; or CONTRACTOR shall provide a financial guarantee satisfactory to

OC SAN guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

C. Other Insurance Provisions

1. Each such policy of general liability insurance and automobile liability insurance shall be endorsed to contain, the following provisions:

- a. OC SAN, its directors, officers, agents, consultants, and employees, and all public agencies from whom permits will be obtained, and their directors, officers, agents, and employees are hereby declared to be additional insureds under the terms of this policy, but only with respect to the operations of CONTRACTOR at or from any of the sites of OC SAN in connection with this Contract, or acts and omissions of the additional insured in connection with its general supervision or inspection of said operations related to this Contract.
- b. Insurance afforded by the additional insured endorsement shall apply as primary insurance, and other insurance maintained by OC SAN shall be excess only and not contributing with insurance provided under this policy.

2. Cancellation and Policy Change Notice.

The CONTRACTOR is required to notify OC SAN in writing of any insurance cancellation notice it receives or other knowledge of pending or actual insurance policy cancellation within two (2) working days of receipt of such notice or acquisition of such knowledge. Additionally, the CONTRACTOR is required to notify OC SAN in writing of any change in the terms of insurance, including reduction in coverage or increase in deductible/SIR, within two (2) working days of receipt of such notice or knowledge of same.

Said notices shall be mailed to OC SAN at:

ORANGE COUNTY SANITATION DISTRICT
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Contracts, Purchasing & Materials Management Division

3. Coverage shall not extend to any indemnity coverage for the active negligence of any additional insured in any case where an agreement to indemnify the additional insured would be invalid under California Civil Code Section 2782(b).
4. If required by a public agency from whom permit(s) will be obtained, each policy of general liability insurance and automobile liability insurance shall be endorsed to specify by name the public agency and its legislative members, officers, agents, consultants, and employees, to be additional insureds.

D. Acceptability of Insurers

Insurers must have an "A-", or better, Policyholder's Rating, and a Financial Rating of at least Class VIII, or better, in accordance with the most current A.M. Best Rating Guide.

OC SAN recognizes that State Compensation Insurance Fund has withdrawn from participation in the A.M. Best Rating Guide process. Nevertheless, OC SAN will accept State Compensation Insurance Fund for the required policy of worker's compensation insurance, subject to OC SAN's option, at any time during the term of this Contract, to require a change in insurer upon twenty (20) days written notice. Further, OC SAN will require CONTRACTOR to substitute any insurer whose rating drops below the levels herein specified. Said substitution shall occur within twenty (20) days of written notice to CONTRACTOR by OC SAN or its agent.

E. Verification of Coverage

CONTRACTOR shall furnish OC SAN with original certificates and mandatory endorsements affecting coverage. Said policies and endorsements shall conform to the requirements herein stated. All certificates and endorsements are to be received and approved by OC SAN before Work commences. OC SAN reserves the right to require complete, certified copies of all required insurance policies, including endorsements, affecting the coverage required by these Specifications at any time.

F. Subcontractors

CONTRACTOR shall be responsible to establish insurance requirements for any Subcontractors hired by CONTRACTOR. The insurance shall be in amounts and types reasonably sufficient to deal with the risk of loss involving the Subcontractor's operations and work. OC SAN and any public agency issuing permits for the Project must be named as "Additional Insured" on any general liability or automobile liability policy obtained by a Subcontractor. The CONTRACTOR must obtain copies and maintain current versions of all Subcontractors' policies, certificate of liability and mandatory endorsements effecting coverage. Upon request, CONTRACTOR must furnish OC SAN with the above referenced required documents.

G. Required Forms and Endorsements

1. Required ACORD Form

- | | |
|-----------------------------|--|
| a. Certificate of Liability | ACORD Form 25 or other equivalent
certificate of insurance form |
|-----------------------------|--|

2. Required Insurance Services Office, Inc. Endorsements (when alternative forms are shown, they are listed in order of preference)

In the event any of the following forms are cancelled by Insurance Services Office, Inc. (ISO), or are updated, the ISO replacement form or equivalent must be supplied.

- | | | |
|----|--|--|
| a. | Commercial General Liability | Form CG 00 01 |
| b. | Additional Insured Including
Products-Completed Operations | Form CG 20 10 and
Form CG 20 37
All other additional insured
endorsements must be submitted for
approval by OC SAN, and OC SAN
may reject alternatives that provide
different or less coverage to OC SAN. |
| c. | Waiver of Transfer of Rights of
Recovery Against Others to Us/
Waiver of Subrogation | Form CG 24 04 |
3. Required State Compensation Insurance Fund Endorsements
- | | | |
|----|-----------------------|---|
| a. | Waiver of Subrogation | Submit workers' compensation
waiver of subrogation endorsement
provided by carrier for OC SAN
approval. |
| b. | Cancellation Notice | No endorsement is required.
However, CONTRACTOR is
responsible for notifying OC SAN of
any pending or actual insurance
policy cancellation, as described in
Article C.2., Cancellation and Policy
Change Notice, above. |
4. Additional Required Endorsements
- | | | |
|----|------------------------------|------------------------|
| a. | Notice of Policy Termination | Manuscript Endorsement |
|----|------------------------------|------------------------|

SECTION – 17 RISK AND INDEMNIFICATION

All Work covered by this Contract done at the site of construction or in preparing or delivering materials to the site shall be at the risk of CONTRACTOR alone. CONTRACTOR shall save, indemnify, defend, and keep OC SAN and others harmless as more specifically set forth in General Conditions, "General Indemnification".

SECTION – 18 TERMINATION

This Contract may be terminated in whole or in part in writing by OC SAN in the event of substantial failure by the CONTRACTOR to fulfill its obligations under this Agreement, or it may be terminated by OC SAN for its convenience provided that such termination is effectuated in a

manner and upon such conditions set forth more particularly in General Conditions, "Termination for Default" and/or "Termination for Convenience", provided that no termination may be effected unless proper notice is provided to CONTRACTOR at the time and in the manner provided in said General Conditions. If termination for default or convenience is effected by OC SAN, an equitable adjustment in the price provided for in this Contract shall be made at the time and in the manner provided in the General Conditions, "Termination for Default" and "Termination for Convenience".

SECTION – 19 WARRANTY

The CONTRACTOR agrees to perform all Work under this Contract in accordance with the Contract Documents, including OC SAN's designs, Drawings and Specifications.

The CONTRACTOR guarantees for a period of at least one (1) year from the date of Final Acceptance of the Work, pursuant to the General Conditions, "Final Acceptance and Final Completion" that the completed Work is free from all defects due to faulty materials, equipment or workmanship and that it shall promptly make whatever adjustments or corrections which may be necessary to cure any defects, including repairs of any damage to other parts of the system resulting from such defects. OC SAN shall promptly give notice to the CONTRACTOR of observed defects. In the event that the CONTRACTOR fails to make adjustments, repairs, corrections or other work made necessary by such defects, OC SAN may do so and charge the CONTRACTOR the cost incurred. The CONTRACTOR's warranty shall continue as to any corrected deficiency until the later of (1) the remainder of the original one-year warranty period; or (2) one year after acceptance by OC SAN of the corrected Work. The Performance Bond and the Payment Bond shall remain in full force and effect through the guarantee period.

The CONTRACTOR's obligations under this clause are in addition to the CONTRACTOR's other express or implied assurances under this Contract, including but not limited to specific

manufacturer or other extended warranties specified in the Plans and Specifications, or state law and in no way diminish any other rights that OC SAN may have against the CONTRACTOR for faulty materials, equipment or Work.

SECTION – 20 ASSIGNMENT

No assignment by the CONTRACTOR of this Contract or any part hereof, or of funds to be received hereunder, will be recognized by OC SAN unless such assignment has had prior written approval and consent of OC SAN and the Surety.

SECTION – 21 RESOLUTION OF DISPUTES

OC SAN and the CONTRACTOR shall comply with the provisions of California Public Contract Code Section 20104 et. seq., regarding resolution of construction claims for any Claims which arise between the CONTRACTOR and OC SAN, as well as all applicable dispute and Claims provisions as set forth in the General Conditions and as otherwise required by law.

SECTION – 22 SAFETY & HEALTH

CONTRACTOR shall comply with all applicable safety and health requirements mandated by federal, state, city and/or public agency codes, permits, ordinances, regulations, and laws, as well as these Contract Documents, including but not limited to the General Requirements, Section entitled “Safety” and Exhibit B Contractor Safety Standards.

SECTION – 23 NOTICES

Any notice required or permitted under this Contract shall be served by personal delivery or by certified mail, return receipt requested, at the address set forth below. Unless specified elsewhere in the Contract Documents or otherwise required by law, any notice may alternatively be given by electronic telecommunication to the e-mail address set forth below. Any party whose address changes shall notify the other party in writing.

TO OC SAN: Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, California 92708-7018
Attn: Clerk of the Board
ocsanclerk@ocsan.gov

Copy to: Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, California 92708-7018
Attn: Construction Manager
rcuellar@ocsan.gov

Bradley R. Hogin, Esquire
Woodruff, Spradlin & Smart
555 Anton Boulevard
Suite 1200
Costa Mesa, California 92626
bhogin@wss-law.com

TO CONTRACTOR: W.A. Rasic Construction Company, Inc.
4150 Long Beach Blvd.
Long Beach, CA 90807
wrasic@warasic.com

Copy to: Walter A. Rasic, Jr., Vice President/Secretary
W.A. Rasic Construction Company, Inc.
4150 Long Beach Blvd.
Long Beach, CA 90807
wrasic@warasic.com

IN WITNESS WHEREOF, the parties hereto have executed this Contract Agreement as the date first hereinabove written.

CONTRACTOR: W.A. Rasic Construction Company, Inc.
4150 Long Beach Blvd.
Long Beach, CA 90807

By _____ Date _____

Printed Name

Its _____

CONTRACTOR's State License No. 368761 (Expiration Date – 01/31/2025)

OC SAN: Orange County Sanitation District

By _____ Date _____

Marshall Goodman
Chair, Operations Committee

By _____ Date _____

Kelly A. Lore
Clerk of the Board

By _____ Date _____

Ruth Zintzun
Finance & Procurement Manager

EXHIBIT A
SCHEDULE OF PRICES

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SCHEDULE OF PRICES

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EXHIBIT A

SCHEDULE OF PRICES

EXA-1 BASIS OF COMPENSATION

CONTRACTOR will be paid the Contract Price according to the Schedule of Prices, and all other applicable terms and conditions of the Contract Documents.

EXA-2 PROGRESS PAYMENTS

Progress payments will be made in accordance with all applicable terms and conditions of the Contract Documents, including, but not limited to:

1. Contract Agreement – Section 11 – “Contract Price and Method of Payment;”
2. General Conditions – “Payment – General”;
3. General Conditions – “Payment – Applications for Payment”;
4. General Conditions – “Payment – Mobilization Payment Requirements;”
5. General Conditions – “Payment – Itemized Breakdown of Contract Lump Sum Prices”;
6. General Conditions – “Contract Price Adjustments and Payments”;
7. General Conditions – “Suspension of Payments”;
8. General Conditions – “OC SAN’s Right to Withhold Certain Amounts and Make Application Thereof”; and
9. General Conditions – “Final Payment.”

EXA-3 RETENTION AND ESCROW ACCOUNTS

A. Retention:

OC SAN shall retain a percentage of each progress payment to assure satisfactory completion of the Work. The amount to be retained from each progress payment shall be determined as provided in General Conditions – “Retained Funds; Substitution of Securities”. In all contracts between CONTRACTOR and its Subcontractors and/or Suppliers, the retention may not exceed the percentage specified in the Contract Documents.

B. Substitution of Securities:

CONTRACTOR may, at its sole expense, substitute securities as provided in General Conditions – “Retained Funds; Substitution of Securities.” Payment of Escrow Agent:

In lieu of substitution of securities as provided above, the CONTRACTOR may request and OC SAN shall make payment of retention earned directly to the escrow agent at the expense of the CONTRACTOR. At the expense of the CONTRACTOR, the CONTRACTOR may direct the investment of the payments into securities consistent with Government Code §16430 and the CONTRACTOR shall receive the interest earned on the investments upon the same terms provided for in this article for securities deposited by the CONTRACTOR. Upon satisfactory completion of the Contract, the CONTRACTOR shall receive from the escrow agent all securities, interest and payments received by the escrow agent from OC SAN, pursuant to the terms of this article. The CONTRACTOR shall pay to each Subcontractor, not later than twenty (20) calendar days after receipt of the payment, the respective amount of interest earned, net of costs attributed to retention withheld from each Subcontractor, on the amount of retention withheld to ensure the performance of the Subcontractor. The escrow agreement used by the escrow agent pursuant to this article shall be substantially similar to the form set forth in §22300 of the California Public Contract Code.

C. Release of Retention:

Upon Final Acceptance of the Work, the CONTRACTOR shall submit an invoice for release of retention in accordance with the terms of the Contract.

D. Additional Deductibles:

In addition to the retentions described above, OC SAN may deduct from each progress payment any or all of the following:

1. Liquidated Damages that have occurred as of the date of the application for progress payment;
2. Deductions from previous progress payments already paid, due to OC SAN's discovery of deficiencies in the Work or non-compliance with the Specifications or any other requirement of the Contract;
3. Sums expended by OC SAN in performing any of the CONTRACTOR'S obligations under the Contract that the CONTRACTOR has failed to perform, and;
4. Other sums that OC SAN is entitled to recover from the CONTRACTOR under the terms of the Contract, including without limitation insurance deductibles and assessments.

The failure of OC SAN to deduct any of the above-identified sums from a progress payment shall not constitute a waiver of OC SAN's right to such sums or to deduct them from a later progress payment.

EXA-4 STOP PAYMENT NOTICE

In addition to other amounts properly withheld under this article or under other provisions of the Contract, OC SAN shall retain from progress payments otherwise due the CONTRACTOR an amount equal to one hundred twenty-five percent (125%) of the amount claimed under any stop payment notice under Civil Code §9350 et. seq. or other lien filed against the CONTRACTOR for labor, materials, supplies, equipment, and any other thing of value claimed to have been furnished to and/or incorporated into the Work; or for any other alleged contribution thereto. In addition to the foregoing and in accordance with Civil Code §9358 OC SAN may also satisfy its duty to withhold funds for stop payment notices by refusing to release funds held in escrow pursuant to public receipt of a release of stop payment notice executed by a stop payment notice claimant, a stop payment notice release bond, an order of a court of competent jurisdiction, or other evidence satisfactory to OC SAN that the CONTRACTOR has resolved such claim by settlement.

EXA-5 PAYMENT TO SUBCONTRACTORS

Requirements

1. The CONTRACTOR shall pay all Subcontractors for and on account of Work performed by such Subcontractors, not later than seven (7) days after receipt of each progress payment as required by the California Business and Professions Code §7108.5. Such payments to Subcontractors shall be based on the measurements and estimates made pursuant to article progress payments provided herein.
2. Except as specifically provided by law, the CONTRACTOR shall pay all Subcontractors any and all retention due and owing for and on account of Work performed by such Subcontractors not later than seven (7) days after CONTRACTOR'S receipt of said retention proceeds from OC SAN as required by the California Public Contract Code §7107.

EXA-6 PAYMENT OF TAXES

Unless otherwise specifically provided in this Contract, the Contract Price includes full compensation to the CONTRACTOR for all taxes. The CONTRACTOR shall pay all federal, state, and local taxes, and duties applicable to and assessable against any Work, including but not limited to retail sales and use, transportation, export, import, business, and special taxes. The CONTRACTOR shall ascertain and pay the taxes when due. The CONTRACTOR will maintain auditable records, subject to OC SAN reviews, confirming that tax payments are current at all times.

EXA-7 FINAL PAYMENT

After Final Acceptance of the Work, as more particularly set forth in the General Conditions, "Final Acceptance and Final Completion", and after Resolution of the Board authorizing final payment and satisfaction of the requirements as more particularly set forth in General Conditions – "Final Payment", a final payment will be made as follows:

1. Prior to Final Acceptance, the CONTRACTOR shall prepare and submit an application for Final Payment to OC SAN, including:
 - a. The proposed total amount due the CONTRACTOR, segregated by items on the payment schedule, amendments, Change Orders, and other bases for payment;
 - b. Deductions for prior progress payments;
 - c. Amounts retained;
 - d. A conditional waiver and release on final payment for each Subcontractor (per Civil Code Section 8136);
 - e. A conditional waiver and release on final payment on behalf of the CONTRACTOR (per Civil Code Section 8136);
 - f. List of Claims the CONTRACTOR intends to file at that time or a statement that no Claims will be filed,
 - g. List of pending unsettled claims, stating claimed amounts, and copies of any and all complaints and/or demands for arbitration received by the CONTRACTOR; and
 - h. For each and every claim that resulted in litigation or arbitration which the CONTRACTOR has settled, a conformed copy of the Request for Dismissal with prejudice or other satisfactory evidence the arbitration is resolved.
2. The application for Final Payment shall include complete and legally effective releases or waivers of liens and stop payment notices satisfactory to OC SAN, arising out of or filed in connection with the Work. Prior progress payments shall be subject to correction in OC SAN's review of the application for Final Payment. Claims filed with the application for Final Payment must be otherwise timely under the Contract and applicable law.
3. Within a reasonable time, OC SAN will review the CONTRACTOR'S application for Final Payment. Any recommended changes or corrections will then be forwarded to the CONTRACTOR. Within ten (10) calendar days after receipt of recommended changes from OC SAN, the CONTRACTOR will make the changes, or list Claims that will be filed as a result of the changes, and shall submit the revised application for Final Payment. Upon

acceptance by OC SAN, the revised application for Final Payment will become the approved application for Final Payment.

4. If no Claims have been filed with the initial or any revised application for Final Payment, and no Claims remain unsettled within thirty-five (35) calendar days after Final Acceptance of the Work by OC SAN, and agreements are reached on all issues regarding the application for Final Payment, OC SAN, in exchange for an executed release, satisfactory in form and substance to OC SAN, will pay the entire sum found due on the approved application for Final Payment, including the amount, if any, allowed on settled Claims.
5. The release from the CONTRACTOR shall be from any and all Claims arising under the Contract, except for Claims that with the concurrence of OC SAN are specifically reserved, and shall release and waive all unreserved Claims against OC SAN and its officers, directors, employees and authorized representatives. The release shall be accompanied by a certification by the CONTRACTOR that:
 - a. It has resolved all Subcontractors, Suppliers and other Claims that are related to the settled Claims included in the Final Payment;
 - b. It has no reason to believe that any party has a valid claim against the CONTRACTOR or OC SAN which has not been communicated in writing by the CONTRACTOR to OC SAN as of the date of the certificate;
 - c. All warranties are in full force and effect, and;
 - d. The releases and the warranties shall survive Final Payment.
6. If any claims remain open, OC SAN may make Final Payment subject to resolution of those claims. OC SAN may withhold from the Final Payment an amount not to exceed one hundred fifty percent (150%) of the sum of the amounts of the open claims, and one hundred twenty-five percent (125%) of the amounts of open stop payment notices referred to in article entitled stop payment notices herein.
7. The CONTRACTOR shall provide an unconditional waiver and release on final payment from each Subcontractor and Supplier providing Work under the Contract (per Civil Code Section 8138) and an unconditional waiver and release on final payment on behalf of the CONTRACTOR (per Civil Code Section 8138) within thirty (30) days of receipt of Final Payment.

EXA-8 DISCOVERY OF DEFICIENCIES BEFORE AND AFTER FINAL PAYMENT

Notwithstanding OC SAN's acceptance of the application for Final Payment and irrespective of whether it is before or after Final Payment has been made, OC SAN shall not be precluded from subsequently showing that:

1. The true and correct amount payable for the Work is different from that previously accepted;

2. The previously accepted Work did not in fact conform to the Contract requirements, or;
3. A previous payment or portion thereof for Work was improperly made.

OC SAN also shall not be stopped from demanding and recovering damages from the CONTRACTOR, as appropriate, under any of the foregoing circumstances as permitted under the Contract or applicable law.

ATTACHMENT 1 – CERTIFICATION FOR REQUEST FOR PAYMENT

I hereby certify under penalty of perjury as follows:

That the claim for payment is in all respects true, correct; that the services mentioned herein were actually rendered and/or supplies delivered to OC SAN in accordance with the Contract.

I understand that it is a violation of both the federal and California False Claims Acts to knowingly present or cause to be presented to OC SAN a false claim for payment or approval.

A claim includes a demand or request for money. It is also a violation of the False Claims Acts to knowingly make use of a false record or statement to get a false claim paid. The term "knowingly" includes either actual knowledge of the information, deliberate ignorance of the truth or falsity of the information, or reckless disregard for the truth or falsity of the information. Proof of specific intent to defraud is not necessary under the False Claims Acts. I understand that the penalties under the Federal False Claims Act and State of California False Claims Act are non-exclusive, and are in addition to any other remedies which OC SAN may have either under contract or law.

I hereby further certify, to the best of my knowledge and belief, that:

1. The amounts requested are only for performance in accordance with the Specifications, terms, and conditions of the Contract;
2. Payments to Subcontractors and Suppliers have been made from previous payments received under the Contract, and timely payments will be made from the proceeds of the payment covered by this certification;
3. This request for progress payments does not include any amounts which the prime CONTRACTOR intends to withhold or retain from a Subcontractor or Supplier in accordance with the terms and conditions of the subcontract; and
4. This certification is not to be construed as Final Acceptance of a Subcontractor's performance.

Name

Title

Date

ATTACHMENT 2 – SCHEDULE OF PRICES

See next pages for Bid Submittal Forms: W.A. Rasic Construction Company, Inc.

BF-14 SCHEDULE OF PRICES, Pages 1 – 2

Bid Submitted By: W.A. Rasic Construction Company, Inc.
(Name of Firm)

BF-14 SCHEDULE OF PRICES

INSTRUCTIONS

A. General

For Unit Prices, it is understood that the following quantities are approximate only and are solely for the purpose of estimating the comparison of Bids, and that the actual value of Work will be computed based upon the actual quantities in the completed Work, whether they be more or less than those shown. CONTRACTOR's compensation for the Work under the Contract Documents will be computed based upon the lump sum amount of the Contract at time of award, plus any additional or deleted costs approved by OC SAN via approved Change Orders, pursuant to the Contract Documents.

Bidder shall separately price and accurately reflect costs associated with each line item, leaving no blanks. Any and all modifications to the Bid must be initialed by an authorized representative of the Bidder in accordance with the Instructions to Bidders, Preparation of Bid.

Bidders are reminded of Instruction to Bidders, Discrepancy in Bid Items, which, in summary, provides that the total price for each item shall be based on the Unit Price listed for each item multiplied by the quantity; and the correct Total Price for each item shall be totaled to determine the Total Amount of Bid.

All applicable costs including overhead and profit shall be reflected in the respective unit costs and the TOTAL AMOUNT OF BID. The Bid price shall include all costs to complete the Work, including profit, overhead, etc., unless otherwise specified in the Contract Documents. All applicable sales taxes, state and/or federal, and any other special taxes, patent rights or royalties shall be included in the prices quoted in this Bid.

B. Basis of Award

AWARD OF THE CONTRACT WILL BE MADE ON THE BASIS OF THE LOWEST RESPONSIVE AND RESPONSIBLE BID.

Note 1: Base Bid. Includes all costs necessary to furnish all labor, materials, equipment and services for the construction of the Project per the Contract Documents.

Bidders shall accurately reflect the cost to perform the Work. OC SAN may reject unbalanced Bids. Refer to Part 2 – INSTRUCTIONS TO BIDDERS.

Bid Submitted By: W.A. Rasic Construction Company, Inc.
(Name of Firm)

SCHEDULE OF PRICES

BASE BID ITEMS (Refer to Note 1 in the Instructions):

Item No.	Description	Unit of Measurement	Extended Price
1.	Mobilization: All fees, labor, materials, and equipment required for all mobilization activities performed by the CONTRACTOR as described in Section 01155, Measurement and Payment, and in conformance with the Contract Documents for the lump sum price of...	Lump Sum	\$ 7,500
2.	Shoring and Bracing: All fees, labor, materials, and equipment required for all shoring and bracing activities performed by the CONTRACTOR as described in Section 01155, Measurement and Payment, and in conformance with the Contract Documents for the lump sum price of...	Lump Sum	\$ 2,000
3.	All Other Portions of the Work: All other portions of the work performed by the CONTRACTOR including, but not limited to, moving out, submittal and acceptance of As-Built Drawings, and final cleanup and restoration of the staging area to its original condition upon Final Completion, as described in Section 01155, Measurement and Payment, and in conformance with the Contract Documents for the lump sum price of...	Lump Sum	\$ 167,563

TOTAL AMOUNT OF BID (BASIS OF AWARD)

\$ 177,063



OPERATIONS COMMITTEE

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2023-2849

Agenda Date: 6/7/2023

Agenda Item No: 3.

FROM: Robert Thompson, General Manager
Originator: Mike Dorman, Director of Engineering

SUBJECT:

ENGINEERING PROGRAM CONTRACT PERFORMANCE REPORT

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

Receive and file the Engineering Program Contract Performance Report for the period ending March 31, 2023.

BACKGROUND

The Engineering Program involves awarding and managing multiple construction and consulting contracts. In 2008, the Orange County Sanitation District (OC San) Board of Directors began authorizing contingencies along with construction and consulting contracts, allowing the General Manager to approve construction change orders and amendments to consulting contracts up to the amount of the authorized contingency. This practice reduces administrative costs, expedites resolution of project issues that arise, helps avoid contractor delay claims, and facilitates efficient management of many contracts.

The Engineering Program Contract Performance Report summarizes construction and consulting contract performance and activities for the quarter ending March 31, 2023. This report is updated quarterly and includes a summary of General Manager approved contract contingencies among other key performance indicators.

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Engineering Program Contract Performance Report - Period Ending March 31, 2023

EY: jw

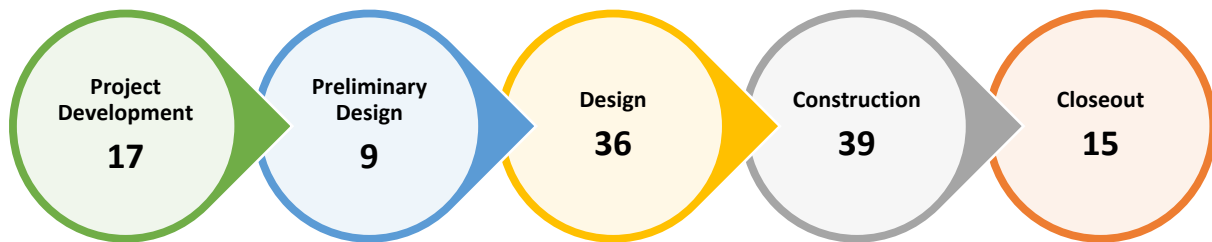
DATE: June 7, 2023

TO: Orange County Sanitation District Board of Directors

FROM: Rob Thompson, General Manager
Through: Mike Dorman, Director of Engineering

This report summarizes the status, activities, and performance of construction contracts and consultant agreements. This report also identifies the names and status of projects being performed under master budgets for planning studies, research, small construction projects, Operations & Maintenance capital projects and information technology projects.

As of 3/31/2023, Orange County Sanitation District (OC San) Engineering Department manages 116 active projects, with project budgeting totaling close to \$3.3 million. These projects are in various project phases, ranging from Project Development to Closeout. The graphic below shows the number of projects in each of the project phases.



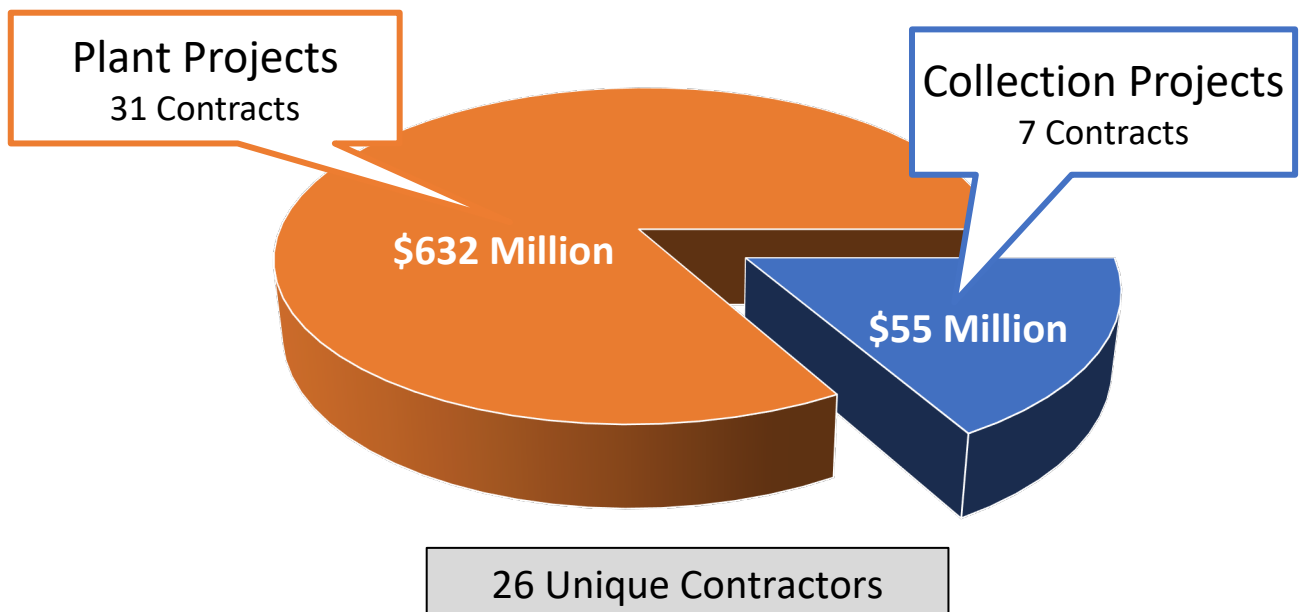
This report is organized into six parts, as follows. Detailed tables can be found in the appendix section of the report.

Part 1 – Construction Contracts	Page 2
Part 2 – Engineering Professional Services Agreements	Page 4
Part 3 – Master Budget Projects	Page 5
Part 4 – Supplemental Engineering Services Contract	Page 6
Part 5 – Programming Professional Services Contract	Page 8
Part 6 – On-Call Services Agreements	Page 10
Appendix (Tables 1 through 13)	Page 11

PART 1 - CONSTRUCTION CONTRACTS

Construction Contracts

As shown in the graph below, there are currently thirty-six active construction contracts totaling \$687 Million. Of the thirty-six active construction contracts, twenty-nine are plant projects and seven are collections projects. Table 1 in the appendix lists the Board-awarded construction contracts active as of March 31, 2023, while Tables 2 and 3 list the General Manager-awarded and Operations Committee-awarded construction contracts. The General Manager may award contracts up to \$100,000 and task orders up to \$300,000.

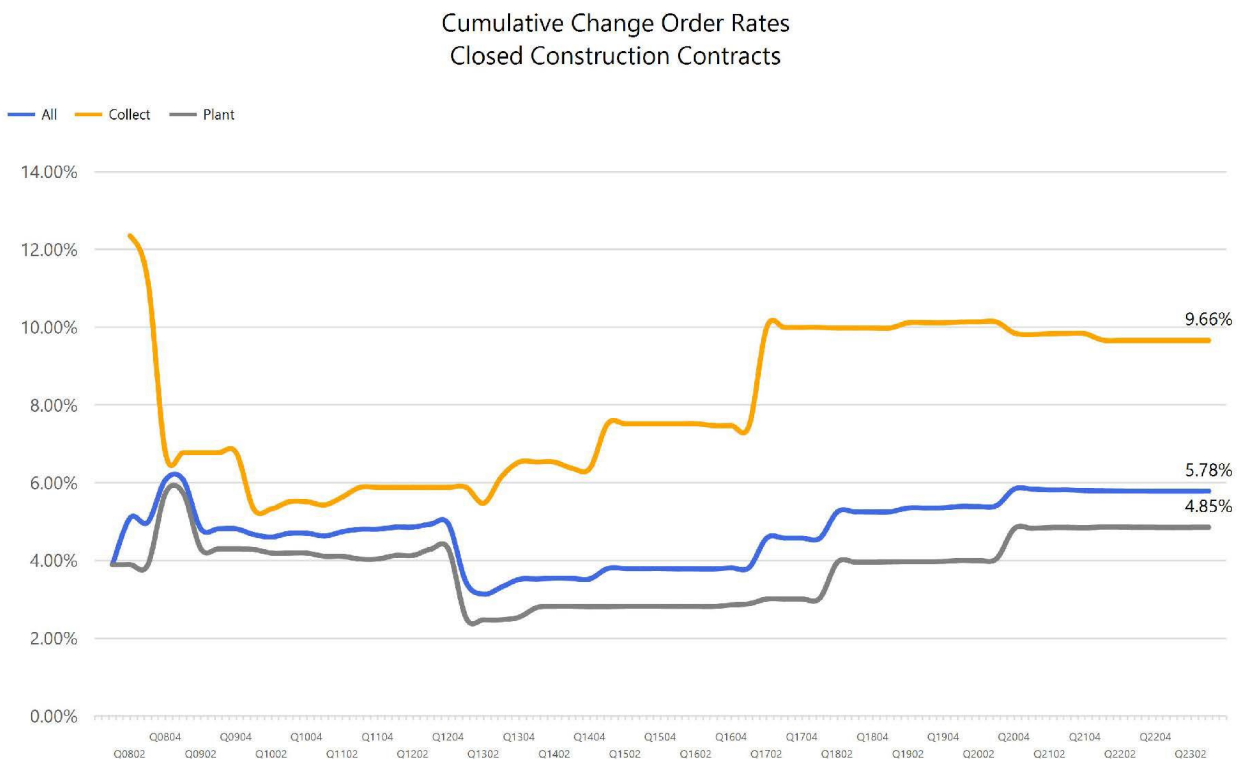


Only two construction contracts were closed during this quarter, both were awarded by the Operations committee. The table below summarizes the number of active and closed construction contracts and total contract amounts. See Tables 4, 5 and 6 in the appendix for a list of the closed contracts.

Type	Contracts	Total Contract Amount
Active Board-Awarded Construction Contracts	32	\$680,847,009
Active GM Awarded Construction Contracts	5	\$6,333,189
Active Ops Committee Awarded Construction Contracts	1	\$138,650
Closed Board-Awarded Construction Contracts	0	\$0
Closed GM Awarded Construction Contracts	0	\$0
Closed Committee-Awarded Construction Contracts	2	\$367,407

Cumulative Change Order Rates

When the OC San Board of Directors awards a construction contract, they also approve a contingency which allows the General Manager to approve contract change orders up to the amount of the contingency. One purpose of this report is to document how much of the contingency is utilized. A contract's change order rate is only meaningful when the work is completed. As such, this report's change order performance charts are based only on contracts closed since the Board began approving contingencies in 2008. The following chart shows how cumulative change order rates have changed for plant, collections, and all contracts since the contingency system was implemented.



PART 2 – ENGINEERING PROFESSIONAL SERVICES AGREEMENTS

Professional Service Agreements

OC San engages engineering consultants through Professional Service Agreements (PSAs), Professional Design Services Agreements (PDSAs), Professional Construction Services Agreements (PCSAs), and Master Professional Services Agreements (Master Agreements). PDSAs are used to obtain design engineering services, and PCSAs are a subsequent agreement with the design consultant to provide support services during construction. PSAs are used for planning studies and other consultant assignments. There are currently 42 Professional Service Agreements (19 individual firms) with total agreement amount of \$216,053,075. Table 7 in the appendix provides a detailed list of Professional Service Agreements.

Master Agreements

Master Agreements are issued to a pool of pre-qualified consultants for smaller projects. On those smaller projects, OC San solicits task order proposals from interested firms and awards a task order to the most qualified consultant. There are currently five sets of Master Agreements.

- 2017 Master Agreements for On-Call Planning Studies (expired)
- 2018 Master Professional Design Services Agreements (expired)
- 2020 Master Agreements for On-Call Planning Studies
- 2021 Master Professional Design Services Agreements
- Agreement for Design Installation, Implementation and Maintenance of a Process Control System

The 2017 Master Agreements for On-Call Planning Studies and the 2018 Master Professional Design Services Agreements have expired, meaning no new task orders can be issued under them, but previously issued task orders remain active until completed. Task Orders are limited by OC San Ordinance No. OCSD-56 to \$300,000 per task order. Below is a summary of the various master agreements with active task orders. See Table 8 in the appendix for a detailed list of task orders.

Task Order	Contracts	Total Contract Amount
2017 Master Agreements for On-Call Planning Studies	1	\$274,888
2018 Master Professional Design Service Agreements	27	\$4,540,490
2020 Master Agreements for On-Call Planning Studies	10	\$1,608,801
2021 Master Professional Design Service Agreement	12	\$2,370,753

PART 3 – MASTER BUDGET PROJECTS

The Board-adopted budget for Fiscal Years 2022-23 and 2023-24 includes master program budgets that allow staff to initiate, execute, and manage smaller projects that fit within the scope of a particular program more quickly. The projects chartered under these program budgets are referred to as sub-projects and are managed to the same standards as projects specifically listed in the adopted budget. A status table for each of these programs listing the sub-projects is attached in the appendix.

Master Program Title	Status Table	Number of Projects	Total Allocated Budget
Planning Studies Program	Table 9	23	\$15,870,252
Research Program	Table 10	3	\$8,431,025
Small Construction Projects Program	Table 11	33	\$67,360,500
Information Technology Capital Program	Table 12	11	\$3,860,952
Operations & Maintenance Capital Program	Table 13	4	\$9,100,000

PART 4 – SUPPLEMENTAL ENGINEERING SERVICES CONTRACT

OC San has been utilizing Jacobs Project Management Co. to provide supplemental engineering and support staff services since an initial contract was approved by the Board in 2016. This existing contract will end in June 2023.

In April of 2022, the OC San Board of Directors approved two Professional Service Agreements - one with AECOM Technical Services, Inc. and one with Jacobs Project Management Co. - to provide Supplemental Engineering Services for a three-year period commencing May 1, 2022, through April 30, 2025, with two one-year renewal options. The Board approved the agreements for an amount not to exceed \$29,700,000 per individual agreement.

The benefits of using a supplemental engineering services contract, as opposed to hiring full-time staff or limited-term employees, include rapid mobilization of highly skilled/technical staff, flexibility to change the mix of staff positions on an immediate and as-needed basis, the ability to reduce staff as workloads decrease, access to technical experts to support special tasks, and access to staff with wastewater project experience.

A status table for the supplemental engineering services contract summary for the 2016 Supplemental Engineering Services Contract with Jacobs Project Management Co. and the Supplemental Engineering Services labor summary for the same contract can be found below.

2016 Supplemental Engineering Services Labor Summary (Jacobs)				
	Total Fees		Time	
Contract	\$41,000,000		86 Months	
Actuals to Date	\$38,312,988	93.4%	83 Months	96.5%
Remaining	\$2,687,012	6.6%	3 Months	3.5%

2016 Supplemental Engineering Services Labor Summary (Jacobs)		
	This Quarter	Inception to Date
Labor Hours	8,989	268,250
Full Time Equivalents	19	20
Labor Costs (no expenses)	\$1,527,820	\$37,573,529
Average Hourly Rate	\$170	\$140

Status tables for the supplemental engineering services contract and labor summary for the 2022 Supplemental Engineering Services Contract with AECOM and Jacobs Project Management Co. are included below.

2022 Supplemental Engineering Services Contract Status (AECOM)				
	Total Fees		Time	
Contract	\$29,700,000		60 months	(1)
Actuals to Date	\$581,194	2.0%	11 Months	18%
Remaining	\$29,118,806	98.0%	49 months	82%

(1) Assuming two additional 1-year extensions

2022 Supplemental Engineering Services Labor Summary (AECOM)		
	This Quarter	Inception to Date
Labor Hours	1,201	3,438
Full Time Equivalents	2.6	2.0
Labor Costs (no expenses)	\$183,385	\$562,636
Average Hourly Rate	\$152.69	\$163.65

2022 Supplemental Engineering Services Contract Status (Jacobs)				
	Total Fees		Time	
Contract	\$29,700,000		60 Months	(1)
Actuals to Date	\$1,311,889	4.4%	11 Months	18%
Remaining	\$28,388,111	95.6%	49 Months	82%

(1) Assuming two additional 1-year extensions

2022 Supplemental Engineering Services Labor Summary (Jacobs)		
	This Quarter	Inception to Date
Labor Hours	4540	8543
Full Time Equivalents	9.5	6
Labor Costs (no expenses)	\$651,809	\$1,286,635
Average Hourly Rate	\$145	\$151

PART 5 – PROGRAMMING PROFESSIONAL SERVICES CONTRACT

In April of 2022, the OC San Board of Directors approved two Professional Service Agreements - one with Enterprise Automation and one with Maverick Technologies - to provide Programming Professional Services for a three-year period commencing May 11, 2022, through May 10, 2025, with two one-year renewal options. The Board approved the agreements for an amount not to exceed \$4,900,000 per individual agreement.

The programming professional services will program, test, commission, maintain, upgrade, and configure programmable logic controllers, HMI graphics, databases, servers, and networks for select projects. The benefits of using a programming professional services contract, as opposed to hiring full-time staff or limited-term employees, include the ability to provide the needed short-term resources during the execution of Project No. J-120, Process Control Systems Upgrades, rapid mobilization of highly skilled technical resources, flexibility to change the mix of needed resources to match project requirements, and the ability to increase or reduce project resources as workloads change.

Status tables for the programming professional services contract and labor summary for the 2022 Programming Professional Services Contract with Enterprise Automation and Maverick Technologies are included below.

2022 Programming Professional Services Contract Status (Enterprise Automation)				
	Total Fees		Time	
Contract	\$4,900,000		60 months	(1)
Actuals to Date	\$530,312	11%	11 Months	18%
Remaining	\$4,369,688	89%	49 months	82%

(1) Assuming two additional 1-year extensions

2022 Programming Professional Services Labor Summary (Enterprise Automation)		
	This Quarter	Inception to Date
Labor Hours	947	2799
Full Time Equivalents	1.8	1.5
Labor Costs (no expenses)	\$186,225	\$530,312
Average Hourly Rate	\$197	\$189

2022 Programming Professional Services Contract Status (Maverick Technologies)				
	Total Fees		Time	
Contract	\$4,900,000		60 months	(1)
Actuals to Date	\$50,490	1%	11 Months	18%
Remaining	\$4,849,510	99%	49 months	82%

(1) Assuming two additional 1-year extensions

2022 Programming Professional Services Labor Summary (Maverick Technologies)		
	This Quarter	Inception to Date
Labor Hours	131	284
Full Time Equivalents	0.3	0.2
Labor Costs (no expenses)	\$22,670	\$50,490
Average Hourly Rate	\$173	\$178

PART 6 – ON-CALL SERVICES AGREEMENTS

OC San uses three sets of on-call services agreements for coating inspection and corrosion testing; materials testing, inspection, and other geotechnical testing; and surveying. Services are typically requested by inspection supervisors as needs arise, and the work is generally spread among the available firms.

The table below lists the contract limits and funds expended to date for each of the agreements which became effective on March 23, 2022, and will expire on April 30, 2025. For each of these services, OC San typically uses a single firm for a particular construction contract.

Consultant	Contract Limit	Total Costs Incurred	Remaining
Coating Inspection Services (PSA2022-001)			
CSI Services, Inc.	\$300,000	\$8,535	\$291,466
Diversified Project Services Int'l (DPSI)	\$300,000	\$35,461	\$264,539
Geotechnical Testing Services (PSA2022-003)			
AESCO	\$400,000	\$113,184	\$286,816
Atlas Technical Consultants	\$400,000	\$106,592	\$293,408
Koury Engineering and testing, Inc.	\$400,000	\$104,091	\$295,909
MTGL, Inc	\$400,000		\$400,000
Surveying Services (PSA2022-002)			
D.Woolley & Associates	\$200,000		\$200,000
Michael Baker International, Inc.	\$200,000	\$1,726	\$198,275
Psomas	\$200,000		\$200,000
Stantec Consulting Services, Inc.	\$200,000	\$21,200	\$178,800

APPENDIX

Engineering Program Contract Performance Report

For the Period Ending March 31, 2023

Table 1 - Board-Awarded Construction Contracts

Project/Contract		Contractor	Award Date	Contract Amount				Contingency			
				Award	Change Orders	Current	% Spent	Original	Current	Used	Remaining
3-62	Westminster Blvd Force Main Replacement	Teichert Energy - Utilities Group, Inc.	12/18/2019	\$27,743,000	\$1,339,145	\$29,082,145	98.5%	10.0%	14.0%	4.8%	9.2%
3-64B	Los Alamitos Trunk Sewer Rehabilitation	Steve P. Rados, Inc.	05/26/2021	\$17,775,000	\$37,851	\$17,812,851	66.0%	10.0%	10.0%	0.2%	9.8%
7-66	Sunflower and Red Hill Interceptor Repairs	Charles King Company	07/28/2021	\$4,777,000	\$131,751	\$4,908,751	82.2%	10.0%	10.0%	2.8%	7.2%
FE18-13	Redhill Relief Sewer Relocation at State Route 55	SRK Engineering, Inc.	06/22/2022	\$2,213,000	\$0	\$2,213,000	0.0%	15.0%	15.0%	0.0%	15.0%
FE18-14	Plant Water Pipeline Replacement in Kinnison, Lindstrom, and Scott Tunnels at Plant No. 2	MMC, Inc.	12/16/2020	\$1,134,000	\$4,348	\$1,138,348	-4.2%	15.0%	15.0%	0.4%	14.6%
FE18-15	Plant Boiler System Relief at Plant No. 2	MMC, Inc.	04/28/2021	\$230,000	\$24,528	\$254,528	100.0%	15.0%	15.0%	10.7%	4.3%
FE19-01	Pump Station Portable Generator Connectors	Pacific Industrial Electric	09/29/2021	\$1,207,479	\$0	\$1,207,479	40.3%	10.0%	10.0%	0.0%	10.0%
FE19-03	Trickling Filter Sludge and Scum Pumps Replacement at Plant No. 1	Garney Pacific, Inc.	02/23/2022	\$778,000	\$18,317	\$796,317	67.9%	10.0%	10.0%	2.4%	7.6%
FE19-04	Sunflower Pump Replacement at Plant No. 1	GSE Construction Company, Inc.	10/27/2021	\$2,123,200	\$0	\$2,123,200	5.8%	10.0%	10.0%	0.0%	10.0%
FE19-06	EPSA Motor Cooling Improvements at Plant No. 2	MMC, Inc.	09/29/2021	\$854,000	\$21,474	\$875,474	52.3%	10.0%	10.0%	2.5%	7.5%

Engineering Program Contract Performance Report

For the Period Ending March 31,2023

Table 1 - Board-Awarded Construction Contracts

Project/Contract		Contractor	Award Date	Contract Amount				Contingency			
				Award	Change Orders	Current	% Spent	Original	Current	Used	Remaining
FE19-08	Secondary Treatment VFD Replacements at Plant No. 2	ACS Engineering	03/23/2022	\$1,433,000	\$0	\$1,433,000	0.8%	10.0%	10.0%	0.0%	10.0%
FE19-12	Rebuild Shop Fume Extractor Installation at Plant No 1	RAN Enterprises, Inc	10/18/2022	\$217,000	\$0	\$217,000	92.5%	10.0%	10.0%	0.0%	10.0%
FE20-01	Wastehauler Station Safety and Security Improvements	Leed Electric	09/28/2022	\$1,689,788	\$0	\$1,689,788	14.1%	10.0%	10.0%	0.0%	10.0%
FE20-04	Cengen Cooling Water Pipe Replacement at Plant No. 2	Innovative Construction Solutions	12/22/2022	\$3,487,600	\$0	\$3,487,600	0.0%	10.0%	10.0%	0.0%	10.0%
FE20-06	Thickening and Dewatering Building Pipe Support Improvements at Plant No. 1	Garney Pacific, Inc.	02/23/2022	\$793,000	\$5,796	\$798,796	91.1%	10.0%	10.0%	0.7%	9.3%
FE20-07	Santa Ana Trunk Rehabilitation at Plant No. 1	Sancon Technologies Inc.	04/27/2022	\$395,082	\$5,497	\$400,579	100.0%	20.0%	20.0%	1.4%	18.6%
FE21-07	Liquid Oxygen Tank A Replacement at Plant No. 2	J.R. Filanc Construction Company, Inc.	01/18/2023	\$2,608,007	\$0	\$2,608,007	2.0%	0.0%	10.0%	0.0%	10.0%
FR1-0011	VFD Replacements at Plant No. 1	ACS Engineering	03/07/2023	\$1,214,888	\$0	\$1,214,888	0.0%	10.2%	10.2%	0.0%	10.2%
FR1-0016	Waste Sidestream Pump Station VFD replacements at Plant No.1	Leed Electric	03/23/2022	\$344,889	\$0	\$344,889	4.8%	15.0%	15.0%	0.0%	15.0%
FR2-0018	Activated Sludge Clarifier Repairs at Plant No. 2	Garney Pacific, Inc.	10/11/2022	\$5,091,686	\$0	\$5,091,686	13.3%	10.0%	10.0%	0.0%	10.0%

Engineering Program Contract Performance Report

For the Period Ending March 31, 2023

Table 1 - Board-Awarded Construction Contracts

Project/Contract		Contractor	Award Date	Contract Amount				Contingency			
				Award	Change Orders	Current	% Spent	Original	Current	Used	Remaining
J-117B	Outfall Low Flow Pump Station	Shimmick Construction	12/19/2018	\$90,200,000	\$2,985,408	\$93,185,408	80.7%	8.0%	8.0%	3.3%	4.7%
J-120	Process Control Systems Upgrades	ABB, Inc.	09/15/2021	\$11,818,480	\$0	\$11,818,480	10.9%	10.0%	10.0%	0.0%	10.0%
J-135B	Engine and Generator Overhauls at Plant No. 1 and 2	Cooper Machinery Services	07/27/2022	\$29,361,029	\$917,783	\$30,278,812	28.0%	10.0%	15.6%	3.1%	12.4%
MP-307	Bushard Diversion Structure Repair	Abhe - Svoboda, Inc.	06/22/2022	\$1,762,545	\$0	\$1,762,545	0.0%	10.0%	10.0%	0.0%	10.0%
P1-105	Headworks Rehabilitation at Plant 1	Kiewit Infrastructure West Co.	03/24/2021	\$222,330,000	\$516,763	\$222,846,763	24.2%	4.0%	4.0%	0.2%	3.8%
P1-128A	Headquarters Complex at Plant No. 1	Swinerton Builders	05/26/2021	\$102,544,973	\$1,221,007	\$103,765,980	62.2%	5.0%	5.0%	1.2%	3.8%
P1-132	Uninterruptable Power Supply Improvements at Plant 1	Leed Electric	12/15/2022	\$5,765,789	\$0	\$5,765,789	\$0	10.0%	10.0%	0.0%	10.0%
P1-133	Primary Sedimentation Basins No. 6-31 Reliability Improvements at Plant No. 1	Shimmick Construction	02/23/2022	\$6,275,000	\$0	\$6,275,000	26.8%	10.0%	10.0%	0.0%	10.0%
P1-134	South Perimeter Security and Utility Improvements at Plant No.1	Tovey-Shultz Construction, Inc.	07/28/2021	\$4,396,779	\$260,520	\$4,657,299	95.6%	10.0%	10.0%	5.9%	4.1%

Engineering Program Contract Performance Report

For the Period Ending March 31, 2023

Table 1 - Board-Awarded Construction Contracts

Project/Contract		Contractor	Award Date	Contract Amount				Contingency			
				Award	Change Orders	Current	% Spent	Original	Current	Used	Remaining
P2-122	Headworks Modifications at Plant No. 2 for GWRS Final Expansion	Shimmick Construction	01/22/2020	\$14,487,735	\$739,246	\$15,226,981	99.2%	10.0%	10.0%	5.1%	4.9%
P2-98A	A-Side Primary Clarifiers Replacement at Plant 2	PCL CONSTRUCTION INC.	05/26/2021	\$111,405,880	\$321,135	\$111,727,015	25.6%	6.0%	6.0%	0.3%	5.7%
RE21-01	Supercritical Water Oxidation Demonstration at Plant No. 1	Garney Pacific, Inc.	01/10/2023	\$1,172,000	\$0	\$1,172,000	16.6%	10.0%	10.0%	0.0%	10.0%
SC19-03	Return Activated Sludge Pump Station Elevator Rehabilitation at Plant No. 2	OTIS	12/16/2020	\$432,400	\$0	\$432,400	0.0%	20.0%	20.0%	0.0%	20.0%
			Total	\$678,062,229	\$8,550,569	\$686,612,798					

Engineering Program Contract Performance Report

For the Period Ending March 31, 2023

Table 2 - GM Awarded Construction Contracts

Project/Contract		Contractor	Award Date	Contract Amount			
				Award	Change Orders	Current	% Spent
FR2-0022	Digester O Structural Repairs at Plant No. 2	Jamison Engineering	03/14/2022	\$89,500	\$0	\$89,500	0.0%
FR2-0025	Digester O-T and Q-R Bridge Repair at Plant No. 2	O'Connell Engineering & Construction, Inc.	03/14/2022	\$115,450	\$38,000	\$153,450	81.4%
FRC-0009	Bitter Point Trunk Sewer Repair at Bitter Point Pump Station	Charles King Company	10/13/2022	\$275,000	\$0	\$275,000	0.0%
MP2-002	Ella Tunnel Walkway Replacement at Plant 2	O'Connell Engineering & Construction, Inc.	10/20/2022	\$49,450	\$0	\$49,450	0.0%
			Total	\$529,400	\$38,000	\$567,400	

Table 3 - Operations Committee Awarded Construction Contracts

Project/Contract		Contractor	Award Date	Contract Amount			
				Award	Change Orders	Current	% Spent
FE19-13	VFD Replacements at Seal Beach Pump Station	Energy Management Corporation	03/23/2022	\$138,650	\$0	\$138,650	100.0%
			Total	\$138,650	\$0	\$138,650	

Table 4 - Closed Board-Awarded Construction Contracts

Project/Contract		Contractor	Award Date	Closed Date	Contract Amount			Contingency		
				Total						
No Board-awarded construction contract closed this quarter										

Table 5 - Closed GM-Awarded Construction Contracts

Project/Contract		Contractor	Award Date	Closed Date	Original Award Amount	Change Orders	Final Contract Amount	Final Change Order Rate
				Total				
No GM-awarded construction contract closed this quarter								

Table 6 - Closed Committee -Awarded Construction Contracts

Project/Contract		Contractor	Award Date	Closed Date	Original Award Amount	Change Orders	Final Contract Amount	Final Change Order Rate
FE18-16	Truck Loading Basement Drain Modifications at Plant No. 1	MMC, Inc.	10/06/2021	03/14/2023	\$162,500	\$13,814	\$176,314	8.5%
FR1-0014	Laboratory Building HVAC Controls Replacement at Plant No. 1	Retrofit Service Company, Inc.	02/02/2022	11/17/2022	\$176,847	\$14,246	\$191,093	8.1%
				Total	\$339,347	\$28,060	\$367,407	

Engineering Program Contract Performance Report

For the Period Ending March 31, 2023

Table 7 - Active Engineering Services Agreements

Project/Contract		Consultant	Type	Award Date	Contract Amount				Contingency			
					Award	Amendments	Current	% Spent	Original	Current	Used	Remaining
1-23	Santa Ana Trunk Sewer Rehabilitation	Stantec Consulting Services, Inc.	PDSA	04/27/2022	\$3,880,000	\$0	\$3,880,000	26%	10.0%	10.0%	0.0%	10.0%
1-24	Greenville Trunk Improvements	Brown and Caldwell	PDSA	10/31/2022	\$4,730,000	\$0	\$4,730,000	1%	10.0%	10.0%	0.0%	10.0%
2-49	Taft Branch Improvements	Woodard & Curran, Inc.	PDSA	02/24/2021	\$2,200,000	\$55,000	\$2,255,000	62%	10.0%	10.0%	2.5%	7.5%
2-72B	Newhope-Placentia Trunk Replacement, Segment B	Lee & Ro, Inc.	PCSA	03/23/2016	\$3,253,946	\$0	\$3,253,946	72%	10.0%	10.0%	0.0%	10.0%
3-62	Westminster Blvd Force Main Replacement	Stantec Consulting Services, Inc.	PCSA	12/18/2019	\$1,183,000	\$0	\$1,183,000	42%	10.0%	10.0%	0.0%	10.0%
3-64	Rehabilitation of Western Regional Sewers	AECOM Technical Services, Inc.	PDSA	01/27/2016	\$17,639,250	\$195,850	\$17,835,100	63%	10.0%	10.0%	1.1%	8.9%
3-64B	Los Alamitos Trunk Sewer Rehabilitation	AECOM Technical Services, Inc.	PCSA	05/26/2021	\$610,000	\$0	\$610,000	47%	10.0%	10.0%	0.0%	10.0%
3-67	Seal Beach Pump Station Replacement	Lee & Ro, Inc.	PDSA	12/18/2019	\$5,947,850	\$744,435	\$6,692,285	92%	10.0%	12.6%	12.5%	0.1%
5-67	Bay Bridge Pump Station Replacement	Arcadis U.S., Inc.	PDSA	10/25/2017	\$7,137,000	\$1,779,825	\$8,916,825	62%	10.0%	35.0%	24.9%	10.1%
5-68	Newport Beach Pump Station Pressurization Improvements	Dudek	PDSA	05/27/2020	\$542,988	\$0	\$542,988	86%	10.0%	10.0%	0.0%	10.0%
6-20	Fairview Trunk Rehabilitation	Dudek	PDSA	07/27/2022	\$1,200,000	\$0	\$1,200,000	13%	10.0%	10.0%	0.0%	10.0%

Engineering Program Contract Performance Report

For the Period Ending March 31,2023

Table 7 - Active Engineering Services Agreements

Project/Contract		Consultant	Type	Award Date	Contract Amount				Contingency			
					Award	Amendments	Current	% Spent	Original	Current	Used	Remaining
7-65	Gisler-Red Hill Interceptor and Baker Force Main Rehabilitation	CDM Smith Inc.	PDSA	09/23/2020	\$1,754,000	\$175,400	\$1,929,400	98%	10.0%	10.0%	10.0%	0.0%
7-66	Sunflower and Red Hill Interceptor Repairs	GHD, Inc.	PCSA	07/28/2021	\$166,000	\$0	\$166,000	42%	10.0%	10.0%	0.0%	10.0%
7-68	MacArthur Force Main Improvements	Michael Baker International, Inc.	PDSA	05/26/2021	\$500,000	\$0	\$500,000	94%	10.0%	10.0%	0.0%	10.0%
FR1-0007	Control Center Offices and Day Training Room Remodeling at Plant No. 1	AECOM Technical Services, Inc.	PSA	07/24/2017	\$48,000	\$33,351	\$81,351	11%	N/A	N/A	69.5%	N/A
J-117B	Outfall Low Flow Pump Station	SEL Engineering Services Inc.	PSA	11/23/2022	\$1,096,074	\$0	\$1,096,074	61%	10.0%	10.0%	0.0%	10.0%
J-117B	Outfall Low Flow Pump Station	Brown and Caldwell	PCSA	12/19/2018	\$8,563,913	\$692,120	\$9,256,033	62%	10.0%	10.0%	8.1%	1.9%
J-124	Digester Gas Facilities Replacement	Brown and Caldwell	PDSA	11/15/2017	\$11,770,000	\$1,177,000	\$12,947,000	97%	10.0%	10.0%	10.0%	0.0%
J-98	Electrical Power Distribution System Improvements	Schweitzer Engineering Laboratories, Inc	PSA	03/25/2020	\$1,296,878	\$0	\$1,296,878	26%	10.0%	10.0%	0.0%	10.0%
J-98	Electrical Power Distribution System Improvements	Brown and Caldwell	PDSA	02/26/2020	\$2,240,000	\$92,078	\$2,332,078	91%	10.0%	10.0%	4.1%	5.9%

Engineering Program Contract Performance Report

For the Period Ending March 31,2023

Table 7 - Active Engineering Services Agreements

Project/Contract		Consultant	Type	Award Date	Contract Amount				Contingency			
					Award	Amendments	Current	% Spent	Original	Current	Used	Remaining
P1-105	Headworks Rehabilitation at Plant 1	Carollo Engineers, Inc	PCSA	03/02/2021	\$16,500,000	\$0	\$16,500,000	28%	10.0%	10.0%	0.0%	10.0%
P1-126	Primary Sedimentation Basins No. 3-5 Replacement at Plant No. 1	Black & Veatch	PDSA	04/27/2022	\$14,163,000	\$0	\$14,163,000	4%	10.0%	10.0%	0.0%	10.0%
P1-128A	Headquarters Complex at Plant No. 1	HDR Engineering, Inc.	PCSA	05/26/2021	\$4,900,000	\$452,997	\$5,352,997	60%	10.0%	10.0%	9.2%	0.8%
P1-128A	Headquarters Complex at Plant No. 1	AECOM Technical Services, Inc.	PSA	04/28/2021	\$6,750,000	\$0	\$6,750,000	55%	10.0%	10.0%	0.0%	10.0%
P1-132	Uninterruptable Power Supply Improvements at Plant 1	Tetra Tech, Inc.	PDSA	10/23/2019	\$784,630	\$62,755	\$847,385	96%	10.0%	10.0%	8.0%	2.0%
P1-133	Primary Sedimentation Basins No. 6-31 Reliability Improvements at Plant No. 1	Carollo Engineers, Inc	PCSA	03/23/2022	\$530,000	\$0	\$530,000	19%	10.0%	10.0%	0.0%	10.0%
P1-134	South Perimeter Security and Utility Improvements at Plant No.1	HDR Engineering, Inc.	PCSA	07/28/2021	\$235,000	\$0	\$235,000	40%	10.0%	10.0%	0.0%	10.0%
P1-137	Supports Buildings Seismic Improvements at Plant No. 1	Simpson, Gumpertz, and Heger	PDSA	07/27/2022	\$1,900,000	\$0	\$1,900,000	15%	0.0%	10.0%	0.0%	10.0%

Engineering Program Contract Performance Report

For the Period Ending March 31, 2023

Table 7 - Active Engineering Services Agreements

Project/Contract		Consultant	Type	Award Date	Contract Amount				Contingency			
					Award	Amendments	Current	% Spent	Original	Current	Used	Remaining
P1-140	Activated Sludge-1 and Secondary Clarifier Rehabilitation	HDR Engineering, Inc.	PDSA	03/06/2023	\$18,462,443	\$0	\$18,462,443	1%	10.0%	10.0%	0.0%	10.0%
P2-122	Headworks Modifications at Plant No. 2 for GWRS Final Expansion	CDM Smith Inc.	PCSA	01/15/2020	\$2,200,000	\$0	\$2,200,000	79%	10.0%	10.0%	0.0%	10.0%
P2-123	Return Activated Sludge Piping Replacement at Plant 2	Spec Services, Inc.	PCSA	09/25/2019	\$252,329	\$25,233	\$277,562	100%	10.0%	10.0%	10.0%	0.0%
P2-124	Interim Food Waste Receiving Facility	Kennedy/Jenks Consultants, Inc.	PDSA	09/05/2018	\$695,000	\$31,168	\$726,168	100%	10.0%	10.0%	4.5%	5.5%
P2-128	TPAD Digester Facility at Plant No.2	Brown and Caldwell	PDSA	07/22/2020	\$39,300,000	\$1,467,788	\$40,767,788	41%	10.0%	10.0%	3.7%	6.3%
P2-137	Digesters Rehabilitation at Plant No. 2	CDM Smith Inc.	PDSA	03/23/2022	\$2,650,000	\$0	\$2,650,000	28%	10.0%	10.0%	0.0%	10.0%
P2-98A	A-Side Primary Clarifiers Replacement at Plant 2	Black & Veatch	PCSA	05/26/2021	\$8,400,000	\$0	\$8,400,000	26%	10.0%	10.0%	0.0%	10.0%
PS18-09	Ocean Outfall Condition Assessment and Scoping Study	Carollo Engineers, Inc	PSA	03/25/2020	\$2,744,000	\$2,009,067	\$4,753,067	76%	10.0%	80.0%	73.2%	6.8%
PS20-02	Collection System Flow Level Monitoring Study	Woodard & Curran, Inc.	PSA	07/28/2021	\$616,562	\$0	\$616,562	32%	0.0%	10.0%	0.0%	10.0%

Engineering Program Contract Performance Report

For the Period Ending March 31,2023

Table 7 - Active Engineering Services Agreements

Project/Contract		Consultant	Type	Award Date	Contract Amount				Contingency			
					Award	Amendments	Current	% Spent	Original	Current	Used	Remaining
PS20-05	Cen Gen Pressure Vessel Integrity Assessment at Plant Nos. 1and 2	Pond & Company	PSA	02/23/2022	\$235,133	\$0	\$235,133	25%	10.0%	10.0%	0.0%	10.0%
PS21-01	Exterior Lighting Study at Plant Nos. 1 and 2	IDS Group, Inc.	PSA	10/17/2022	\$151,660	\$0	\$151,660	37%	10.0%	10.0%	0.0%	10.0%
PS21-04	Energy and Digester Gas Master Plan	Brown and Caldwell	PSA	06/22/2022	\$1,438,036	\$0	\$1,438,036	17%	10.0%	10.0%	0.0%	10.0%
RE21-01	Supercritical Water Oxidation Demonstration at Plant No. 1	374Water Systems, Inc.	PSA	01/09/2023	\$5,139,000	\$0	\$5,139,000	40%	0.0%	10.0%	0.0%	10.0%
				Total	\$207,059,638	\$8,994,067	\$216,053,705					

Table 8 - Active Task Orders by Master Agreement

Agreement/Project			Consultant	Award Date	Original Task Order Value	Amendments	Current Task Order Value	% Spent
2017 Master Agreements for On-Call Planning Studies								
PS19-03	Laboratory Rehabilitation Feasibility Study		HDR Engineering, Inc.	10/20/2020	\$274,888	\$0	\$274,888	76%
2018 Master Professional Design Service Agreements								
FE18-06	CenGen Instrument Air Compressors Replacement at Plant No. 1		IDS Group, Inc.	04/27/2020	\$89,876	\$0	\$89,876	69%
FE18-13	Redhill Relief Sewer Relocation at State Route 55		GHD, Inc.	03/27/2020	\$168,612	\$105,331	\$273,943	84%
FE18-14	Plant Water Pipeline Replacement in Kinnison, Lindstrom, and Scott Tunnels at Plant No. 2		Dudek	11/06/2019	\$108,308	\$0	\$108,308	96%
FE18-15	Plant Boiler System Relief at Plant No. 2		IDS Group, Inc.	10/22/2019	\$23,299	\$0	\$23,299	55%
FE18-16	Truck Loading Basement Drain Modifications at Plant No. 1		GHD, Inc.	12/04/2019	\$70,130	\$18,365	\$88,495	93%
FE18-19	12KV Distribution B and East RAS Pump Station Roofing Replacement		HDR Engineering, Inc.	09/16/2019	\$74,771	\$8,672	\$83,443	87%
FE18-20	DAFT Air Compressors Replacement at Plant No. 1		HDR Engineering, Inc.	09/02/2020	\$243,954	\$11,982	\$255,936	82%
FE19-02	Cengen Plant Water Pipe Replacement at Plant No. 1		AECOM Technical Services, Inc.	07/08/2020	\$156,498	\$143,378	\$299,876	73%
FE19-03	Trickling Filter Sludge and Scum Pumps Replacement at Plant No. 1		Black & Veatch	09/02/2020	\$244,728	\$55,272	\$300,000	97%
FE19-06	EPSA Motor Cooling Improvements at Plant No. 2		IDS Group, Inc.	05/06/2020	\$88,206	\$0	\$88,206	96%
FE19-10	Digesters C, D, F, G and I Gas Balance Lines Replacement at Plant No. 2		GHD, Inc.	02/03/2021	\$25,000	\$58,000	\$83,000	71%
FE19-11	Primary Clarifiers Nos. 6-31 Lighting and Alarm Improvements at Plant No. 1		AECOM Technical Services, Inc.	09/21/2020	\$226,685	\$6,137	\$232,822	74%
FE19-13	VFD Replacements at Seal Beach Pump Station		AECOM Technical Services, Inc.	03/24/2021	\$78,033	\$0	\$78,033	60%

Table 8 - Active Task Orders by Master Agreement

Agreement/Project			Consultant	Award Date	Original Task Order Value	Amendments	Current Task Order Value	% Spent
	FE20-01	Wastehauler Station Safety and Security Improvements	AECOM Technical Services, Inc.	03/16/2021	\$161,012	\$16,247	\$177,259	80%
	FE20-02	Digester C, D, F, and G Mechanical Rehabilitation at Plant No. 2	HDR Engineering, Inc.	03/02/2021	\$188,212	\$22,396	\$210,608	89%
	FE20-03	Return Activated Sludge Discharge Piping Replacement at Activated Sludge Plant No. 1	GHD, Inc.	06/30/2021	\$249,000	\$0	\$249,000	82%
	FE20-04	Cengen Cooling Water Pipe Replacement at Plant No. 2	Dudek	06/01/2021	\$240,000	\$60,000	\$300,000	91%
	FE20-05	Plant Water Piping Replacement at Secondary Clarifiers 1-26 at Plant No. 1	IDS Group, Inc.	06/22/2021	\$186,626	\$0	\$186,626	75%
	FE20-07	Santa Ana Trunk Rehabilitation at Plant No. 1	GHD, Inc.	05/04/2021	\$100,625	\$0	\$100,625	91%
	FE20-08	Olive Sub-Trunk Siphon Rehabilitation at Santa Ana River	Dudek	06/21/2021	\$240,000	\$0	\$240,000	86%
	FE20-09	CenGen Smoke Detection Improvements at Plant No. 1 and No. 2	IDS Group, Inc.	06/30/2021	\$63,275	\$0	\$63,275	80%
	FR1-0011	VFD Replacements at Plant No. 1	Black & Veatch	04/08/2021	\$283,000	\$17,000	\$300,000	83%
	FR2-0013	P2 Trickling Filter Sludge Pump Room Exhaust Fan Relocation at Plant No.2	AECOM Technical Services, Inc.	11/06/2019	\$75,120	\$0	\$75,120	100%
	FR2-0022	Digester O Structural Repairs at Plant No. 2	AECOM Technical Services, Inc.	04/12/2021	\$46,115	\$0	\$46,115	98%
	FRC-0009	Bitter Point Trunk Sewer Repair at Bitter Point Pump Station	GHD, Inc.	06/17/2021	\$159,451	\$0	\$159,451	78%
	J-127	Natural Gas Pipelines Replacement at Plant Nos. 1 and 2	Black & Veatch	01/21/2019	\$271,964	\$28,036	\$300,000	100%
	P1-135	Digester Ferric Chloride Piping Replacement at Plant No. 1	Dudek	02/19/2020	\$127,174	\$0	\$127,174	100%
2020 Master Agreements for On-Call Planning Studies								
	PS19-03	Laboratory Rehabilitation Feasibility Study	Hazen and Sawyer	01/17/2023	\$23,825	\$0	\$23,825	0%

Table 8 - Active Task Orders by Master Agreement

Agreement/Project			Consultant	Award Date	Original Task Order Value	Amendments	Current Task Order Value	% Spent
PS20-01	Collections Yard Relocation Feasibility Study		AECOM Technical Services, Inc.	09/09/2021	\$147,181	\$0	\$147,181	100%
PS20-03	Truck Loading Bay Odor Control Improvements Study at Plant No. 2		Hazen and Sawyer	08/03/2021	\$226,021	\$0	\$226,021	100%
PS20-04	Power Generation Overhaul Feasibility Study		Brown and Caldwell	04/26/2021	\$122,748	\$101,518	\$224,266	90%
PS20-07	College Pump Station Wet Well Condition Assessment Study		HDR Engineering, Inc.	01/18/2022	\$182,297	\$0	\$182,297	70%
PS20-09	Thickening & Dewatering Plant Water Study at Plant No. 1		HDR Engineering, Inc.	04/21/2022	\$219,670	\$0	\$219,670	42%
PS21-03	Process Model for Denitrification Alternatives at Activated Sludge 1		HDR Engineering, Inc.	01/18/2022	\$25,000	\$0	\$25,000	100%
PS21-08	Pure Oxygen Activated Sludge Operations Study at Plant No. 2		Hazen and Sawyer	09/22/2022	\$241,791	\$0	\$241,791	74%
PS22-03	CEQA/MMRP Measures Review		HDR Engineering, Inc.	11/28/2022	\$24,963	\$0	\$24,963	52%
RE20-02	Chemical Resilience Study at Plant No.1 and 2		Hazen and Sawyer	06/02/2021	\$278,784	\$15,003	\$293,787	100%
2021 Master Professional Design Service Agreements								
FE21-05	Warehouse Stations and Demolition at Plant No. 2		ProjectLine Technical Services, Inc.	04/26/2022	\$228,328	\$42,953	\$271,281	100%
FE21-08	Newhope-Placentia Sewer Manhole Replacements		GHD, Inc.	02/28/2023	\$235,820	\$0	\$235,820	0%
FE22-01	Platform Modifications for Process Areas at Plant No. 1 and No. 2		ProjectLine Technical Services, Inc.	03/14/2023	\$159,296	\$0	\$159,296	0%
FR1-0017	Trickling Filter Valve Replacement at Plant No. 1		Dudek	08/16/2022	\$101,108	\$0	\$101,108	50%
FR1-0018	Dewatering Centrifuge Diverter Gate Improvements at Plant No. 1		Dudek	08/16/2022	\$140,000	\$0	\$140,000	25%
FR2-0023	Activated Sludge Clarifier Entry Improvements at Plant No. 2		AECOM Technical Services, Inc.	01/13/2022	\$120,030	\$79,828	\$199,858	49%

Table 8 - Active Task Orders by Master Agreement

Agreement/Project			Consultant	Award Date	Original Task Order Value	Amendments	Current Task Order Value	% Spent
FR2-0027	Heavy Mechanics Group Office Space Upgrade at Plant No. 2		ProjectLine Technical Services. Inc.	09/13/2022	\$126,153	\$0	\$126,153	32%
FRC-0010	Warner Avenue Vault Cover Improvements		Kleinfelder, Inc.	07/01/2021	\$205,000	\$0	\$205,000	88%
FRC-0014	Magnolia Sewer Manhole Abandonment at Interstate-5		Brown and Caldwell	03/15/2023	\$195,055	\$0	\$195,055	0%
FRJ-0003	Interplant Gas Line Blow Off Vault Repairs		Dudek	09/08/2022	\$165,000	\$0	\$165,000	27%
P2-127	Collections Yard Relocation and Warehouse Demolition at Plant No. 2		ProjectLine Technical Services. Inc.	08/02/2022	\$188,898	\$83,284	\$272,182	67%
SC19-06	EPSA Standby Power Generator Control Upgrades at Plant No. 2		Spec Services, Inc.	11/03/2021	\$241,153	\$58,847	\$300,000	38%
				Total	\$7,862,683	\$932,249	\$8,794,932	

Table 9 - Planning Studies Status Report

Project Number	Project Name	Status	Allocated Budget
PS17-03	Active Fault Location Study at Plant No. 2	Active	\$973,007
PS18-06	Go/No-Go Lights and Signage	Active	\$495,000
PS18-09	Ocean Outfall Condition Assessment and Scoping Study	Active	\$5,302,717
PS19-03	Laboratory Rehabilitation Feasibility Study	Active	\$450,000
PS20-01	Collections Yard Relocation Feasibility Study	Active	\$279,867
PS20-02	Collection System Flow Level Monitoring Study	Active	\$743,218
PS20-03	Truck Loading Bay Odor Control Improvements Study at Plant No. 2	Active	\$319,189
PS20-04	Power Generation Overhaul Feasibility Study	Active	\$320,000
PS20-05	Cen Gen Pressure Vessel Integrity Assessment at Plant Nos. 1 and 2	Active	\$269,934
PS20-07	College Pump Station Wet Well Condition Assessment Study	Active	\$365,000
PS20-08	Euclid Trunk Sewer Hydraulic Modeling and Odor Control Analyses	Active	\$500,000
PS20-09	Thickening & Dewatering Plant Water Study at Plant No. 1	Active	\$400,000
PS21-01	Exterior Lighting Study at Plant Nos. 1 and 2	Active	\$345,533
PS21-02	Public Announcement and Fire System at Plant Nos. 1 and 2	Active	\$500,000
PS21-03	Process Model for Denitrification Alternatives at Activated Sludge 1	Active	\$36,787
PS21-04	Energy and Digester Gas Master Plan	Active	\$1,785,000
PS21-05	CAD Design Manual Update for 3D Design	Active	\$758,000
PS21-06	Urban Runoff Optimization Study	Active	\$1,000,000
PS21-07	Process Simulation Model Development for Cen Gen Facilities	Active	\$121,000
PS21-08	Pure Oxygen Activated Sludge Operations Study at Plant No. 2	Active	\$360,000
PS21-10	Sidestream Nitrogen Management	Active	\$211,000
PS22-02	Onsite Oxygen Generation Feasibility Study at Plant No. 2	Active	\$295,000
PS22-03	CEQA/MMRP Measures Review	Active	\$40,000
Grand Total			\$15,870,252
Number of Chartered Projects			23
Board Approved Program Budget			\$28,652,000
Remaining Unallocated Budget			\$12,781,748

Table 10 - Research Program Status Report

Project Number	Project Name	Status	Allocated Budget
RE20-02	Chemical Resilience Study at Plant No.1 and 2	Active	\$329,996
RE20-06	Co-Thickened Sludge Pump Trial at Plant No. 1	Active	\$160,000
RE21-01	Supercritical Water Oxidation Demonstration at Plant No. 1	Active	\$7,941,029
Grand Total			\$8,431,025
Number of Chartered Projects			3
Board Approved Program Budget			\$10,000,000
Remaining Unallocated Budget			\$1,568,975

Table 11 - Small Construction Projects Program Status Report

Project Number	Project Name	Status	Allocated Budget
FE18-06	CenGen Instrument Air Compressors Replacement at Plant No. 1	Active	\$1,150,000
FE18-13	Redhill Relief Sewer Relocation at State Route 55	Active	\$3,550,000
FE18-14	Plant Water Pipeline Replacement in Kinnison, Lindstrom, and Scott Tunnels at Plant No. 2	Active	\$1,895,000
FE18-15	Plant Boiler System Relief at Plant No. 2	Active	\$560,000
FE18-16	Truck Loading Basement Drain Modifications at Plant No. 1	Active	\$592,000
FE18-20	DAFT Air Compressors Replacement at Plant No. 1	Active	\$1,360,000
FE19-01	Pump Station Portable Generator Connectors	Active	\$2,570,000
FE19-02	Cengen Plant Water Pipe Replacement at Plant No. 1	Active	\$4,165,000
FE19-03	Trickling Filter Sludge and Scum Pumps Replacement at Plant No. 1	Active	\$3,200,000
FE19-04	Sunflower Pump Replacement at Plant No. 1	Active	\$4,300,000
FE19-06	EPSA Motor Cooling Improvements at Plant No. 2	Active	\$1,475,000
FE19-08	Secondary Treatment VFD Replacements at Plant No. 2	Active	\$2,900,000
FE19-10	Digesters C, D, F, G and I Gas Balance Lines Replacement at Plant No. 2	Active	\$1,200,000
FE19-11	Primary Clarifiers Nos. 6-31 Lighting and Alarm Improvements at Plant No. 1	Active	\$1,250,000
FE19-12	Rebuild Shop Fume Extractor Installation at Plant No 1	Active	\$560,000
FE19-13	VFD Replacements at Seal Beach Pump Station	Active	\$520,000
FE20-01	Wastehauler Station Safety and Security Improvements	Active	\$2,671,500
FE20-02	Digester C, D, F, and G Mechanical Rehabilitation at Plant No. 2	Active	\$3,950,000
FE20-03	Return Activated Sludge Discharge Piping Replacement at Activated Sludge Plant No. 1	Active	\$6,840,000
FE20-04	Cengen Cooling Water Pipe Replacement at Plant No. 2	Active	\$5,180,000
FE20-05	Plant Water Piping Replacement at Secondary Clarifiers 1-26 at Plant No. 1	Active	\$1,545,000
FE20-06	Thickening and Dewatering Building Pipe Support Improvements at Plant No. 1	Active	\$1,500,000
FE20-07	Santa Ana Trunk Rehabilitation at Plant No. 1	Active	\$765,000
FE20-08	Olive Sub-Trunk Siphon Rehabilitation at Santa Ana River	Active	\$2,800,000
FE20-09	CenGen Smoke Detection Improvements at Plant No. 1 and No. 2	Active	\$950,000
FE21-01	Plasma Cutting Fume Extractor installation at Plant No. 1 Rebuild Shop	Active	\$277,000
FE21-02	Lighting Improvements Boiler and Sludge Dewatering Areas at Plant No. 1	Active	\$320,000
FE21-04	Thickening and Dewatering Facility Handrail Installation at Plant No. 1	Active	\$230,000
FE21-05	Warehouse Stations and Demolition at Plant No. 2	Active	\$2,200,000
FE21-06	Chemical Dosing Station Installation at Westside Pump Station	Active	\$560,000

Table 11 - Small Construction Projects Program Status Report

Project Number	Project Name	Status	Allocated Budget
FE21-07	Liquid Oxygen Tank A Replacement at Plant No. 2	Active	\$3,800,000
FE21-08	Newhope-Placentia Sewer Manhole Replacements	Active	\$1,225,000
FE22-01	Platform Modifications for Process Areas at Plant No. 1 and No. 2	Active	\$1,300,000
Grand Total			\$67,360,500
Number of Chartered Projects			33
Board Approved Program Budget			\$90,000,000
Remaining Unallocated Budget			\$22,639,500

Table 12 - Information Technology Capital Program Status Report

Project Number	Project Name	Status	Allocated Budget
IT19-01	IT Safety VPP Systems (IT19-01)	Active	\$210,000
IT19-05	IT P1 & P2 Data Refresh (IT19-05)	Active	\$1,200,000
IT20-05	Client Management Modernization (ICE-69_IT20-05) 6520005	Active	\$99,000
IT20-06	Nintex Workflow Cloud Implementation (ICE-75_IT20-06) 6520006	Active	\$350,000
IT20-08	Field Computer for Nerissa and Interface with LIMS(ICE-68_IT20-07) 6520008	Active	\$121,000
IT20-10	Digitize Quality Assurance Tracking Processes/TNI/ELAP Standards (ICE-76_IT20-10) 6520010	Active	\$145,700
IT21-01	Access Network Equipment Obsolescence Replacement (ICE-79_IT21-01) 6521001	Active	\$1,249,500
IT21-04	Databridge Scale Management Software (ICE - 84_IT21-04)	Active	\$42,752
IT21-05	JD Edwards Server Migration and Upgrade (ICE - 86_IT21-05) 6521005	Active	\$88,000
IT22-01	Fortigate Firewall Replacement (ICE - 92_IT22-01) 6522001	Active	\$275,000
IT22-02	Two Routers and Two Switches for Dual ISPs (ICE - 94_IT22-02) 6522002	Active	\$80,000
Grand Total			\$3,860,952
Number of Chartered Projects			11
Board Approved Program Budget			\$10,000,000
Remaining Unallocated Budget			\$6,139,048

Table 13 - Operations & Maintenance Capital Program Status Report

Project Number	Project Name	Status	Allocated Budget
SC19-03	Return Activated Sludge Pump Station Elevator Rehabilitation at Plant No. 2	Active	\$890,000
SC19-06	EPSA Standby Power Generator Control Upgrades at Plant No. 2	Active	\$3,450,000
SC20-02	Ocean Outfall Booster Station Elevator Rehabilitation	Active	\$410,000
SC22-01	EPSA Electrical Building and Distribution Center H HVAC System Replacement at Plant No. 2	Active	\$4,350,000
Grand Total			\$9,100,000
Number of Chartered Projects			4
Board Approved Program Budget			\$15,622,000
Remaining Unallocated Budget			\$6,522,000

File #: 2023-3001

Agenda Date: 6/7/2023

Agenda Item No: 4.

FROM: Robert Thompson, General Manager
Originator: Riaz Moinuddin, Director of Operations & Maintenance

SUBJECT:

LIQUID OXYGEN (LOX) PURCHASE, SPECIFICATION NO. C-2023-1398BD

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve a Chemical Supplier Agreement to Airgas USA, LLC for the purchase of liquid oxygen, Specification No. C-2023-1398BD for the period beginning August 21, 2023 through August 20, 2024, for a unit price of \$0.53 per centum cubic feet (ccf) delivered, plus applicable sales tax, for a total estimated annual amount of \$912,000; with four one-year renewal options; and
- B. Authorize unit price adjustment of up to 15% annually using mutually acceptable price indices for subsequent agreement renewal periods.

BACKGROUND

Orange County Sanitation District's (OC San) Plant No. 2 facility requires liquid oxygen for the secondary treatment process. OC San purchases liquid oxygen to reduce shipping volume and lower overall costs. The liquid oxygen is vaporized on site and feeds as a gas to the activated sludge plant to remove biodegradable organic matter and suspended solids.

RELEVANT STANDARDS

- Comply with environmental permit requirements
- Maintain a culture of improving efficiency to reduce the cost to provide the current service level or standard

PROBLEM

The current liquid oxygen agreement will expire on August 20, 2023.

PROPOSED SOLUTION

Approve an agreement with Airgas USA, LLC for the purchase of liquid oxygen.

TIMING CONCERNS

OC San requires a new agreement to be in place before the existing agreement expires on August 20, 2023.

RAMIFICATIONS OF NOT TAKING ACTION

If the new vendor is not in place before the expiration of the existing contract, OC San would not be able to provide effective secondary treatment for Plant No. 2's non-reclaimable flow.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

A Notice Inviting Bids was issued on March 24, 2023 via PlanetBids. Bids were due on April 25, 2023. OC San received three (3) bids valid for 180 calendar days from the bid opening date. Linde Inc. has been determined as Non-Responsive due to taking exceptions to a number of items. The following is a list of the firms that submitted a bid:

Company Name	Bid	Determination
AIRGAS USA, LLC	\$0.53 Delivered Cost per CCF@STP = \$912,000.00	Responsive
LINDE INC.	\$0.98 Delivered Cost per CCF@STP = \$1,680,000.00	Non-Responsive
WESTAIR GASES & EQUIPMENT	\$1.00 Delivered Cost per CCF@STP = \$1,728,000.00	Responsive

The bids which were evaluated in accordance with OC San's Purchasing Ordinance. Staff recommends approving an agreement to Airgas USA, LLC, the lowest responsive, responsible bidder.

CEQA

N/A

FINANCIAL CONSIDERATIONS

This request complies with authority levels of OC San's Purchasing Ordinance. This item will be funded by the FY 2022-23 and 2023-24 approved budget for Plant No. 2 Operations Division. (Line item: Repairs and Maintenance, Section 6, Page 88).

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Chemical Supplier Agreement

CHEMICAL SUPPLIER AGREEMENT
Purchase of Liquid Oxygen (LOX)
Specification No. C-2023-1398BD

This CHEMICAL SUPPLIER AGREEMENT (hereinafter referred to as "Agreement"), is made and entered into as of the date fully executed below, by and between Orange County Sanitation District (hereinafter referred to as "OC San") and Airgas USA, LLC, an Air Liquide Company (hereinafter referred to as "Supplier"), and collectively referred to herein as the "Parties."

RECITALS

WHEREAS, OC San desires to temporarily engage Supplier to provide Liquid Oxygen (LOX) as described in Exhibit "A"; and

WHEREAS, Supplier submitted its Bid dated April 24, 2023; and

WHEREAS, on June 28, 2023, OC San's Board of Directors, by minute order, authorized execution of this Agreement.

WHEREAS, OC San has chosen Supplier to provide LOX in accordance with Ordinance No. OC SAN-56; and

NOW, THEREFORE, in consideration of the mutual promises and mutual benefits exchanged between the Parties, the Parties mutually agreed as follows:

1. Introduction

1.1 This Agreement and all exhibits hereto is made by OC San and the Supplier. The terms and conditions herein exclusively govern the purchase of LOX as described in Exhibit "A".

1.2 Exhibits to this Agreement are incorporated by reference and made a part of this Agreement as though fully set forth at length herein.

Exhibit "A" Scope of Work

Exhibit "B" Bid

Exhibit "C" Determined Insurance Requirement Form

Exhibit "D" OC San Safety Standards

Exhibit "E" Human Resources Policies

1.3 In the event of any conflict or inconsistency between the provisions of this Agreement and any of the provisions of the exhibits hereto, the provisions of this Agreement shall in all respects govern and control.

1.4 This Agreement may not be modified, changed, or supplemented, nor may any obligations hereunder be waived or extensions of time for performance granted, except by written instrument signed by both Parties.

1.5 The various headings in this Agreement are inserted for convenience only and shall not affect the meaning or interpretation of this Agreement or any section or provision hereof.

1.6 The term "days", when used in the Agreement, shall mean calendar days, unless otherwise noted as workdays.

- 1.7 The term “workday”. Workdays are defined as all days that are not Saturday, Sunday, or OC San observed holidays. Meetings with OC San staff shall be scheduled from Monday through Friday between the hours of 7:00 a.m. and 4:00 p.m. (exception is Operations staff who maintain plant operations 24 hours per day 7 days per week and work a rotated 12-hour shift) and shall conform to OC San work schedules.
- 1.8 OC San holidays (non-working days) are as follows: New Year’s Day, Martin Luther King, Jr. Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, and Christmas Day.
- 1.9 Supplier shall provide OC San with all required premiums and/or overtime work at no charge beyond the total amount of the Agreement.
- 1.10 Except as expressly provided otherwise, OC San accepts no liability for any expenses, losses, or action incurred or undertaken by Supplier as a result of work performed in anticipation of purchases of said services by OC San.

2. Delivery

- 2.1 LOCATIONS: Deliveries shall be made in accordance with the Scope of Work, Exhibit “A”.
 - 2.2 OC San will pay only for the actual quantity of LOX delivered, based upon certified tare weight and net weight. The quantity invoiced by Supplier and payable by OC San will be for the total net weight of LOX delivered (loaded gross weight minus the tare weight). Tare weight shall be determined immediately after each delivery and prior to cleaning, emptying, or clearing the delivery tank.
 - 2.3 In accordance with Exhibit “A”, a bill of lading shall accompany all shipments.
3. **Possession** Ownership and control of all LOX delivered pursuant to this Agreement shall remain solely and exclusively with Supplier, until complete transfer of possession by delivery to OC San at the designated locations is made by Supplier.

4. Quantity

- 4.1 OC San makes no guarantee to actual use or quantity of LOX purchased. Use may be sporadic based on the wastewater treatment requirements unique to each treatment plant.
- 4.2 OC San will, through the term of this Agreement, purchase LOX from Supplier exclusively, except when OC San determines Supplier cannot make delivery within the time specified, with the quality and quantity specified, at the Agreement price, the level of Service is inadequate, OC San unapproved increase in rate or for any other default or breach of this Agreement. In such event, OC San may purchase LOX elsewhere and charge Supplier any difference in the delivered price to OC San from that provided in this Agreement, or alternatively, OC San may terminate the Agreement based on said breach or failure to deliver the specified product. Quality control tests will be performed by OC San on the delivered LOX to ensure it is consistent with the requirements specified in Exhibit “A”.

5. California Department of Industrial Relations Registration and Record of Wages

- 5.1 Pursuant to Labor Code sections 1720 et seq., and as specified in Title 8, California Code of Regulations section 16000, prevailing wages are required for all Work under this Agreement. It is Supplier’s responsibility to interpret and implement any prevailing wage

requirements and Supplier agrees to pay any penalty or civil damages resulting from a violation of the prevailing wage laws.

- 5.2 Supplier and its subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4(a)(1), the Work is subject to compliance monitoring and enforcement by the California Department of Industrial Relations (DIR).
- 5.3 Pursuant to Labor Code section 1773.2, a copy of the prevailing rate of per diem wages is available upon request at OC San's principal office. The prevailing rate of per diem wages may also be found at the DIR website for prevailing wage determinations at <http://www.dir.ca.gov/DLSR/PWD>.
- 5.4 Supplier and its subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 164611. Pursuant to Labor Code sections 1773.2 and 1771.4(a)(2), Supplier shall post a copy of the prevailing rate of per diem wages at the job site.
- 5.5 Supplier and its subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776. Supplier and its subcontractors shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Pursuant to Labor Code section 1776, the Supplier and its subcontractors shall furnish a copy of all certified payroll records to OC San and/or the general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement of the Department of Industrial Relations. Pursuant to Labor Code section 1776(h), penalties for non-compliance with a request for payroll records may be deducted from progress payments.
 - 5.5.1 As a condition to receiving payments, Supplier agrees to present to OC San, along with any request for payment, all applicable and necessary certified payrolls and other required documents for the time period covering such payment request. Pursuant to Title 8, California Code of Regulations section 16463, OC San shall withhold any portion of a payment, up to and including the entire payment amount, until certified payroll forms and any other required documents are properly submitted. In the event certified payroll forms do not comply with the requirements of Labor Code section 1776, OC San may continue to withhold sufficient funds to cover estimated wages and penalties under the Agreement.
- 5.6 The Supplier and any of its subcontractors shall comply with Labor Code section 1774 and section 1775. Pursuant to Labor Code section 1775, the Supplier and any of its subcontractors shall forfeit to OC San a penalty of not more than two hundred dollars (\$200) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the DIR for the work or craft in which the worker is employed for any Work.
 - 5.6.1 In addition to the penalty, and pursuant to Labor Code section 1775, the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Supplier or its subcontractor.
- 5.7 Supplier and its subcontractors shall comply with Labor Code sections 1810 through 1815. Supplier and its subcontractors shall restrict working hours to eight (8) hours per day and

forty (40) hours per week, except that Work performed in excess of those limits shall be permitted upon compensation for all excess hours worked at not less than one and one-half (1.5) times the basic rate of pay, as provided in Labor Code section 1815. The Supplier shall forfeit, as a penalty to OC San, twenty-five dollars (\$25) per worker per calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of Labor Code sections 1810 through 1815.

- 5.8 Supplier and its subcontractors shall comply with Labor Code sections 1777.5, 1777.6, and 1777.7 concerning the employment of apprentices by Supplier or any subcontractor.
- 5.9 Supplier shall include, at a minimum, a copy of the following provisions in any contract it enters into with any subcontractor: Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860, and 1861.
- 5.10 Pursuant to Labor Code sections 1860 and 3700, the Supplier and its subcontractors will be required to secure the payment of compensation to employees. Pursuant to Labor Code section 1861, Supplier and its subcontractors, by accepting this Agreement, certify that:

“I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers’ compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Agreement.”

6. Pricing and Invoicing

- 6.1 Supplier will invoice for LOX delivered in accordance with Exhibit “A”, and in accordance with the unit price(s) listed in Exhibit “B”. Prices shall include all cartage and taxes except California State Sales Tax. The sales tax will be paid by OC San.
- 6.2 OC San shall pay, net thirty (30) days, upon receipt and approval by OC San of itemized invoices, submitted in a form acceptable to OC San to enable audit of the charges thereon. Supplier shall email invoices to OC San Accounts Payable at APStaff@ocsan.gov and “INVOICE” with the Purchase Order Number and LOX shall be referenced in the subject line. All invoices shall include a description of the delivery location, the delivery date, and the unit price(s).

7. Modifications

- 7.1 This Agreement may be modified or changed only by written instrument in the form of an amendment to this Agreement signed by both Parties.
- 7.2 Pricing modifications: The prices established in this Agreement shall remain firm for the Agreement term. Any adjustments made will allow for increases or decreases in the manufactured cost of LOX and will be based upon OC San validated information furnished by Supplier and OC San sources. Adjustments will only be reviewed on an annual basis. OC San reserves the right to agree with or reject the proposed unit price increase or decrease.
- 7.3 Price changes may be made through the OC San Purchase Order Process.

- 8. **Agreement Term** The term of this Agreement shall be for one (1) year commencing on August 21, 2023 and continuing through August 20, 2024.

9. Renewals

- 9.1 OC San may exercise the option to renew the Agreement for up to four (4) one-year periods. OC San shall make no obligation to renew nor give reason if it elects not to renew. The prices established in the original Agreement may be adjusted. The adjustment will allow for any increase or decrease in the manufactured cost of the LOX and will be based upon OC San validated information furnished by Supplier and OC San sources. Adjustments will only be reviewed on an annual basis. OC San reserves the right to agree with or reject the proposed unit price increase or decrease.
- 9.2 Renewals may be made through the OC San Purchase Order Process.

10. Termination

- 10.1 OC San reserves the right to terminate this Agreement for its convenience, with or without cause, in whole or in part, at any time, by written notice from OC San. Upon receipt of a termination notice, Supplier shall immediately discontinue all work under this Agreement (unless the notice directs otherwise). OC San shall thereafter, within thirty (30) days, pay Supplier for work performed (cost and fee) to the date of termination. Supplier expressly waives any claim to receive anticipated profits to be earned during the uncompleted portion of this Agreement. Such notice of termination shall terminate this Agreement and release OC San from any further fee, cost or claim hereunder by Supplier other than for work performed to the date of termination.
- 10.2 OC San reserves the right to terminate this Agreement immediately upon OC San's determination that Supplier is not meeting specification requirements for delivery of quantities needed, the level of service is inadequate, for poor quality of product, for OC San unapproved increase in unit price(s), or any other default or breach of this Agreement.
- 10.3 OC San may also immediately terminate for default of this Agreement in whole or in part by written notice to Supplier:
- if Supplier becomes insolvent or files a petition under the Bankruptcy Act; or
 - if Supplier sells its business; or
 - if Supplier breaches any of the terms of this Agreement; or
 - if total amount of compensation exceeds the amount authorized under this Agreement.
- 10.4 All OC San property in the possession or control of Supplier shall be returned by Supplier to OC San upon demand, or at the termination of this Agreement, whichever occurs first.

- 11. Indemnification and Hold Harmless Provision** Supplier shall assume all responsibility for damages to property and/or injuries to persons, including accidental death, which may arise out of or be caused by Supplier's services under this Agreement, or by its subcontractor or by anyone directly or indirectly employed by Supplier, and whether such damage or injury shall accrue or be discovered before or after the termination of the Agreement. Except as to the sole active negligence of or willful misconduct of OC San, Supplier shall indemnify, protect, defend and hold harmless OC San, its elected and appointed officials, officers, agents and employees, from and against any and all claims, liabilities, damages or expenses of any nature, including attorneys' fees: (a) for injury to or death of any person or damage to property or interference with the use of property, arising out of or in connection with Supplier's performance under this Agreement, and/or (b) on account of any goods and services provided under this Agreement. This indemnification provision shall apply to any acts or omissions, willful misconduct, or negligent misconduct, whether active or passive, on the part of Supplier or anyone employed by or working under Supplier. To the maximum extent permitted by law, Supplier's duty to defend shall apply whether or not such claims, allegations, lawsuits, or proceedings have merit or are

meritless, or which involve claims or allegations that any of the parties to be defended were actively, passively, or concurrently negligent, or which otherwise assert that the parties to be defended are responsible, in whole or in part, for any loss, damage, or injury. Supplier agrees to provide this defense immediately upon written notice from OC San, and with well qualified, adequately insured, and experienced legal counsel acceptable to OC San. This section shall survive the expiration or early termination of the Agreement.

12. **Insurance** Supplier shall purchase and maintain, throughout the life of this Agreement and any periods of warranty or extensions, insurance in amounts equal to the requirements set forth in the signed Acknowledgement of Insurance Requirements, Exhibit "C". Supplier shall not commence work under this Agreement until all required insurance is obtained in a form acceptable to OC San, nor shall Supplier allow any subcontractor to commence service pursuant to a subcontract until all insurance required of the subcontractor has been obtained. Failure to maintain required insurance coverage shall result in termination of this Agreement.
13. **Equipment Loss** OC San will be responsible for any loss or damage to Supplier-owned equipment, when OC San determines OC San is at fault, only to the extent of OC San's fault, and will reimburse Supplier for such loss or damage upon receipt of invoices, minus a deduction for any amount determined to be the fault of Supplier or its subcontractor or a third party.
14. **Conflict of Interest and Reporting** Supplier shall at all times avoid conflict of interest or appearance of conflict of interest in performance of this Agreement.
15. **Supplier's Relationship to OC San** Supplier's relationship to OC San in the performance of this Agreement is that of an independent contractor. The personnel performing Services under this Agreement shall, at all times, be under Supplier's exclusive direction and control, and shall be employees of Supplier and not employees of OC San. Supplier shall pay all wages, salaries and other amounts due its employees in connection with this Agreement, and shall be responsible for all legal reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, worker's compensation and similar matters.
16. **OC San Safety Standards**
 - 16.1 In addition to the requirements set forth in Exhibit "A", Supplier shall meet with personnel from OC San's Risk Management Division prior to providing Services to OC San to review safety and accident prevention policies and procedures. All subcontractors should be present at this meeting. Supplier is responsible to inform all subcontractors of the items discussed at this meeting. Supplier shall not be permitted to provide Services to OC San prior to this meeting.
 - 16.2 OC San requires Supplier and its subcontractor(s) to follow and ensure their employees follow all Federal, State, and local regulations as well as OC San Safety Standards while working at OC San locations. If during the Agreement it is discovered that OC San Safety Standards do not comply with Federal, State, or local regulations, then the Supplier is required to follow the most stringent regulatory requirement at no additional cost to OC San. Supplier and all of its employees and subcontractors shall adhere to all applicable OC San Safety Standards attached hereto in Exhibit "D".

17. **Drug-Free Workplace** All employees of Supplier who will perform work under this Agreement must adhere to the California Drug-Free Workplace Act, Government Code Sections 8350 through 8357.
18. **Assignments** Neither this Agreement nor any interest herein or any claim hereunder may be assigned by Supplier either voluntarily or by operation of law, nor may all or substantially all of this Agreement be further subcontracted by Supplier without the prior written consent of OC San.
19. **Attorney's Fees** If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees, costs and necessary disbursements, in addition to any other relief to which it may be entitled.
20. **Permits, Ordinances and Regulations** Any and all fees required by Federal, State, County, City and/or municipal laws, codes and/or tariffs that pertain to work performed under the terms of this Agreement shall be paid by Supplier. Fees demanded for obtaining certificates, including associated inspection fees and expenses of regulatory inspectors shall be paid by Supplier.
21. **Training Certification** When required by regulation, certificates of training shall be maintained on-site for the duration of the activity that requires an employee of Supplier to be certified. Certificates shall be current. Lack of certificates when required will be cause for removal of offending personnel from the site, termination of the Agreement, or both.
22. **Compliance with Law** Supplier warrants that under the performance of this Agreement, it shall comply with all applicable Federal, State and local laws, and all lawful orders rules and regulations thereunder. In connection with the execution of this Agreement, Supplier shall not discriminate against employees or an applicant for employment because of race, religion, color, sex or national origin. Supplier shall take affirmative action to ensure that applicants are employed and employees are treated during their employment without regard to their race, religion, color, sex or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; lay-off or termination; rate of pay, or other forms of compensation; and selection for training, including apprenticeship.
23. **Disputes**
- 23.1 This Agreement shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County, in the event any action is brought in connection with this Agreement or the performance thereof. Pending final resolution of a dispute hereunder, Supplier shall proceed diligently with the performance of this Agreement and in accordance with OC San's decision.
- 23.2 In the event of a dispute as to the construction or interpretation of this Agreement, or any rights or obligations hereunder, the Parties shall first attempt, in good faith, to resolve the dispute by mediation. The Parties shall mutually select a mediator to facilitate the resolution of the dispute. If the Parties are unable to agree on a mediator, the mediation shall be conducted in accordance with the Commercial Mediation Rules of the American Arbitration Agreement, through the alternate dispute resolution procedures of Judicial Arbitration through Mediation Services of Orange County ("JAMS"), or any similar organization or entity conducting an alternate dispute resolution process.

23.3 In the event the Parties are unable to timely resolve the dispute through mediation, the issues in dispute shall be submitted to arbitration pursuant to California Code of Civil Procedure, Part 3, Title 9, Sections 1280 et seq. For such purpose, an agreed arbitrator shall be selected, or in the absence of Agreement, each party shall select an arbitrator, and those two (2) arbitrators shall select a third. Discovery may be conducted in connection with the arbitration proceeding pursuant to California Code of Civil Procedure Section 1283.05. The arbitrator, or three (3) arbitrators acting as a board, shall take such evidence and make such investigation as deemed appropriate and shall render a written decision on the matter in question. The arbitrator shall decide each and every dispute in accordance with the laws of the State of California. The arbitrator's decision and award shall be subject to review for errors of fact or law in the Superior Court for the County of Orange, with a right of appeal from any judgment issued therein.

24. Right to Review Services, Facilities, and Records

24.1 OC San reserves the right to review any portion of the Services performed by Supplier under this Agreement, and Supplier agrees to cooperate to the fullest extent possible. Supplier shall furnish to OC San such reports, statistical data, and other information pertaining to Supplier's Services as shall be reasonably required by OC San to carry out its rights and responsibilities under its agreements with its bondholders or noteholders an in connection with the issuance of its official statements and other prospectuses with respect to the offering, sale, and issuance of its bond and other obligations.

24.2 The right of OC San to review or approve specifications, procedures, instructions, reports, test results, calculations, schedules, or other data that are developed by Supplier shall not relieve Supplier of any obligation set forth herein.

25. Severability Any provision of this Agreement which is found to be invalid or unenforceable shall be ineffective to the extent of such invalidity or unenforceability, and the invalidity or unenforceability of such provision shall not affect the validity or enforceability of the remaining provisions hereof.

26. Waiver The waiver of either party of any breach or violation of, or default under, any provision of this Agreement, shall not be deemed a continuing waiver by such party of any other provision or of any subsequent breach or violation of this Agreement or default thereunder.

27. Breach Any breach by Supplier to which OC San does not object shall not operate as a waiver of OC San to seek remedies available to it for any subsequent breach.

28. South Coast Air Quality Management District's (SCAQMD) Requirements It is Supplier's responsibility that all equipment furnished and installed be in accordance with the latest rules and regulations of the South Coast Air Quality Management District (SCAQMD). All work practices, which may have associated emissions such as sandblasting, open field spray painting or demolition of asbestos containing components or structures, shall comply with the appropriate rules and regulations of the SCAQMD.

29. Performance Time is of the essence in the performance of the provisions hereof.

30. Familiarity with Work By executing this Agreement, Supplier warrants that: 1) it has investigated the work to be performed; (b) it understands the facilities, difficulties, and restrictions of the work under this Agreement; and (c) it has examined the site of the work

and is aware of all conditions at the site. Should Supplier discover any latent or unknown conditions materially differing from those inherent in the work or as represented by OC San, it shall immediately inform OC San of this and shall not proceed, except at Supplier's risk, until written instructions are received from OC San.

31. **Damage to OC San's Property** Any OC San property damaged by Supplier, its subcontractor(s), or by the personnel of either will be subject to repair or replacement by Supplier at no cost to OC San.
32. **Third Party Rights** Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than OC San and Supplier.
33. **Authority to Execute** The persons executing this Agreement on behalf of the Parties warrant that they are duly authorized to execute this Agreement and that by executing this Agreement, the Parties are formally bound.
34. **Read and Understood** By signing this Agreement, Supplier represents that it has read and understood the terms and conditions of the Agreement.
35. **Entire Agreement** This Agreement constitutes the entire agreement of the Parties and supersedes all prior written or oral and all contemporaneous oral agreements, understandings, and negotiations between the Parties with respect to the subject matter hereof.
36. **Notices** All notices under this Agreement must be in writing. Written notice shall be sent by registered or certified mail, postage prepaid, return receipt requested, or by any other overnight delivery service which delivers to the noticed destination and provides proof of delivery to the sender. Any facsimile notice must be followed within three (3) days by written notice. All notices shall be effective when first received at the following addresses:

OC San: Darius Ghazi
Senior Buyer
Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
dghazi@ocsan.gov

Supplier: Christophe Tardieu
President, West Division
Airgas USA, LLC, an Air Liquide Company
3737 Worsham Avenue
Long Beach, CA 90808
christophe.tardieu@airgas.com

IN WITNESS WHEREOF, intending to be legally bound, the Parties hereto have caused this Agreement to be signed by their duly authorized representatives.

ORANGE COUNTY SANITATION DISTRICT

Dated: _____

By: _____
Chad P. Wanke
Chair, Board of Directors

Dated: _____

By: _____
Kelly A. Lore
Clerk of the Board

Dated: _____

By: _____
Ruth Zintzun
Purchasing & Contracts Manager

Airgas USA, LLC, an Air Liquide Company

Dated: _____

By: _____

Print Name and Title of Officer

LL

Exhibit “A”

SCOPE OF WORK

SCOPE OF WORK
Purchase of Liquid Oxygen (LOX)
SPECIFICATION NO. C-2023-1398BD

This Notice Inviting Bids is for procuring Liquid Oxygen (LOX) for Orange County Sanitation District's (OC San's) Plant 2 as detailed in this Scope of Work.

1. PRODUCT REQUIREMENTS

- 1.1 Liquid Oxygen (LOX) - Quantity:** The Supplier shall provide the unit price of gaseous oxygen (\$/100 scf, where 100 scf = ccf@STP) and the total price for the first year, including delivery and unloading.

The estimated annual LOX demand would be 160,000,000 scf (1,600,000 ccf@STP). It is used for Plant No. 2 biological Activated Sludge (AS) process 24 hours a day and seven days a week. Actual LOX requirements may vary depending on numerous factors, including but not limited to internal plant operations and the quantity and quality of wastewater received at Plant No. 2. Under most circumstances, these factors are beyond Orange County Sanitation District's (OC San's) control. Therefore, LOX demand at Plant No. 2 will not be constant monthly. Historically the LOX demand varies by $\pm 20\%$ around the long-term average usage. The Supplier must meet all variable LOX needs without adjusting the unit price. OC San does not guarantee any minimum or maximum use of LOX.

- 1.2 Liquid Oxygen – Quality:** All LOX deliveries shall conform to the following purity requirements:

Purity, vol. % O ₂	99.5% (min.)
Total hydrocarbons, ppm as CH ₄	50 (max.)
Water, ppm	7 (max.)

OC San reserves the right to demand a "Certificate of Conformance" for any or all deliveries as confirmation that any delivery conforms to purity requirements. Certificate of Conformance will present analytical data on LOX delivered to OC San and the LOX storage tanks. As a minimum, all purity data specified in this section will be analyzed and reported on the "Certificate of Conformance".

A delivery statement shall accompany all shipments and state the delivered gallons, as determined by the delivery vehicle's flow meter and the delivered LOX's actual purity. Payment shall be based on the actual volume of product delivered (expressed as ccf@STP).

- 1.3 Liquid Oxygen - Pricing:** The price provided for LOX under Section 1.1 will remain constant for 12 months, with no exceptions allowed. The Supplier may adjust the price at the beginning of the second and all subsequent 12-month periods by providing acceptable justifications, including variations in energy, O&M, and delivery costs. OC San reserves the right to accept or reject any proposed unit price modifications or request further supporting documents.

1.4 Liquid Oxygen - Storage Facilities: LOX will be delivered to and stored at OC San Plant No. 2, located at 22212 Brookhurst Street, Huntington Beach, CA 92646. The LOX storage facilities consist of two (2) 43,000-gallon, horizontally mounted vacuum- insulated tanks (Tanks A and B) with appurtenant piping and one 9,000-gallon backup tank. LOX is vaporized through atmospheric vaporizers and used in the biological secondary treatment process. Tank A is currently out of service and is expected to be back in service by April 2024.

1.5 Liquid Oxygen - Storage Facilities Monitoring: LOX levels inside the storage tanks will be monitored locally in the OC San SCADA system and remotely by the LOX Supplier at Supplier's production or central monitoring facility. All telemetering instrumentation will be supplied, installed, and configured by LOX Supplier. The Supplier will retain title to and will be responsible for maintaining, at Supplier's own cost, monitoring instrumentation for the duration of the Agreement period. At Agreement termination, the Supplier will remove its telemetering instrumentation. All expenses relating to the tank-level remote monitoring instrumentation, including installation, setup, and maintenance are to be provided at no additional cost to OC San.

1.5.1 Any modifications required to OC San's existing equipment to accommodate Supplier's remote monitoring instrumentation require OC San's approval prior to modification/ installation.

1.6 Liquid Oxygen - Delivery Scheduling: Liquid oxygen is a critical supply component for OC San's wastewater treatment system at Plant No. 2. LOX supply interruption due to delivery or equipment breakdowns will seriously compromise OC San's ability to meet federal and state-mandated regulations. As such, an uninterrupted supply of bulk LOX, in the quantities required, is essential to the success of wastewater operations and will be a critical component of this Agreement.

OC San has no capacity for on-site oxygen generation; therefore, the Supplier is responsible for fulfilling the entire demand by trucking the LOX from the off-site oxygen generation facilities. The Supplier must acknowledge having the assets and capability to provide an uninterrupted supply of LOX as detailed in this Scope of Work.

1.6.1 Deliveries will be automatic, based on an OC San Standing Order to maintain a minimum inventory. Delivery schedules must conform to the requirements of this Scope of Work unless otherwise agreed by OC San authorized staff.

1.6.2 Deliveries must happen with minimum vehicular traffic in the Huntington Beach area where Plant No. 2 is located. Partial load deliveries will not be acceptable except in emergency situations or with OC San authorized staff approval.

1.6.3 Before the delivery truck leaves the site, a delivery ticket documenting the quantity of delivered LOX (expressed as gallons and ccf@STP) and the delivery date and time must be left with OC San Plant No. 2 personnel. The Supplier must use a flow meter on the delivery vehicle to determine the delivered gallons of LOX.

2. GENERAL PROCEDURES

- 2.1** The Supplier shall maintain compliance with all applicable Department of Transportation (DOT) – including, but not limited to 49 CFR 171-180, 382, 383, 387, and 397 – and Occupational Health and Safety Administration (OSHA) – including, but not limited to 29 CFR 1910.1200 – rules and regulations that pertain to the Supplier's equipment or personnel.
- 2.2** Delivery trucks, trailers, and trailer-based LOX transfer piping shall be in good mechanical condition, and the delivery truck driver shall be experienced in LOX offloading. The driver will be responsible for leaving the fill station site in a condition comparable to that existing before the transfer.
- 2.3** Scheduled deliveries will be made Monday through Friday, 7:00 a.m. to 4:00 p.m.
 - 2.3.1** In emergencies, the Supplier can deliver on any day of the week, on an as-needed basis, as directed by OC San.
- 2.4** OC San's Plant No. 2 gate is staffed with security guards on a 24-hour per day basis to check visitors into the plant and for staff protection. The security staff will be opening the gate for the delivery vehicles. Should the security staff be absent, the gates are equipped with intercoms to announce arrivals. Please follow the instructions – DO NOT BLOW HORNS.
- 2.5** The Supplier's delivery vehicles must be crewed only by appropriately commercial-licensed operators. Operators shall be DOT HAZMAT trained and adequately trained in all LOX aspects, including its unique properties, hazards, handling precautions, and delivery aspects. The training must adhere to generally accepted industry standards for LOX delivery drivers. LOX Supplier must be able to demonstrate that they have a training program for drivers. A list of training materials should be submitted to OC San by the LOX Supplier upon request. Shipping papers (delivery ticket), emergency response information, and LOX Safety Data Sheets (SDS) shall be readily available in the delivery driver's vehicle.
- 2.6** At the time of delivery and during the LOX transfer, the Supplier's fully trained and qualified personnel must be in continuous attendance.
- 2.7** OC San reserves the right to observe the LOX fill piping connection, disconnection, and tank filling. The Supplier's personnel shall accommodate all reasonable OC San personnel observation requests.
- 2.8** Vapor plumes associated with line connections/disconnections and line or storage tank purging must always be minimized.
- 2.9** The tanks are equipped with pressure relief systems that could release oxygen in case of tank overfilling. Any liquid spillage caused or noticed by the Supplier's personnel must be immediately reported to OC San plant personnel. Supplier personnel must take all steps necessary to secure the hazardous area in conformance with OC San's safety procedures and NFPA standards.

- 2.9.1 With conditions permitting, the Supplier's driver must remain on-site to ensure that oxygen safety procedures are fulfilled, and normal atmospheric oxygen concentrations return to the fill station area. Failure to re-establish safe operating conditions at the fill station and LOX storage site will be considered a breach of Agreement and could result in Agreement termination.
- 2.9.2 In the event of a spill on asphalt or any petroleum-based material, the Supplier's driver must cordon off the area until the frost that formed has evaporated for at least 30 minutes; do not walk, drive, or roll equipment over the affected area. Personnel exposed to concentrated LOX vapor during a spill must go to an open area to ventilate clothing for at least 30 minutes and avoid any sources of ignition.
- 2.10 Supplier shall provide the telephone number(s) where qualified Supplier personnel can be contacted in the event of an emergency during the LOX delivery in the LOX Storage and Vaporization Systems area. This telephone number must be handled by qualified personnel 24 hours/day, seven days/week, including all holidays. The Supplier must keep contact details and phone numbers up-to-date and known to OC San's operating personnel.
- 2.11 The Supplier must investigate any more-than-one-gallon LOX spills caused by its personnel and submit a written report to OC San. The report must include the date and time of the spill, approximate quantity, cause of the spill, approximate time required for the spill to vaporize and dissipate, procedure followed by the driver to secure the hazardous area and ensure the fill station returned to safe atmospheric oxygen concentrations, and recommended steps to prevent similar spills in the future. A written report will be provided to OC San no later than 14 calendar days after the spill. Failure to comply with this provision of the Scope of Work will be considered a breach of Agreement requirements and could result in Agreement termination.
- 2.12 Supplier shall deliver LOX in company-owned vehicles.
 - 2.12.1 If the Supplier uses third-party delivery equipment and personnel, Supplier must provide OC San with the name of the hauling company and the safety-related provisions set forth between the Supplier and the hauling company before the commencement of the Agreement.
 - 2.12.2 The Supplier is responsible for providing training on all OC San contract delivery provisions to the third-party delivery company at Supplier's own cost.
- 2.13 Upon execution of the Agreement, one set of reproducible originals of the Product Information Bulletin and Safety Data Sheet (SDS) for LOX will be provided by Supplier to OC San Safety personnel.

3. DELIVERY UNLOADING PROCEDURES

Upon arrival at OC San Plant No. 2 Treatment Facility, the driver shall:

- 3.1** Notify the Operations Center at Plant No. 2. The driver shall sign the visitor log and notify the clerk that he/she is at Plant No. 2 to deliver LOX. At this point, the driver may be directed where and how to proceed, if necessary.
- 3.2** OC San reserves the right to reject any delivery that does not conform to these specifications or may compromise overall Plant No. 2 safety. Delivery rejection will not be applied capriciously and will not result in additional costs to OC San.
- 3.3** Supplier shall comply with the requirements of OC San's Chemical Delivery SOP (i.e., OPS-SOP-39-002) and all other safety requirements as referenced in the Agreement.
- 3.4** Supplier shall have documented prior supply and delivery experience comparable to OC San LOX demand with three industrial references (references must be submitted with bid documents).

File #: 2023-3022

Agenda Date: 6/7/2023

Agenda Item No: 5.

FROM: Robert Thompson, General Manager
Originator: Riaz Moinuddin, Director of Operations & Maintenance

SUBJECT:

MANHOLE REHABILITATION SERVICES, SPECIFICATION NO. S-2023-1391BD

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve a General Services Contract to Ayala Engineering, Inc. to provide Manhole Rehabilitation Services, Specification No. S-2023-1391BD for a total amount not to exceed \$881,750 for the period beginning July 1, 2023 through June 30, 2024, with four one-year renewal options; and
- B. Approve an annual contingency of \$132,263 (15%).

BACKGROUND

The Orange County Sanitation District (OC San) owns approximately 4,400 manhole structures throughout Orange County that provide access to the wastewater collection system. Manhole structures are typically made of concrete and protectively lined with either an epoxy or PVC coating. As these assets age, the manhole structures require rehabilitation measures due to environmental corrosion, water infiltration, and age to extend their useful life. OC San currently contracts with a service provider to fulfill these needs.

RELEVANT STANDARDS

- Maintain a proactive asset management program
- Protect OC San assets
- Commitment to safety & reducing risk in all operations

PROBLEM

OC San manhole structures are typically made of concrete and protectively lined with either an epoxy or PVC coating. As these assets age, the manhole structures require rehabilitation since coating failures lead to corrosion which eventually compromise the structural integrity of the manhole. The current contracted service has reached the end of its approved renewal periods.

PROPOSED SOLUTION

Staff recommends approving a manhole rehabilitation services contract to Ayala Engineering, Inc.

TIMING CONCERNS

Once concrete or lining starts to fail on a manhole, the damage will spread if corrective action is not taken and, if left for long periods of time, can lead to a potential collapse. Additionally, it is important to react to and urgently repair manholes as lining material separating from the structure could fall into the sewer line causing a sewage spill.

RAMIFICATIONS OF NOT TAKING ACTION

Without a contract in place, degrading manhole structures will continue without mitigation and pose a structural risk to the wastewater collection system and the public. Individual purchase orders in lieu of a convenience blanket contracts are time-consuming and will reduce the speed at which repairs can commence.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

A Notice Inviting Bids was issued on March 9, 2023 via PlanetBids. Bids were due on April 12, 2023. OC San received three bids valid for 180 calendar days from the bid opening date.

BID RESULTS

Company Name:	Bid:	Determination:
Ayala Engineering, Inc.	\$ 881,750	Responsive
Sancon Technologies, Inc.	\$ 965,600	Responsive
Downstream Services, Inc.	\$2,854,561	Responsive
OC San's Engineer Estimate: \$900,000		

Based on the results, staff recommends awarding the contract to Ayala Engineering, Inc. The term of the contract will begin July 1, 2023 through June 30, 2024, with four optional one-year renewals.

CEQA

N/A

FINANCIAL CONSIDERATIONS

This request complies with the authority levels of OC San's Purchasing Ordinance. This budgeted item is in the fiscal year 2023-2024. Line item: Section 6, Page 76.

ATTACHMENT

The following attachment(s) may be viewed online at the OC San website (www.ocsan.gov) with the complete agenda package:

- Draft General Services Contract

MB:ds:sr

**GENERAL SERVICES CONTRACT
MANHOLE REHABILITATION SERVICES
Specification No. S-2023-1391BD**

This GENERAL SERVICES CONTRACT (hereinafter referred to as "Contract"), is made and entered into as of the date fully executed below, by and between Orange County Sanitation District (hereinafter referred to as "OC San") and _____ (hereinafter referred to as "Contractor"), and collectively referred to herein as the "Parties."

RECITALS

WHEREAS, OC San desires to retain the services of Contractor for Manhole Rehabilitation Services ("Services") as described in Exhibit "A" attached hereto and incorporated herein by this reference; and

WHEREAS, Contractor is qualified to perform the Services by virtue of experience, training, education, and expertise; and

WHEREAS, OC San desires to engage Contractor to provide the Services; and

WHEREAS, OC San selected Contractor to provide the Services in accordance with Ordinance No. OC SAN-56; and

WHEREAS, on _____, OC San's Board of Directors, by minute order, authorized execution of this Contract.

NOW, THEREFORE, in consideration of the above recitals and the mutual promises and benefits specified below, the Parties agree as follows:

1. General.

1.1 This Contract and all exhibits hereto are made by OC San and the Contractor.

1.2 The following exhibits, in order of precedence, are incorporated by reference and made part of this Contract.

Exhibit "A" – Scope of Work
Exhibit "B" – Bid
Exhibit "C" – Determined Insurance Requirement Form
Exhibit "D" – Contractor Safety Standards
Exhibit "E" – Human Resources Policies
Exhibit "F" – Not Used
Exhibit "G" – Not Used

1.3 In the event of any conflict or inconsistency between the provisions of this Contract and any of the provisions of the exhibits hereto, the provisions in the Contract shall control and thereafter the provisions in the document highest in precedence shall be controlling.

1.4 Except as expressly provided otherwise, OC San accepts no liability for any expenses, losses, or actions incurred or undertaken by Contractor as a result of work performed in anticipation of acquisition of the Services by OC San.

- 1.5 Work Hours: Shall be as specified in Exhibit "A."
- 1.6 Days: Shall mean calendar days, unless otherwise noted.
- 1.7 OC San holidays (non-working days) are as follows: New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, and Christmas Day.
- 1.8 Work: Shall mean all work, labor, and materials necessary to provide the Services.
- 1.9 The provisions of this Contract may be amended or waived only by an amendment executed by authorized representatives of both Parties.
- 1.10 The various headings in this Contract are inserted for convenience only and shall not affect the meaning or interpretation of this Contract or any paragraph or provision hereof.

2. Scope of Work.

- 2.1 Contractor shall perform the Services identified in Exhibit "A" in accordance with generally accepted industry and professional standards.
- 2.2 Modifications to Scope of Work. OC San shall have the right to modify the Scope of Work at any time. All modifications must be made by an amendment signed by both Parties.
- 2.3 Familiarity with Work. By executing this Contract, Contractor warrants that: (a) it has investigated the work to be performed; and (b) it understands the facilities, difficulties, and restrictions of the work under this Contract. Should Contractor discover any latent or unknown condition materially differing from those inherent in the work or as represented by OC San, it shall immediately inform OC San of this and shall not proceed, except at Contractor's risk, until written instructions are received from OC San.
- 2.4 Performance. Time is of the essence in the performance of the provisions hereof.

3. Contract Term.

- 3.1 The term of this Contract shall be for one (1) year commencing on the effective date of the Notice to Proceed.
- 3.2 Renewals. At its sole discretion, OC San may exercise the option to renew this Contract for up to four (4) one-year periods. This Contract may be renewed by an OC San Purchase Order. OC San shall have no obligation to renew the Contract nor to give a reason if it elects not to renew it.
- 3.3 Extensions. The term of this Contract may be extended only by an amendment signed by both Parties.

4. Payments and Invoicing.

- 4.1 OC San shall pay itemized invoices for work completed in accordance with Exhibit "A", and in accordance with the unit price(s) listed in Exhibit "B" thirty (30) days from receipt of the invoice and after approval by OC San's Project Manager or designee. OC San shall be the determining party, in its sole discretion, as to whether the Services have been satisfactorily completed.

- 4.2 Price adjustments for optional renewal periods may be based upon mutually acceptable price indices.
- 4.3 Contractor shall submit its invoices to OC San Accounts Payable by electronic mail to APStaff@OCSan.gov. In the subject line include "INVOICE" and the Purchase Order Number.

5. California Department of Industrial Relations Registration and Record of Wages.

- 5.1 To the extent Contractor's employees and/or its subcontractors perform work related to this Contract for which Prevailing Wage Determinations have been issued by the California Department of Industrial Relations (DIR) as more specifically defined under Labor Code section 1720 et seq., prevailing wages are required to be paid for applicable work under this Contract. It is Contractor's responsibility to interpret and implement any prevailing wage requirements and Contractor agrees to pay any penalty or civil damages resulting from a violation of the prevailing wage laws.
- 5.2 Contractor and its subcontractors shall comply with the registration requirements of Labor Code section 1725.5. Pursuant to Labor Code section 1771.4(a)(1), the work is subject to compliance monitoring and enforcement by the California Department of Industrial Relations (DIR).
- 5.3 Pursuant to Labor Code section 1773.2, a copy of the prevailing rate of per diem wages is available upon request at OC San's principal office. The prevailing rate of per diem wages may also be found at the DIR website for prevailing wage determinations at <http://www.dir.ca.gov/DLSR/PWD>.
- 5.4 Contractor and its subcontractors shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations section 16461(e). Pursuant to Labor Code sections 1773.2 and 1771.4(a)(2), Contractor shall post a copy of the prevailing rate of per diem wages at the job site.
- 5.5 Contractor and its subcontractors shall maintain accurate payroll records and shall comply with all the provisions of Labor Code section 1776. Contractor and its subcontractors shall submit payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4(a)(3). Pursuant to Labor Code section 1776, the Contractor and its subcontractors shall furnish a copy of all certified payroll records to OC San and/or the general public upon request, provided the public request is made through OC San, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement of the Department of Industrial Relations. Pursuant to Labor Code section 1776(h), penalties for non-compliance with a request for payroll records may be deducted from progress payments.
 - 5.5.1 As a condition to receiving payments, Contractor agrees to present to OC San, along with any request for payment, all applicable and necessary certified payrolls and other required documents for the period covering such payment request. Pursuant to Title 8, California Code of Regulations section 16463, OC San shall withhold any portion of a payment, up to and including the entire payment amount, until certified payroll forms and any other required documents are properly submitted. In the event certified payroll forms do not comply with the

requirements of Labor Code section 1776, OC San may continue to withhold sufficient funds to cover estimated wages and penalties under the Contract.

- 5.6 The Contractor and its subcontractors shall comply with Labor Code section 1774 and section 1775. Pursuant to Labor Code section 1775, the Contractor and any of its subcontractors shall forfeit to OC San a penalty of not more than two hundred dollars (\$200) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the DIR for the work or craft in which the worker is employed for any work.

5.6.1 In addition to the penalty and pursuant to Labor Code section 1775, the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Contractor or its subcontractor.

- 5.7 Contractor and its subcontractors shall comply with Labor Code sections 1810 through 1815. Contractor and its subcontractors shall restrict working hours to eight (8) hours per day and forty (40) hours per week, except that work performed in excess of those limits shall be permitted upon compensation for all excess hours worked at not less than one and one-half (1.5) times the basic rate of pay, as provided in Labor Code section 1815. The Contractor shall forfeit, as a penalty to OC San, twenty-five dollars (\$25) per worker per calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of Labor Code sections 1810 through 1815.

- 5.8 Contractor and its subcontractors shall comply with Labor Code sections 1777.5, 1777.6, and 1777.7 concerning the employment of apprentices by Contractor or any subcontractor.

- 5.9 Contractor shall include, at a minimum, a copy of the following provisions in any contract it enters into with any subcontractor: Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860, and 1861.

- 5.10 Pursuant to Labor Code sections 1860 and 3700, the Contractor and its subcontractors will be required to secure the payment of compensation to employees. Pursuant to Labor Code section 1861, Contractor, by accepting this contract, certifies that:

“I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers’ compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.”

Contractor shall ensure that all its contracts with its subcontractors provide the provision above.

6. **Damage to OC San’s Property.** Any of OC San’s property damaged by Contractor, any subcontractor, or by the personnel of either will be subject to repair or replacement by Contractor at no cost to OC San.

7. **Freight (F.O.B. Destination).** Contractor assumes full responsibility for all transportation, transportation scheduling, packing, handling, insurance, and other services associated with delivery of all products deemed necessary under this Contract.
8. **Audit Rights.** Contractor agrees that, during the term of this Contract and for a period of three (3) years after its expiration or termination, OC San shall have access to and the right to examine any directly pertinent books, documents, and records of Contractor relating to the invoices submitted by Contractor pursuant to this Contract.
9. **Contractor Safety Standards and Human Resources Policies.** OC San requires Contractor and its subcontractor(s) to follow and ensure their employees follow all Federal, State, and local regulations as well as the Contractor Safety Standards while working at OC San locations. If, during the course of the Contract, it is discovered that the Contractor Safety Standards do not comply with Federal, State, or local regulations, the Contractor is required to follow the most stringent regulatory requirement at no additional cost to OC San. Contractor, its subcontractors, and all of their employees shall adhere to the safety requirements in Exhibit "A," all applicable Contractor Safety Standards in Exhibit "D," and the Human Resources Policies in Exhibit "E."
10. **Insurance.** Contractor and all its subcontractors shall purchase and maintain, throughout the term of this Contract and any periods of warranty or extensions, insurance in amounts equal to the requirements set forth in the signed Exhibit "C" – Determined Insurance Requirement Form. Contractor shall not commence work under this Contract until all required insurance is obtained in a form acceptable to OC San, nor shall Contractor allow any subcontractor to commence service pursuant to a subcontract until all insurance required of the subcontractor has been obtained. Failure to obtain and maintain the required insurance coverage shall result in termination of this Contract.
11. **Bonds.** Not Used.
12. **Indemnification and Hold Harmless Provision.** Contractor shall assume all responsibility for damages to property and/or injuries to persons, including accidental death, which may arise out of or may be caused by Contractor's Services under this Contract, or by its subcontractor(s), or by anyone directly or indirectly employed by Contractor, and whether such damage or injury shall accrue or be discovered before or after the termination of the Contract. Except as to the sole active negligence of or willful misconduct of OC San, Contractor shall indemnify, protect, defend, and hold harmless OC San, its elected and appointed officials, officers, agents, and employees from and against any and all claims, liabilities, damages, or expenses of any nature, including attorneys' fees: (a) for injury to or death of any person, or damage to property, or interference with the use of property arising out of or in connection with Contractor's performance under the Contract, and/or (b) on account of use of any copyrighted or uncopyrighted material, composition, or process; or any patented or unpatented invention, article, or appliance furnished or used under the Contract, and/or (c) on account of any goods and services provided under this Contract. This indemnification provision shall apply to any acts or omissions, willful misconduct, or negligent misconduct, whether active or passive, on the part of Contractor or anyone employed by or working under Contractor. To the maximum extent permitted by law, Contractor's duty to defend shall apply whether or not such claims, allegations, lawsuits, or proceedings have merit or are meritless; or which involve claims or allegations that any of the parties to be defended were actively, passively, or concurrently negligent; or which otherwise assert that the parties to be defended are responsible, in whole

or in part, for any loss, damage, or injury. Contractor agrees to provide this defense immediately upon written notice from OC San, and with well qualified, adequately insured, and experienced legal counsel acceptable to OC San. This section shall survive the expiration or early termination of the Contract.

13. **Independent Contractor.** The relationship between the Parties hereto is that of an independent contractor and nothing herein shall be deemed to make Contractor an OC San employee. During the performance of this Contract, Contractor and its officers, employees, and agents shall act in an independent capacity and shall not act as OC San's officers, employees, or agents. Contractor and its officers, employees, and agents shall obtain no rights to any benefits which accrue to OC San's employees.
14. **Subcontracting and Assignment.** Contractor shall not delegate any duties nor assign any rights under this Contract without the prior written consent of OC San. Any such attempted delegation or assignment shall be void.
15. **Disclosure.** Contractor agrees not to disclose, to any third party, data or information generated from this Contract without the prior written consent from OC San.
16. **Non-Liability of OC San Officers and Employees.** No officer or employee of OC San shall be personally liable to Contractor, or any successor-in-interest, in the event of any default or breach by OC San, or for any amount which may become due to Contractor or to its successor, or for breach of any obligation under the terms of this Contract.
17. **Third-Party Rights.** Nothing in this Contract shall be construed to give any rights or benefits to anyone other than OC San and Contractor.
18. **Applicable Laws and Regulations.** Contractor shall comply with all applicable Federal, State, and local laws, rules, and regulations. Contractor also agrees to indemnify and hold OC San harmless from any and all damages and liabilities assessed against OC San as a result of Contractor's noncompliance therewith. Any provision required by law to be included herein shall be deemed included as a part of this Contract whether or not specifically included or referenced.
19. **Licenses, Permits, Ordinances, and Regulations.** Contractor represents and warrants to OC San that it has obtained all licenses, permits, qualifications, and approvals of whatever nature that are legally required to provide the Services. Any and all fees required by Federal, State, County, City, and/or municipal laws, codes, and/or tariffs that pertain to the work performed under this Contract will be paid by Contractor.
20. **Regulatory Requirements.** Contractor shall perform all work under this Contract in strict conformance with applicable Federal, State, and local regulatory requirements including, but not limited to, 40 CFR 122, 123, 124, 257, 258, 260, 261, and 503, Title 22, 23, and Water Codes Division 2.
21. **Environmental Compliance.** Contractor shall, at its own cost and expense, comply with all Federal, State, and local environmental laws, regulations, and policies which apply to the Contractor, its subcontractors, and the Services, including, but not limited to, all applicable Federal, State, and local air pollution control laws and regulations.

22. **South Coast Air Quality Management District's Requirements.** It is Contractor's responsibility to ensure that all equipment furnished and installed be in accordance with the latest rules and regulations of the South Coast Air Quality Management District (SCAQMD). All Contract work practices, which may have associated emissions such as sandblasting, open field spray painting, or demolition of asbestos containing components or structures shall comply with the appropriate rules and regulations of SCAQMD.
23. **Warranties.** In addition to the warranties stated in Exhibit "A," the following shall apply:
23.1 Manufacturer's standard warranty shall apply. All manufacturer warranties shall commence on the date of acceptance of the work as complete by the OC San Project Manager or designee.
24. **Dispute Resolution.**
24.1 In the event of a dispute as to the construction or interpretation of this Contract, or any rights or obligations hereunder, the Parties shall first attempt, in good faith, to resolve the dispute by mediation. The Parties shall mutually select a mediator to facilitate the resolution of the dispute. If the Parties are unable to agree on a mediator, the mediation shall be conducted in accordance with the Commercial Mediation Rules of the American Arbitration Agreement, through the alternate dispute resolution procedures of Judicial Arbitration through Mediation Services of Orange County ("JAMS"), or any similar organization or entity conducting an alternate dispute resolution process.
24.2 In the event the Parties are unable to timely resolve the dispute through mediation, the issues in dispute shall be submitted to arbitration pursuant to Code of Civil Procedure, Part 3, Title 9, sections 1280 et seq. For such purpose, an agreed arbitrator shall be selected, or in the absence of agreement, each party shall select an arbitrator, and those two (2) arbitrators shall select a third. Discovery may be conducted in connection with the arbitration proceeding pursuant to Code of Civil Procedure section 1283.05. The arbitrator, or three (3) arbitrators acting as a board, shall take such evidence and make such investigation as deemed appropriate and shall render a written decision on the matter in question. The arbitrator shall decide each and every dispute in accordance with the laws of the State of California. The arbitrator's decision and award shall be subject to review for errors of fact or law in the Superior Court for the County of Orange, with a right of appeal from any judgment issued therein.
25. **Pass-Through Damages. In the event the Contractor disposes of debris, rubbish, excess materials, or any other waste into the sewer system OC San may be subject to damages incurred as fines. Such fines may include those charged by permitting agencies or cities. The cost of these damages as validated by OC San shall be passed to the Contractor.** Contractor agrees to pay such damages and further agrees that OC San may offset the amount of these damages from any monies due or that may become due Contractor under this Contract. Contractor also agrees that to the extent the amount of these damages exceeds any monies due to the Contractor under this Contract, Contractor shall pay all such amounts to OC San upon demand.
26. **Liquidated Damages.** Not Used.
27. **Remedies.** In addition to other remedies available in law or equity, if the Contractor fails to make delivery of the goods and Services or repudiates its obligations under this Contract, or if OC San rejects the goods or Services or revokes acceptance of the goods and Services, OC San may (a) cancel the Contract; (b) recover whatever amount of the purchase price OC San

has paid, and/or (c) “cover” by purchasing, or contracting to purchase, substitute goods and Services for those due from Contractor. In the event OC San elects to “cover” as described in (c), OC San shall be entitled to recover from Contractor as damages the difference between the cost of the substitute goods and Services and the Contract price, together with any incidental or consequential damages.

28. Force Majeure. Neither party shall be liable for delays caused by accident, flood, acts of God, fire, labor trouble, war, acts of government, or any other cause beyond its control, but the affected party shall use reasonable efforts to minimize the extent of the delay. Work affected by a force majeure condition may be rescheduled by mutual consent of the Parties.

29. Termination.

29.1 OC San reserves the right to terminate this Contract for its convenience, with or without cause, in whole or in part, at any time, by written notice from OC San. Upon receipt of a termination notice, Contractor shall immediately discontinue all work under this Contract (unless the notice directs otherwise). OC San shall thereafter, within thirty (30) days, pay Contractor for work performed (cost and fee) through the date of termination. Contractor expressly waives any claim to receive anticipated profits to be earned during the uncompleted portion of this Contract. Such notice of termination shall terminate this Contract and release OC San from any further fee, cost, or claim hereunder by Contractor other than for work performed through the date of termination.

29.2 OC San reserves the right to terminate this Contract immediately upon OC San’s determination that Contractor is not complying with the Scope of Work requirements, if the level of service is inadequate, or for any other default of this Contract.

29.3 OC San may also immediately terminate this Contract for default, in whole or in part, by written notice to Contractor:

- if Contractor becomes insolvent or files a petition under the Bankruptcy Act; or
- if Contractor sells its business; or
- if Contractor breaches any of the terms of this Contract; or
- if the total amount of compensation exceeds the amount authorized under this Contract.

29.4 All OC San’s property in the possession or control of Contractor shall be returned by Contractor to OC San on demand or at the expiration or early termination of this Contract, whichever occurs first.

30. Attorney’s Fees. If any action at law or in equity or if any proceeding in the form of an Alternative Dispute Resolution (ADR) is necessary to enforce or interpret the terms of this Contract, the prevailing party shall be entitled to reasonable attorney’s fees, costs, and necessary disbursements in addition to any other relief to which the prevailing party may be entitled.

31. Waiver. The waiver by either party of any breach or violation of, or default under, any provision of this Contract shall not be deemed a continuing waiver by such party of any other provision or of any subsequent breach or violation of this Contract or default thereunder. Any breach by Contractor to which OC San does not object shall not operate as a waiver of OC San’s rights to seek remedies available to it for any subsequent breach.

32. **Severability.** If any section, subsection, or provision of this Contract; or any agreement or instrument contemplated hereby; or the application of such section, subsection, or provision is held invalid, the remainder of this Contract or instrument in the application of such section, subsection, or provision to persons or circumstances other than those to which it is held invalid, shall not be affected thereby, unless the effect of such invalidity shall be to substantially frustrate the expectations of the Parties.

33. **Survival.** The provisions of this Contract dealing with payment, warranty, indemnity, pass-through damages, and forum for enforcement shall survive expiration or early termination of this Contract.

34. **Governing Law.** This Contract shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in the County of Orange in the event any action is brought in connection with this Contract or the performance thereof.

35. **Notices.**

35.1 All notices under this Contract must be in writing. Written notice shall be delivered by personal service, by electronic telecommunication, or sent by registered or certified mail, postage prepaid, return receipt requested, or by any other overnight delivery service which delivers to the noticed destination and provides proof of delivery to the sender. Rejection or other refusal to accept or the inability to deliver because of changed address for which no notice was given as provided hereunder shall be deemed to be receipt of the notice, demand, or request sent. All notices shall be effective when first received at the following addresses:

OC San: Jeremey Arbiso
 Buyer
 Orange County Sanitation District
 10844 Ellis Avenue
 Fountain Valley, CA 92708
 JArbiso@ocsan.gov

Contractor: _____ [Contact Name]
 _____ [Contact Title]
 _____ [Company Name]
 _____ [Street Address]
 _____ [City, State, Zip Code]
 _____ [Email Address]

35.2 Each party shall provide the other party written notice of any change in address as soon as practicable.

36. **Read and Understood.** By signing this Contract, Contractor represents that it has read and understood the terms and conditions of the Contract.

37. **Authority to Execute.** The persons executing this Contract on behalf of the Parties warrant that they are duly authorized to execute this Contract and that by executing this Contract, the Parties are formally bound.

38. **Entire Agreement.** This Contract constitutes the entire agreement of the Parties and supersedes all prior written or oral communications and all contemporaneous oral agreements, understandings, and negotiations between the Parties with respect to the subject matter hereof.

[Intentionally left blank. Signatures follow on the next page.]

DRAFT -
DO NOT SUBMIT

ated: _____

By: _____
Kelly A. Lore
Clerk of the Board

ated: _____

By: _____
Ruth Zintzun
Purchasing & Contracts Manager

[CONTRACTOR]

ated: _____

By: _____

Print Name and Title of Officer

ated: _____

By: _____
Kelly A. Lore
Clerk of the Board

ated: _____

By: _____
Ruth Zintzun
Purchasing & Contracts Manager

[CONTRACTOR]

ated: _____

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Ruth Zintzun
Purchasing & Contracts Manager

[CONTRACTOR]

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By: _____

Print Name and Title of Officer

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Kelly A. Lore
Clerk of the Board

ated: _____

By: _____
Ruth Zintzun
Purchasing & Contracts Manager

[CONTRACTOR]

ated: _____

By: _____

Print Name and Title of Officer

EXHIBIT A
SCOPE OF WORK
For
Manhole Rehabilitation Services

Exhibit A
SCOPE OF WORK
Manhole Rehabilitation Services
SPECIFICATION NO. S-2023-1391BD

1 Purpose

The Orange County Sanitation District (OC San) requires the rehabilitation of sewer manholes, and other structures. The Scope of Work (SOW) involves the rehabilitation of deteriorated, damaged, aged, corroded, and/or offset manholes using polyurethane, epoxy coating techniques. The work will also include associated tasks such as traffic control and obtaining encroachment permits. The work will take place throughout OC San's service areas.

2 Description

Manhole rehabilitation shall conform to subsections of the latest edition of Standard Specifications for Public Works Construction, The "Greenbook" (SSPWC).

The rehabilitation of manholes shall be accomplished using either:

- a. One hundred percent (100%) solids, plural-component applied epoxy coating (Raven 405, Madewell Mainstay DS-5 ultra-high build Epoxy, Sauereisen 210X, or approved equal).
- b. One hundred percent (100%), plural-component applied polyurethane coating (Sprayroq Spraywall, or approved equal)
- c. One hundred percent (100%), PVC applied coating (Armorlok Liner, or approved equal)
- d. One hundred percent (100%), mortar repair back original dimensions (when liner is not present)
- e. One hundred percent (100%), mortar repair back original dimensions, (Prior to application of spray liner or other approved process)
- f. Transitional or termination point epoxy (Sikadur 31, or approved equal)
- g. Use of infiltration foam grout injection as determined and approved by OC San inspector (Avanti AV-202, Sika 101AP, or approved equal)

3 Project/Work Elements

All field services necessary for the manhole and structure rehabilitation shall be provided by the Contractor. The work generally includes:

3.1 General

- 3.1.1 Obtain any required permits.
- 3.1.2 The Contractor shall submit a detailed plan for the control of fugitive dust.
- 3.1.3 The Contractor shall submit a detailed plan for the removal of loose material from the interior sides of the manholes. The plan shall include the tool and equipment to be used in the removal and cleaning process; the method to prevent the material from entering the sewer; the method for removal and disposal; and the final disposal location.
- 3.1.4 Inspection, cleaning and surface preparation of the manhole or structure prior to application of the coating system.

- 3.1.5 Provide localized repairs and patching using rapid setting mortars that are compatible with the coating system.
- 3.1.6 Prepare the surface of the concrete or masonry manhole or structure for suitable application and adhesion of the specified product.
- 3.1.7 Any active leaks of the host manhole or structure shall be eliminated prior to the application of the specified coating system.
- 3.1.8 Application of the coating system per section 500-2.7 POLYURETHANE AND EPOXY PROTECTIVE LINING SYSTEM or section 500-2.8 EPOXY LINING SYSTEM of the latest edition of the SSPWC. Application of either material, polyurethane or epoxy, to be determined by OC San, shall be achieved in one (1) continuous pass with a thickness of 125 mils (3 mm).
- 3.1.9 Inspection of the manhole or structure by OC San's Inspector following application of the coating system (See Section 13 below)
- 3.1.10 The project site shall be completely cleaned upon completion of the work and any damaged areas, structures or equipment caused by the Contractor or its subcontractors shall be repaired to OC San's satisfaction at no additional cost to OC San.

4 Resources Available

OC San will provide an inspector to ensure the work is in compliance with the Contract documents. The Contractor shall provide work site access to the OC San staff at all times. All contractor costs associated with deficient work (additional inspection, traffic control, etc.) shall be paid solely by the Contractor.

5 Confined Space Entry and Safety

The Contractor is required to have a copy of its current OC San issued confined space entry permit at every job site at all times. The OC San inspector may shut down the job site at no additional cost to OC San if the permit is not available upon request.

6 Permits and Access

Contractor shall prepare applications, submit and acquire all required permits, including traffic control, encroachment permits and any other necessary permits that may be necessary to complete the work. OC San will reimburse Contractor for permit fees upon request in writing, after demonstrating proof of payment and acceptance by the local public agency issuing the permit.

7 Traffic Control

All traffic control shall be in accordance with the latest CalTrans requirements, OC San and/or City regulations and based on the speed limits posted in the work zones. Flagmen may be required in some locations. Additional local regulations shall have precedence. Contractor shall apply for all traffic control permits. OC San shall reimburse Contractor for permit fees. Safe and adequate pedestrian and vehicular access shall be provided in accordance with the Work Area Traffic Control Handbook, at a minimum. Inadequate or improper signage and delineation for traffic control may be cause for termination of the Contract.

Standard traffic control is defined in the Bid Price Form. Any work requiring extensive traffic control will be paid on a case-by-case basis which must be approved by the Project Manager or designee before the Contractor starts work.

8 Project Schedule/Work Hours

Work hours shall be 7:00 AM to 4:30 PM Monday through Thursday, excluding OC San holidays, unless stricter work hour restrictions exist in the jurisdiction where the work is being performed. Work on Friday's will be allowable on a case-by-case basis and must be approved by OC San prior to performing work.

Contractor shall provide notification of requested workdays to the OC San Project Manager or designee and Inspector a minimum of two (2) business days before beginning work. This notification/request must be approved by the OC San Project Manager or designee or Inspector before beginning work. Performing work without this approval may be cause for termination of the Contract.

9 Noise Control

Shall follow permitting agency's guidelines and as approved by the Engineer. If applicable, multiple permits may be required.

10 Odor Control

Contractor shall furnish all labor, materials, and equipment required and shall carry out effective measures wherever and as often as necessary to prevent the discharge of nuisance odor from its operation into the atmosphere in such quantity as will violate the regulations of the South Coast Air Quality Management District and any other agency having jurisdiction.

11 House Keeping and Rubbish Control

Contractor shall keep the work area in a neat and clean condition, and free from any accumulation of rubbish and debris. The Contractor shall dispose of all rubbish and waste materials collected from the work site and shall establish regular intervals of collection and disposal of such materials and waste. Disposal of rubbish and surplus materials shall be at the Contractor's expense and done in accordance with all Federal, State, and local, codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and the requirements of the Cal/OSHA and OC San Safety Standards.

Note: Disposal of any debris, rubbish, excess materials, or any other waste into the sewer system may be cause for the termination of the Contract and possible penalties.

12 Warranty

Contractor shall warrant all work against defects in materials and workmanship for a period of not less than five (5) years, unless otherwise noted, from the date of final acceptance of the repair. Contractor shall, within a reasonable time (within 90 calendar days) after receipt of written notice, repair defects in materials and workmanship which may develop during the warranty period, and any damage to other work caused by such defects at its sole expense and without any additional cost to OC San.

An OC San Inspector shall conduct the testing. The Inspector shall observe and document warranty repairs to ensure adherence to the requirements of the Contract documents. All work shall be done to the satisfaction of the Inspector.

OC San may, at its sole discretion, choose to perform holiday testing and bond strength testing within the warranty period. Any defects found in materials or workmanship as warranted shall be corrected by the Contractor at no additional cost to OC San.

13 Testing and Inspection

Testing and inspection shall be conducted by OC San's Inspector. Any portion of the coating that does not satisfactorily pass the inspection and testing requirements shall be repaired or replaced by the Contractor at no additional cost to OC San. Additional testing and/or inspection may be done at the discretion of OC San.

- A. Preparation Inspection: The Contractor shall notify the OC San Project Manager or designee and the Inspector of the time and date for inspection and approval two (2) business days prior to completing the surface preparation of each manhole and prior to application of the coating.
- B. The moisture content in the concrete prior to application shall be less than that recommended by the manufacturer. The Inspector may use a "blotter test", or other test method to determine the moisture content.
- C. Thickness Testing: During application a wet film thickness gage, such as those available through Paul N. Gardner Company, Inc., or approved equal, meeting ASTM D4414 (or current ASTM Standards) - Standard Practice for Measurement of Wet Film Thickness of Organic Coatings by Notched Gages, or approved equal, may be used to ensure a monolithic coating and uniform thickness during application.
- D. Holiday Testing (Spark Testing): Contractor is responsible for the Holiday Testing (Spark Test) and OC San shall witness the test. After the protective coating has set hard to the touch it shall be inspected with a currently calibrated high-voltage holiday detection equipment. Surfaces shall first be dried; an induced holiday shall then be made on to the coated concrete surface and shall serve to determine the minimum/maximum voltage to be used to test the coating for holidays at that particular area. The spark tester shall be initially set at 100 volts per 1 mil (25 microns) of film thickness applied but shall be adjusted as necessary to detect the induced holiday (refer to NACE SP0188-2006). All detected holidays shall be marked and repaired by abrading the coating surface with grit disk paper or other hand tooling method. After abrading and cleaning, additional protective coating material can be hand applied to the repair area. All touch-up/repair procedures shall follow the protective coating manufacturer's recommendations.
- E. Measurement of bond strength of the protective coating to the substrate shall be made in accordance with ASTM D4541 (or current ASTM Standards) and is the responsibility of the contractor. The test shall be performed by a qualified technician. The number of manholes and locations inside the manholes to be tested shall be determined by OC San after application of coating. Each manhole tested shall have one or more 20 mm dollies fixed and pulled in accordance with ASTM D4541 (or current ASTM Standards), using an Elcometer instrument. The adhesion pulls shall exceed 200 psi or concrete failure with more than fifty percent (50%) of the subsurface adhered to the coating. For each test that fails, two (2) additional tests shall be performed in the same manhole at locations chosen by OC San. Further

bond tests may be performed by OC San to determine the extent of potentially deficient bonded areas. The Contractor shall repair all bond strength test sites in accordance with the manufacturer's recommendations. If two (2) consecutive dollies in the same manhole fail, the liner shall be removed and replaced at the expense of the Contractor.

F. Visual Inspection: A visual inspection shall be made by the OC San Inspector using the latest NASSCO standard inspection form (if available) or OC San's inspection form. Any deficiencies in the finished coating shall be marked and repaired according to the procedures set forth herein.

G. All hold points determined by OC San inspection are to be discussed, understood, and followed by the contractor. Hold points include before and after repair inspection.

14 Staff Assistance

The Contractor will be assigned a single point of contact for this Contract. Any meetings and/or correspondence related to this Contract shall be scheduled and approved by the OC San Project Manager or designee.

April 5, 2023

ADDENDUM #2

NOTICE TO BIDDERS

**SPECIFICATION NO. S-2023-1391BD
Manhole Rehabilitation Services**

- | |
|--|
| <p>➤ QUESTION CUT-OFF DATE: March 21, 2023 at 2:00 P.M. PT</p> <p>➤ BID SUBMITTAL DATE: April 12, 2023 at 2:00 P.M. PT</p> |
|--|

The following additions, modifications, corrections, deletions, and clarifications are hereby made to the bid document named above.

ADDITIONS

Please see attached detailed drawings (S-049 and S-060) that provide additional structure information (5 pages).

QUESTIONS

- 1 Question: Is a confined space rescue team required to be on site during the performance of the work outlined in the specifications?
- Answer: Yes, a rescue team member needs to be onsite during confined space entry. Confined space entry under this contract is permit-required (whether it be an entry or non-entry rescue). For an entry-rescue, you may use your own qualified rescuers or use an outside rescue service. Also, being that this will be a live sewer line, you'll need to include a ventilation plan or indicate SCBA use in their CS Entry Plan.**
- 2 Question: Can the District please clarify what type of diversion slots will be needed. Hand operated slide gate or wheel operated.
- Answer: OC San utilizes hand operated slide gates.**

Serving:

Anaheim

Brea

Buena Park

Cypress

Fountain Valley

Fullerton

Garden Grove

Huntington Beach

Irvine

La Habra

La Palma

Los Alamitos

Newport Beach

Orange

Placentia

Santa Ana

Seal Beach

Stanton

Tustin

Villa Park

County of Orange

Costa Mesa
Sanitary District

Midway City
Sanitary District

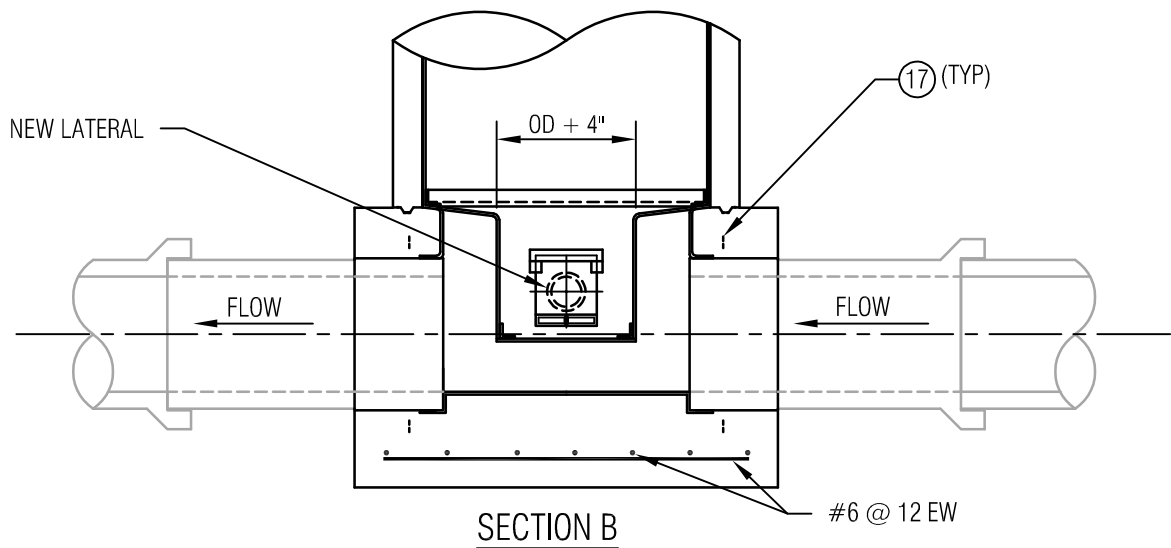
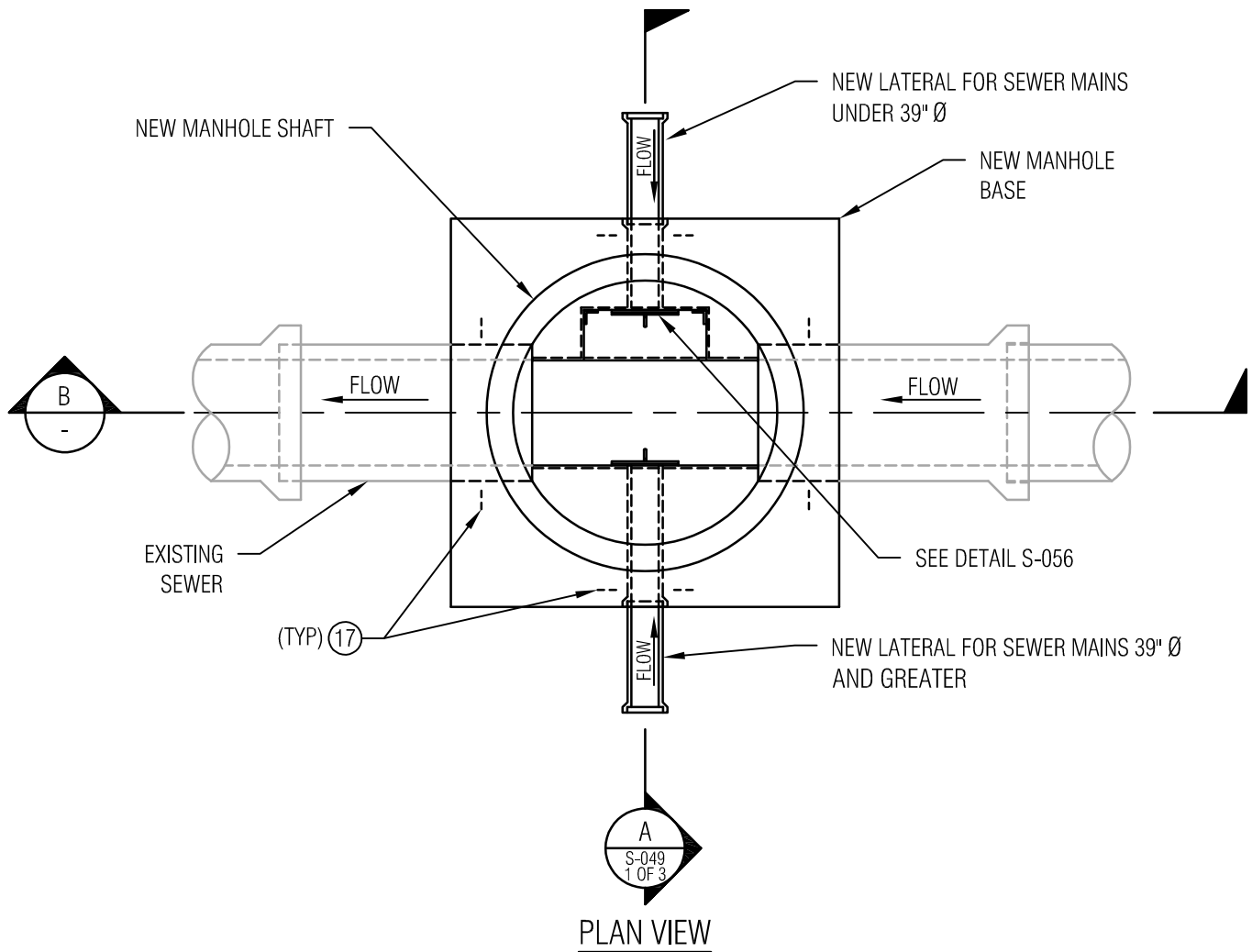
Irvine Ranch
Water District

Yorba Linda
Water District


3 Question: Can the district provide a detail for the Manhole Bench Replacement, one with and one without the diversion slot?

Answer: Please see attached detailed drawings (S-049 and S-060) that provide additional structure information. Please note, not all benches are the same. This is a general guideline and final say will be completed in the field with the OC San inspections team.

Jeremey Arbiso
Contract, Purchasing & Materials Management

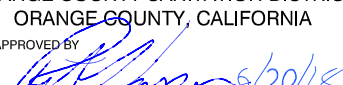


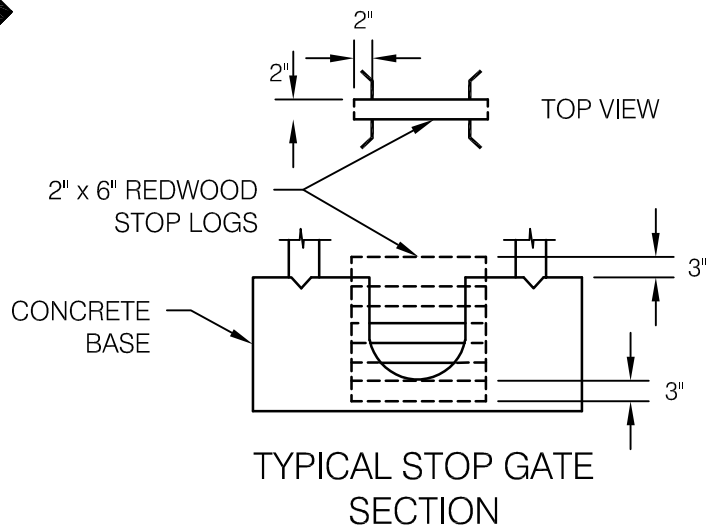
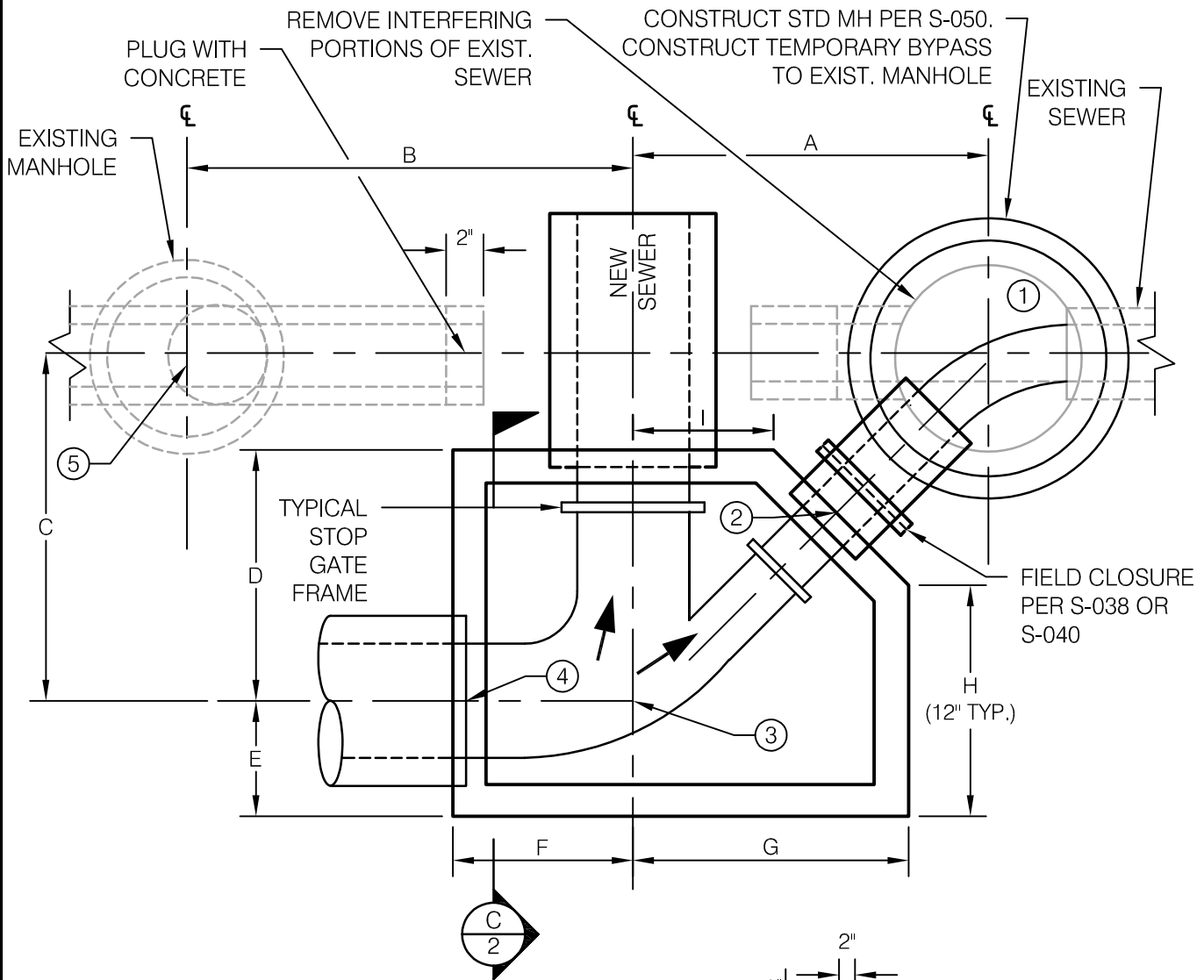
DWG: J:\CAD Standards\WIP\WP_Engineering Standard Drawings\REVISED\S-049_2 - NEW PVC LINED MANHOLE OVER EXISTING SEWER 2 OF 3.dwg
DATE: Apr 02, 2019 7:05am

				ORANGE COUNTY SANITATION DISTRICT ORANGE COUNTY, CALIFORNIA	NEW PVC LINED MANHOLE OVER EXISTING SEWER 2 OF 3	NO SCALE
				APPROVED BY 		STANDARD DWG.
NO.	APPROVED	DATE		DIRECTOR OF ENGINEERING		S-049

NOTES:

- ① MANHOLES SHALL HAVE 4000 # (CLASS "A"), CONCRETE BASES WITH #6 (19 MM) BARS @ 12" E.W. SIDES OF BASE SHALL BE FORMED BY EITHER WOOD FORMS OR SANDBAGS. BASE MAY BE EITHER CIRCULAR OR RECTANGULAR. IF CIRCULAR, THE AREA SHALL BE EQUAL TO THE AREA OF THE SQUARE BASE. ALL CONCRETE AND MORTAR SHALL USE CLASS II/V CEMENT.
- ② THE BASE'S CHANNEL SHALL BE CONSTRUCTED WITH FORMS AND PVC LINED. WHERE PVC LINED RCP IS USED, THE CHANNEL'S LINING IS TO BE INSTALLED TO THE SAME DEPTH AS THE RCP LINING. THE EXISTING PIPE SHALL BE REMOVED BY SAW CUTTING. THE REMOVED SECTION SHALL BE OF A LENGTH THAT THE ENDS OF THE REMAINING PIPE AT ITS SPRINGLINE IS FLUSH WITH THE MANHOLE'S SHAFT INSIDE DIAMETER.
- ③ MANHOLE SHELVES SHALL BE SLOPED 1/4" PER FOOT TO CHANNEL AND COVERED WITH PVC LINER WITH LOCKING EXTENSIONS. INSTALL NON-SKID SURFACE ON PVC LINER OVER THE COMPLETE MANHOLE SHELF ON BOTH SIDES OF MAIN CHANNEL PER THE SPECIFICATION OR APPROVED LINER MANUFACTURER RECOMMENDATIONS. A PVC ANGLE STRIP SHALL BE USED FOR THE TRANSITION BETWEEN HORIZONTAL SHELF AND VERTICAL CHANNEL.
- ④ INSTALL AT LEAST TWO LATERAL INLET PIPES IN THE MANHOLE BASE AS SHOWN. IF NOT SHOWN, LATERAL PIPING SHALL BE 8" VCP AT 90° TO THE MAIN CHANNEL AND SLOPED AT 1/4" PER FOOT FROM THE OUTSIDE OF THE MANHOLE BASE TO THE CHANNEL WHERE THE CHANNEL ANGLES MORE THAN 45° TOWARD A SIDE, THAT SIDE LATERAL IS NOT REQUIRED.
- ⑤ THE SOFFIT OF ALL LATERAL PIPES SHALL BE AT THE SAME ELEVATION AS THE MAIN PIPE SOFFIT. ALL LATERAL INLETS 12" DIAMETER AND SMALLER SHALL HAVE PVC WELDED GAS FLAPS INSTALLED SIMILAR TO DRAWING S-056, UNLESS OTHERWISE NOTED BY THE ENGINEER. PVC LINER SHALL BE PLACED THROUGHOUT THE CHANNEL AND PVC TURN BACK ON VCP OR OTHER PIPE SHALL BE A MINIMUM OF 6".
- ⑤A FOR MANHOLE BASES WHERE MAIN SEWER PIPE IS LESS THAN 39" IN DIAMETER, THE LATERALS SHALL BE RECESSED 12" MINIMUM FROM MAIN LINE CHANNEL WITH A TROUGH IN THE BENCH SLOPING TO THE MAIN CHANNEL.
- ⑤B FOR MANHOLE BASES WHERE MAIN SEWER PIPE IS 39" AND GREATER IN DIAMETER, THE END OF THE LATERAL IS FLUSH WITH THE CHANNEL.
- ⑥ ALL UNUSED CONNECTIONS SHALL HAVE A FACTORY MADE VCP PLUG INSTALLED IN THE BELL END OF THE PIPE WITH RESTRAINT SUFFICIENT TO WITHSTAND LEAKAGE TESTING. PIPE OVER 21" SHALL USE A BRICK AND MORTAR PLUG.
- ⑦ EACH MAIN LINE OR LATERAL CONNECTION TO THE MANHOLE BASE SHALL HAVE TWO EACH, TWO FOOT JOINTS.
- ⑧ MANHOLE SECTIONS AND GRADE RINGS SHALL BE REINFORCED, MADE FROM CLASS II/V CEMENT AND CAST WITH PVC LINER PLATE ON INSIDE. ECCENTRIC CONE SHALL BE SET WITH STRAIGHT SIDE ON DOWNSTREAM SIDE OF MANHOLE. ECCENTRIC REINFORCED CONCRETE FLAT TOPS MAY BE USED WHEN APPROVED BY THE ENGINEER.
- ⑨ THE KEYLOCK JOINT BETWEEN MANHOLE SECTIONS SHALL BE SEALED WITH TWO 1-1/4" SQUARE BEADS OF RAM-NEK BY HENRY COMPANY, KENT-SEAL BY HAMILTON KENT, OR APPROVED EQUAL. THE MASTIC BEADS SHALL BE PLACED ON THE OUTSIDE SHOULDER OF AND IN THE GROOVE. APPLY A 6" MINIMUM WIDTH OUTSIDE JOINT WRAP, RUB'R-NEK BY HENRY COMPANY, SEAL WRAP BY SEALING SYSTEMS, INC., OR EQUAL, TO ALL SHAFT JOINTS. GRADE RING JOINTS SHALL BE MORTAR.
- ⑩ INSTALLATION OF PVC LINER PLATE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 06620 OF THE SPECIFICATIONS. USE WELDING STRIPS AT PVC JOINTS, A PREFORMED CORNER WELDING STRIP AT THE BASE JOINT AND A CONTINUOUS PREFORMED CORNER AT THE TOP GRADE RING AND FRAME JOINT TO THE SECOND GRADE RING.
- ⑪ INSTALL FRAME AND COVER PER STANDARD DRAWING S-055. ADJUSTMENT SHALL OCCUR USING MORTAR BETWEEN FIRST AND SECOND GRADE RINGS. THE FRAME SHALL COMPLETELY BEAR ON PVC. CAULK THE JOINT BETWEEN THE FRAME AND THE PREFORMED PVC CORNER AT THE TOP GRADE RING WITH SIKAFLEX 1A OR EQUAL.
- ⑫ PLACE CONCRETE COLLAR IN PAVED AREAS AS SHOWN AFTER PLACEMENT OF ASPHALT. SEE DRAWING S-055. MANHOLES PLACED IN UNPAVED AREAS SHALL HAVE THE COVERS PLACED 18" ABOVE FINISHED GRADE. EXPOSED CONCRETE SHALL BE FINISHED AND COATED SAFETY YELLOW.
- ⑬ MANHOLES IN INTERSECTIONS SHALL HAVE BOLTED COVERS.
- ⑭ VACUUM TESTING SHALL BE PERFORMED PER ASTM C-1244 UNLESS NOTED OTHERWISE.
- ⑮ MANHOLES SHALL BE BACKFILLED WITH 1-1/2 SACK SAND/CEMENT SLURRY TO STREET ZONE OR AS REQUIRED BY LOCAL AGENCY.
- ⑯ IN PAVED AREAS, PAVEMENT AND BASE COURSE SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED BY THE GOVERNING AGENCY.
- ⑰ INSTALL A WEEP RING AT VCP/HDPE PENETRATIONS WITH HIGH GROUND WATER CONDITIONS.

			ORANGE COUNTY SANITATION DISTRICT ORANGE COUNTY, CALIFORNIA APPROVED BY  DIRECTOR OF ENGINEERING	NEW PVC LINED MANHOLE OVER EXISTING SEWER 3 OF 3	NO SCALE
					DATE
NO.	APPROVED	DATE			



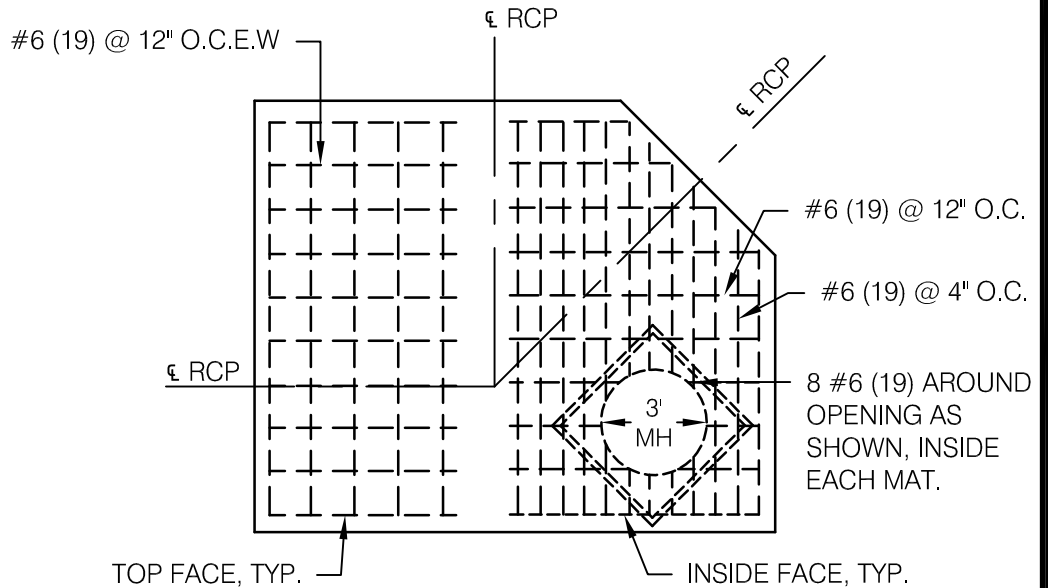
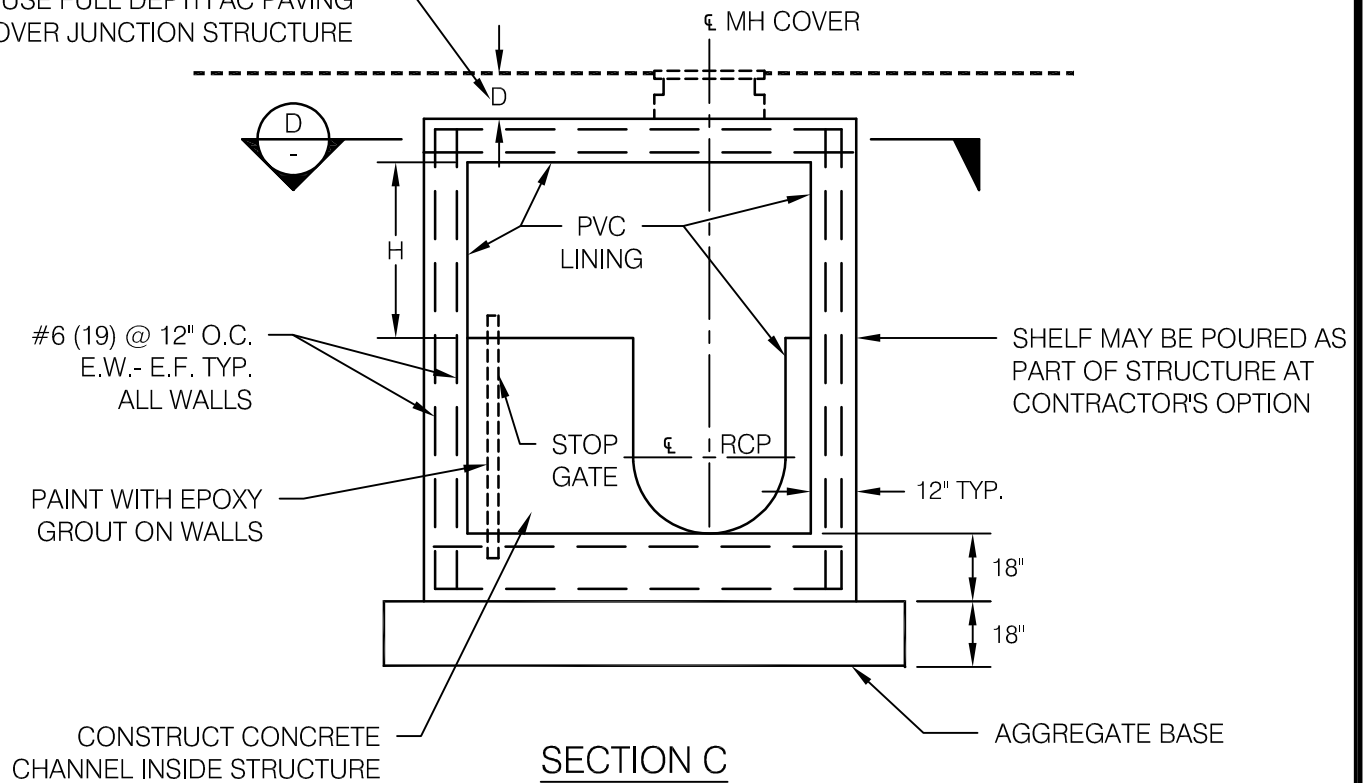
NOTES:

1. DIMENSIONS A, B, C, D, E, F, G, H, AND I SHALL BE AS SHOWN ON THE PLANS.
2. ELEVATIONS ①, ②, ③, ④, AND ⑤ SHALL BE AS SHOWN ON PLANS.
3. TYPICAL STOP GATE SHALL BE INCLUDED IN ALL DIVERSION STRUCTURE INSTALLATIONS.
4. FOR SECTIONS, SEE S-060 SHEET 2 OF 2.

DWG: J:\CAD Standards\WIP\WP_Engineering Standard Drawings\REVISED\S-060_1 - DIVERSION STRUCTURE WITH STOP GATE SHEET 1 OF 2.dwg
DATE: May 15, 2019 8:45am

			ORANGE COUNTY SANITATION DISTRICT ORANGE COUNTY, CALIFORNIA	DIVERSION STRUCTURE WITH STOP GATE SHEET 1 OF 2	NO SCALE
			APPROVED BY <i>Herby 06/20/07</i>		STANDARD DWG.
NO.	APPROVED	DATE	DIRECTOR OF ENGINEERING DATE		S-060

WHEN D IS LESS THAN 12"
USE FULL DEPTH AC PAVING
OVER JUNCTION STRUCTURE



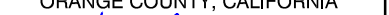
NOTES:

1. ALL CONCRETE SHALL BE 4000 PSI (CLASS "A").
2. REINFORCING STEEL SHALL CONFORM TO ALL REQUIREMENTS OF THE STANDARD SPECIFICATIONS.
3. HEIGHT H SHALL NOT BE LESS THAN 7'-0" UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TOP SLAB ONLY

() DENOTES
METRIC
SYSTEM

DWG: J:\CAD Standards\WIP\WP_Engineering Standard Drawings\REVISED\S-060_2 - DIVERSION STRUCTURE WITH STOP GATE SHEET 2 OF 2.dwg
DATE: Apr 04, 2019 3:18pm

			ORANGE COUNTY SANITATION DISTRICT ORANGE COUNTY, CALIFORNIA	DIVERSION STRUCTURE WITH STOP GATE SHEET 2 OF 2	NO SCALE
			APPROVED BY 		STANDARD DWG.
NO.	APPROVED	DATE	DIRECTOR OF ENGINEERING DATE		S-060

OPERATIONS COMMITTEE

Agenda Report

File #: 2023-2952

Agenda Date: 6/7/2023

Agenda Item No: 6.

FROM: Robert Thompson, General Manager
Originator: Mike Dorman, Director of Engineering

SUBJECT:

**EPSA ELECTRICAL BUILDING AND DISTRIBUTION CENTER H HVAC SYSTEM
REPLACEMENT AT PLANT NO. 2, PROJECT NO. SC22-01**

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve a Purchase Order Contract to Trane U.S. Inc. for the EPSA Electrical Building and Distribution Center H HVAC System Replacement at Plant No. 2, Project No. SC22-01, utilizing the Omnia Cooperative Purchasing Agreement, Contract Number 3341, for a total amount not to exceed \$3,862,000; and
- B. Approve a contingency of \$386,200 (10%).

BACKGROUND

The electrical building for the Effluent Pump Station Annex (EPSA) has six air handlers and condensers that were installed in 2008 and Distribution Center H has four packaged heating, ventilation, and air conditioning (HVAC) units that were installed in 2012. These two buildings house critical electrical equipment vital to Orange County Sanitation District's (OC San) treatment and operation. The HVAC systems are used to cool the electrical equipment and keep them from overheating.

RELEVANT STANDARDS

- Comply with California Public Contract Code Section 20103.8, award construction contract to lowest responsive, responsible bidder
- 24/7/365 treatment plant reliability

PROBLEM

The HVAC outdoor air coils and copper components are showing extreme wear and failure. The maintenance staff has repaired these units several times; however, the units are at a point where further repair or maintenance will not offer acceptable reliability. In addition, the HVAC equipment on the two buildings has passed its useful life expectancy and can no longer be maintained reliably.

PROPOSED SOLUTION

Approve a Purchase Order for EPSA Electrical Building and Distribution Center H HVAC System Replacement at Plant No. 2, Project No. SC22-01. This project will replace in kind the 10 HVAC units on the two buildings.

TIMING CONCERNS

The approval of this Purchase Order contract to design, build, and commission new HVAC equipment is the most feasible way to replace the equipment in the shortest amount of time. Delaying this action means OC San will be vulnerable to the loss of equipment within the two buildings.

RAMIFICATIONS OF NOT TAKING ACTION

Not replacing these units will increase the risk of overheating and the eventual failure of critical electrical equipment in the buildings. Failure of this equipment would cause major treatment plant disruptions.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

OC San is utilizing a cooperative agreement through Omnia Partners, formerly U.S. Communities, which is the largest cooperative purchasing organization for public sector procurement. This agreement was awarded using a competitive bid process similar to OC San's and has been vetted by Purchasing. The collective buying power of the unified purchasing cooperatives typically deliver value and savings for public agencies nationwide.

Trane U.S. Inc. was selected to propose on this cooperative agreement because they can provide equipment that matches the existing and fits within the existing footprint. The total amount of bid under this cooperative agreement is \$3,862,000.

Staff evaluated the proposal in accordance with OC San policies and procedures and, based on these results, recommends awarding the Purchase Order to Trane U.S. Inc.

Location	HVAC Quantity and Size
EPSA Electrical Building	Three (3) 25-ton units One (1) 10-ton unit One (1) 5-ton unit One (1) 2-ton unit
Distribution Center H	Four (4) 60-ton units

CEQA

The project is exempt from CEQA under the Class 1 categorical exemptions set forth in California Code of Regulations Section 15301. A Notice of Exemption will be filed with the OC Clerk-Recorder after OC San Board of Directors approval.

FINANCIAL CONSIDERATIONS

This request complies with the authority levels of OC San's Purchasing Ordinance. This item has been budgeted (Adopted Budget, Fiscal Years 2022-2023 and 2023-24, Section 8, Page 50, Operations and Maintenance Capital Program, Project No. M-SM-CAP) and the budget is sufficient for the recommended action.

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- SC22-01 Photos - Supplemental Attachment

SS:tk

**LEGISTAR NO. 2023-2952
SUPPLEMENTAL ATTACHMENT
EPSA ELECTRICAL BUILDING AND DISTRIBUTION CENTER H HVAC SYSTEM
REPLACEMENT AT PLANT NO. 2, PROJECT NO. SC22-01**

Figure 1:

The Effluent Pump Station Annex (EPSA) electrical building HVAC units on the roof.



Figure 2:

The Effluent Pump Station Annex (EPSA) electrical building HVAC units are experiencing signs of wear and failure.



Figure 3:

The Distribution Center H electrical building HVAC units on the roof are experiencing signs of wear and failure.





OPERATIONS COMMITTEE

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2023-3005

Agenda Date: 6/7/2023

Agenda Item No: 7.

FROM: Robert Thompson, General Manager
Originator: Mike Dorman, Director of Engineering

SUBJECT:

APPROVAL OF COOPERATIVE AGREEMENT WITH THE CITY OF FOUNTAIN VALLEY

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

Approve the Cooperative Agreement between Orange County Sanitation District and the City of Fountain Valley for installation of a traffic signal and authorize its execution and implementation.

BACKGROUND

The Orange County Sanitation District (OC San) is currently constructing a new headquarters complex in the City of Fountain Valley. The headquarters complex has been designed and permitted to provide appropriate access for all staff from Ellis Avenue. OC San identified an additional opportunity to improve site access and safety by installing a new traffic signal at the intersection of Mount Langley Street and Ellis Avenue. OC San and the City of Fountain Valley began discussions to come to the subject agreement, which contains the following material terms:

- OC San shall be responsible for the design and construction of the traffic signal project at OC San's cost.
- The City of Fountain Valley shall cooperate with OC San to expedite review of the design; issue needed permits at no cost to OC San or its construction contractor; inspect the construction; and, upon completion, accept ownership and maintenance of the traffic signal.

The design and construction of the new traffic signal, contingent upon approval of this agreement, will be executed under OC San project number FR1-0020, Traffic Signal Installation at Ellis Avenue and Mt. Langley Street Intersection.

RELEVANT STANDARDS

- Protect OC San assets
- Commitment to safety & reducing risk in all operations
- Maintain collaborative and cooperative relationships with regulators, stakeholders, and neighboring communities

PROBLEM

Access to the new headquarters is predominantly from Pacific Street or Bandilier Circle via Ellis Avenue. Staff who want to exit the headquarters complex and head east on Ellis Avenue or north on Euclid Street, will need to exit onto Pacific Street, turn left, and drive around to Ward Street, via Lawson River Avenue, and travel to Talbert Avenue or Ellis Avenue. OC San currently has a policy that staff working in OC San's Mt. Langley Building cannot make an unprotected left-hand turn onto Ellis Avenue due to potential safety issues.

PROPOSED SOLUTION

Construct a new traffic signal at the intersection of Ellis Avenue and Mt. Langley Street via the Cooperative Agreement to allow for a protected left-hand turn onto Ellis Avenue.

TIMING CONCERNS

Delaying this Cooperative Agreement may impact how quickly the new traffic signal can be designed and constructed.

RAMIFICATIONS OF NOT TAKING ACTION

Absent the Cooperative Agreement, a new traffic signal will not be constructed near the new OC San headquarters complex.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

N/A

CEQA

Under this agreement, OC San shall be designated as lead agency for the traffic signal construction under CEQA.

FINANCIAL CONSIDERATIONS

Under this agreement, OC San shall be responsible for costs associated with the design and construction of the traffic signal. The construction cost for the traffic signal is approximately \$850,000. Total project cost is approximately \$950,000. Contingent on approval of this agreement, appropriate funding will be identified and authorization will comply with the authority levels of OC San's Purchasing Ordinance.

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Cooperative Agreement
- Presentation

**COOPERATIVE AGREEMENT
BETWEEN THE ORANGE COUNTY SANITATION DISTRICT AND THE CITY OF
FOUNTAIN VALLEY FOR INSTALLATION OF TRAFFIC SIGNAL**

This Agreement is made and entered into this 28th day of June 2023 by and between the Orange County Sanitation District, a county sanitation district ("OCSAN"), and the City of Fountain Valley, a municipal corporation ("City"). OCSAN and City are sometimes referred to herein individually as "Party" and collectively as "Parties."

RECITALS

WHEREAS, OCSAN is constructing a new headquarters complex along Ellis Avenue between Pacific Street and Bandelier Circle in the City of Fountain Valley; and

WHEREAS, a new traffic signal at the intersection of Ellis Avenue and Mt. Langley Street is necessary to improve vehicular access to the new headquarter complex; and

WHEREAS, the Parties agree that OCSAN will be responsible for the design and construction of the traffic signal project at its cost and City will accept ownership and maintenance of the same upon completion of construction subject to the terms and conditions included herein.

AGREEMENT

NOW, THEREFORE, in consideration of the promises and agreements hereinafter set forth herein, the Parties hereby agree as follows:

1. OCSAN shall:

Be responsible for the costs and execution of all design, construction, costs, and all acts necessary or required in order to complete the construction and delivery of a fully functional traffic signal at the intersection of Ellis Avenue and Mt. Langley Street including all fiber optic communication to traffic signal equipment and the Traffic Management Center.

a. Submit the design, plans, and specifications for the traffic signal work to City's City Engineer for review and approval.

b. Ensure that the traffic signal construction is completed in compliance with City's approved project plans and specifications.

c. Be designated lead agency for the traffic signal construction under the California Environmental Quality Act ("CEQA").

2. City shall:

a. Cooperate with OCSAN and promptly and expeditiously review and provide approvals or comments regarding the design, plans, and specifications for the traffic signal to be included in bidding documents prepared for the traffic signal construction project, including project plans and specifications. The City shall further issue any permits at no cost to OCSAN or its construction contractor. OCSAN shall not commence the traffic signal construction work until the City has approved the plans and specifications for the work and issued the required permits therefor.

b. At all times, during the progress of construction of the traffic signal project, have access to the work site for the purpose of inspection thereof.

c. Promptly notify OCSAN in writing should City deem any remedial measures to be reasonably necessary prior to OCSAN's acceptance of any work on the traffic signal project.

d. Promptly notify OCSAN of City's acceptance/approval or rejection of the traffic signal construction work within thirty (30) WORKING days after receiving notice from OCSAN that the work is complete. The City shall accept and be deemed to accept/approve of the work if City fails to provide notice to OCSAN within thirty (30) WORKING days.

3. General obligations.

a. Risk Transfer. City and OCSAN, and each of their elected officials, officers, employees and agents, shall be named as additional insureds in all construction contracts in all commercial general and automobile liability insurance policies relating to the traffic signal construction project; and each shall be indemnified and be held harmless for any liability arising out of contractors' performance thereunder.

b. City Indemnity. Neither City, nor any officer, agent, representative or employee thereof, shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by OCSAN, its officers, employees, agents, contractors, or subcontractors, under or in connection with any work, authority, or jurisdiction delegated to OCSAN under this Agreement. To the fullest extent permitted by law, OCSAN shall defend, indemnify and hold harmless City, including City's employees, agents, representatives, and officials, from any liabilities, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, costs or expenses of any kind whatsoever, whether actual, alleged, or threatened, without restriction or limitation, and incurred in relation to, as a consequence of, arising out of or in any way attributable actually, allegedly or impliedly, to the negligence, recklessness, or willful misconduct of OCSAN and its officers, employees, agents, contractors, or subcontractors, in the performance of this Agreement. All obligations under this provision are to be paid by OCSAN as they are incurred by City. OCSAN shall require in any agreement with a contractor for the project that the contractor defend, indemnify and hold harmless City, including City's officers, employees, agents, contractors, and subcontractors, as set forth in this provision.

c. OCSAN Indemnity. Neither OCSAN, nor any officer, agent, representative, or employee thereof, shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by City, its officers, employees, agents, contractors, or subcontractors, under or in connection with any work, authority, or jurisdiction delegated to City under this Agreement. To the fullest extent permitted by law, City shall defend, indemnify and hold harmless OCSAN, including OCSAN's employees, agents, representatives, and officials, from any liabilities, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, costs or expenses of any kind whatsoever, whether actual, alleged, or threatened, without restriction or limitation, and incurred in relation to, as a consequence of, arising out of or in any way attributable actually, allegedly or impliedly, to the negligence, recklessness, or willful misconduct of City and its officers, employees, agents, contractors, or subcontractors, in the performance of this Agreement. All obligations under this provision are to be paid by City as they are incurred by OCSAN.

d. Cooperation. In the event any claim or action is brought against OCSAN relating to the performance rendered under this Agreement, City shall render any reasonable assistance and cooperation which OCSAN might require.

e. Entire Agreement. This Agreement constitutes the entire agreement between the Parties with respect to the subject matter herein. No representation or promise, whether verbal or written, that is not set forth herein, shall be binding or have any force or effect on either of the Parties.

f. Resolution of Disputes. In the event of any dispute concerning any aspect of this Agreement, the Parties' representatives shall work in good faith to resolve any such dispute to each Party's satisfaction prior to initiation of any court action provided, however, that nothing herein shall prevent either Party from utilizing all remedies at law or equity in the event such dispute cannot be resolved within thirty (30) days of a written request by one Party to meet and confer with the other to resolve such dispute, or such other period of time as agreed upon in writing.

g. Notices. Notices permitted or required to be provided pursuant to this Agreement shall be sent to the following addresses:

To OCSAN:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attention: Kelly Lore, Clerk of the Board
E-mail: klore@ocsan.gov

To City:

City of Fountain Valley
10200 Slater Avenue
Fountain Valley, CA 9270
Attention: Rick Miller, City Clerk Administrator
E-mail: Rick.Miller@fountainvalley.org

By notice to the other Party, either Party may change the address specified above. Service of notice or communication shall be complete, if personally served, when received at the designated address, or five (5) days after the deposit of said notice or communication in the United States mail, postage prepaid, whichever occurs first.

h. Severability. If any provision of this Agreement is determined by a court of competent jurisdiction to be unenforceable in any circumstance, such determination shall not affect the validity or enforceability of the remaining terms and provisions hereof or of the offending provision in any other circumstance. Notwithstanding the foregoing, if the value of this Agreement, based upon the substantial benefit of the bargain for any party, is materially impaired, which determination made by the presiding court or arbitrator of competent jurisdiction shall be binding, then both parties agree to substitute such provision(s) through good faith negotiations.

i. No Waiver. No waiver or failure to exercise any right, option, or privilege under the terms of this Agreement on any occasion shall be construed to be a waiver of any other right, option, or privilege on any other occasion.

j. No Third-Party Beneficiaries. This Agreement is entered into by and for OCSAN and City, and nothing herein is intended to establish rights or interests in individuals or entities not a party hereto.

k. Counterparts of Agreement. This Agreement may be executed and delivered in any number of counterparts, each of which, when executed and delivered shall be deemed an original and all of which together shall constitute the same agreement. Facsimile and electronic signatures will be permitted.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement has been duly executed by the respective parties hereto by their duly authorized officers as of the date hereinabove first written.

ORANGE COUNTY SANITATION DISTRICT

By: _____

Chad P. Wanke
Chair, Board of Directors

Date: June 28, 2023

APPROVED AS TO FORM:

ATTEST:

By: _____

Bradley R. Hogin
General Counsel

By: _____

Kelly Lore
Clerk of the Board

CITY OF FOUNTAIN VALLEY

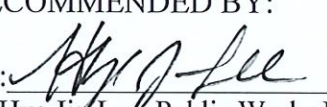
By: _____


Maggie Le, City Manager

Date: 5-4-2023

RECOMMENDED BY:

By: _____


Hye Jin Lee, Public Works Director

APPROVED AS TO FORM:

ATTEST:

By: _____


Colin Burns, City Attorney

By: _____


Rick Miller, City Clerk Administrator

Approval of Cooperative Agreement with the City of Fountain Valley Traffic Signal Installation

Presented by:
Mike Dorman
Director of
Engineering

*Operations
Committee*

June 7, 2023

OC SAN
ORANGE COUNTY SANITATION DISTRICT

1

Current Headquarters Exit Options



Currently limited options for exiting the new Headquarters Building

2

2

Future Headquarters Exit Options

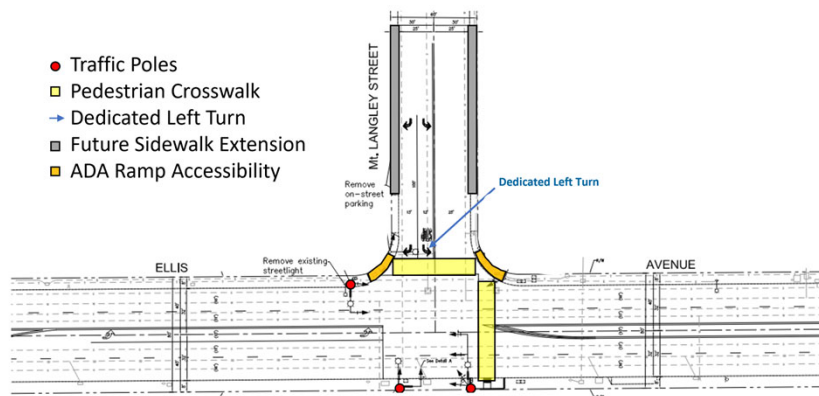


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3

Location Details

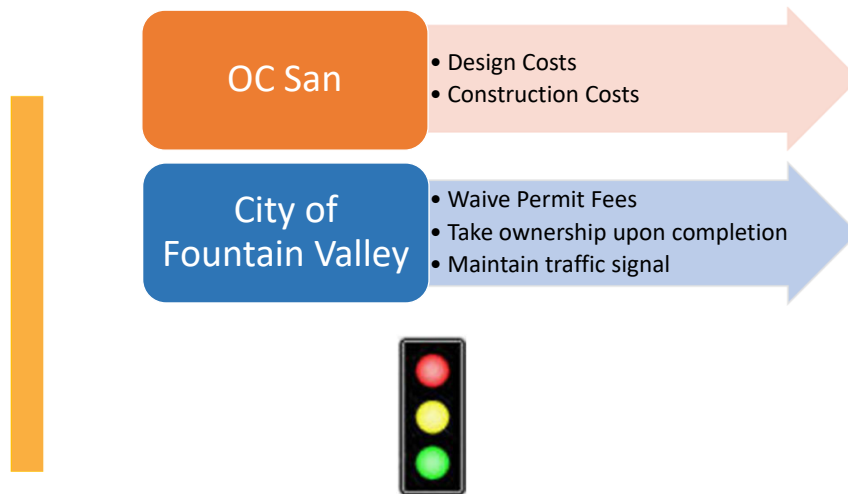
Would allow protected, dedicated left turn onto Ellis Avenue



4

4

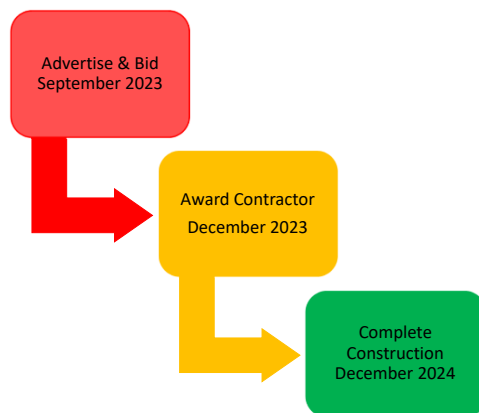
Cooperative Agreement



5

5

Design & Construction Cost = \$850,000
 Total Project Cost = \$960,000



Budget & Schedule

6

6

Recommendation

Recommend to the Board of Directors to:

Approve the Cooperative Agreement between Orange County Sanitation District and the City of Fountain Valley for installation of a traffic signal and authorize its execution and implementation.

7

7

Questions



8



OPERATIONS COMMITTEE

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2023-3004

Agenda Date: 6/7/2023

Agenda Item No: 8.

FROM: Robert Thompson, General Manager
Originator: Wally Ritchie, Director of Finance

SUBJECT:

FY 2023-24 BUDGET UPDATE PRESENTATION

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Information Item.

BACKGROUND

Staff will provide an overview of the FY 2023-24 Budget Update, including Orange County Sanitation District Revenues, Capital Improvement and Operating expenditures, and long-term liabilities. The budget update will be proposed for adoption at the June 28, 2023 Board of Directors meeting.

RELEVANT STANDARDS

- Produce Operating and CIP budgets every two years, with annual update

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Presentation

Proposed FY 2023-24 Budget Update

*Wally Ritchie,
Director of
Finance*

*Operations
Committee*

June 7, 2023



1

Overview

- FY 2023-24 Budget Update
 - Stable Revenues
 - Challenging Inflationary Environment
 - Expenses Include
 - Operating
 - Capital Improvement Program
 - Debt Service
 - Staffing – FY 2023-24 (653 FTE)
 - No New Debt

*All figures in millions unless otherwise noted

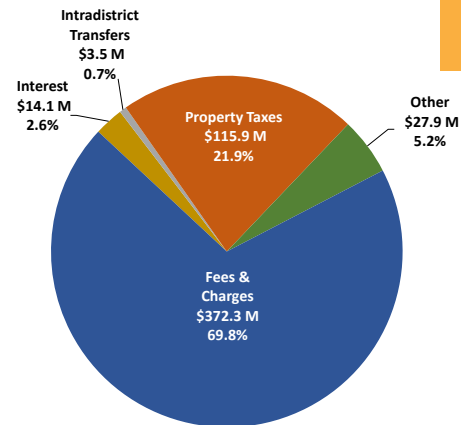
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2

REVENUE

Where the Money Comes From

Category	2022-23 Adopted	2023-24 Adopted	2023-24 Proposed
Service Fees	\$326.0	\$339.2	\$337.7
Property Taxes	109.8	112.1	115.9
Permit User Fees	12.5	12.9	16.1
Capital Facilities Capacity Charges	17.9	18.5	18.5
Interest	14.5	13.7	14.1
Intradistrict Transfers	3.5	3.5	3.5
Debt Proceeds	0.0	0.0	0.0
Other Revenue	31.2	26.1	27.9
Total Funding Sources	\$515.4	\$526.0	\$533.7

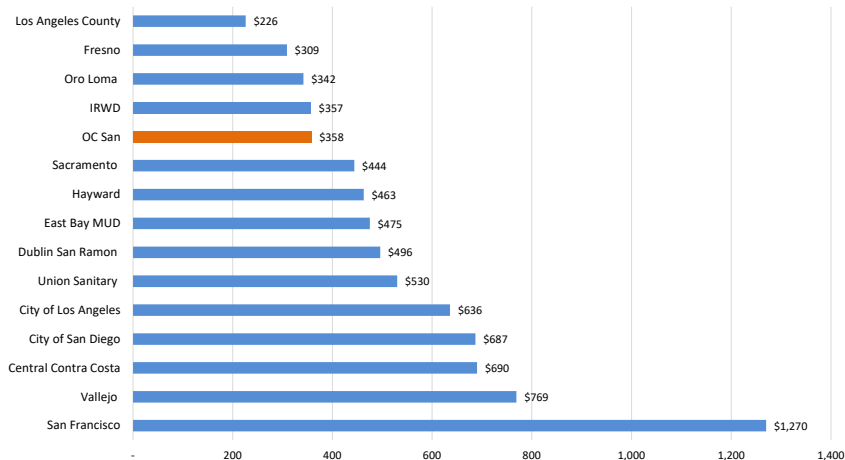


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3

REVENUE - RATES

Annual Single-Family Residential Rate
(July 2022)



SFR Rate for FY 2023-24

\$358

\$11 or 3.2% Increase

4

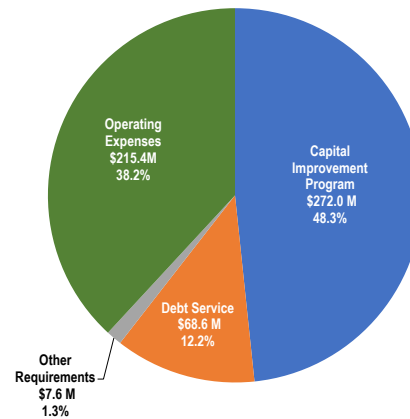
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EXPENSES

Where the Money Goes

Funding Uses by Category
(in millions)

Category	2022-23 Adopted	2023-24 Adopted	2023-24 Proposed
Capital Improvement Program, Net	\$268.2	\$315.3	\$272.0
Operating Expenses	201.1	209.9	215.4
Debt Service	68.6	68.6	68.6
Other Requirements	7.2	7.4	7.6
Total Funding Uses	\$545.1	\$601.2	\$563.6



5

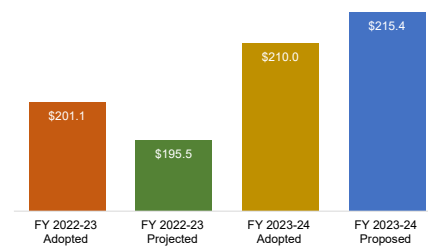
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OPERATING EXPENSES

Expenses by Department (in millions)

Department	2022-23 Budget	2023-24 Originally Proposed	Percent Change	2023-24 Updated Proposed	Percent Change
<i>Administration Units</i>					
General Manager's Office	\$4.4	\$4.3	(2.3%)	\$5.1	17.8%
Human Resources	7.9	8.0	1.3%	8.9	11.6%
Administrative Services	32.0	33.4	4.4%	34.0	1.4%
<i>Sub-Total</i>	<i>\$44.3</i>	<i>\$45.7</i>	<i>3.2%</i>	<i>\$48.0</i>	<i>5.0%</i>
<i>Operating Units</i>					
Environmental Services	22.7	23.8	4.8%	24.1	1.3%
Engineering	8.9	9.0	1.1%	8.1	(10.2%)
Operations & Maintenance	125.2	131.5	4.9%	135.2	2.9%
<i>Sub-Total</i>	<i>\$156.8</i>	<i>\$164.3</i>	<i>4.8%</i>	<i>\$167.4</i>	<i>1.9%</i>
Total	\$201.1	\$210.0	4.4%	\$215.4	2.6%

Operating Expenses
(in millions)



6

6

OPERATING EXPENSES

Category	2022-23 Adopted	2022-23 Projected	2023-24 Adopted	2023-24 Proposed
Salaries and Benefits	\$112.8	\$105.6	\$118.4	\$116.6
Contractual Services	20.1	20.2	21.3	21.8
Repairs and Maintenance	32.1	30.2	33.8	35.5
Operating Materials & Supplies	24.5	27.5	26.0	30.5
Utilities	12.8	16.2	12.6	12.3
Professional Services	7.9	6.0	7.6	7.6
Other Materials, Supplies, Services	3.4	2.1	3.8	3.4
Self-Insurance Requirements	2.4	2.4	2.7	3.2
Administrative Expenses	2.3	2.1	2.2	2.3
Training and Meetings	1.2	0.6	1.1	1.2
Research and Monitoring	1.7	1.4	1.8	1.8
Printing and Publications	0.8	0.6	0.4	0.4
Cost Allocation	(20.8)	(19.5)	(21.6)	(21.6)
Total Operating Expenses	\$201.1	\$195.5	\$210.0	\$215.4

7

7

OPERATING EXPENSES – COST PER MG

Five-Year Cost per MG

Agency	Svc.	Trt.	FY 17-18 Cost/MG	FY 18-19 Cost/MG	FY 19-20 Cost/MG	FY 20-21 Cost/MG	FY 21-22 Cost/MG
Vallejo Sanitation/Flood Control District	B	2	\$ 5,393	6,137	8,682	9,108	9,595
San Francisco	B	2	\$ 5,295	5,995	7,573	9,456	7,152
Central Contra Costa Sanitary District	B	3	\$ 5,588	3,980	5,284	6,513	6,353
Union Sanitary District	B	2	\$ 4,757	4,838	5,655	5,569	5,623
City of San Diego	B	3	\$ 4,147	4,180	3,977	4,219	4,263
East Bay MUD	T	2	\$ 3,137	2,710	3,122	4,052	3,674
Dublin San Ramon Services District	B	3	\$ 3,422	3,692	3,441	3,570	3,406
City of Los Angeles	B	3	\$ 2,329	3,046	3,021	2,763	3,120
Sacramento County	T	3	\$ 2,831	2,812	3,407	3,470	2,819
Los Angeles County	B	3	\$ 2,077	2,264	2,343	2,338	2,786
Orange County Sanitation District	B	2	\$ 2,069	2,275	2,422	2,428	2,255
City of Fresno	B	3	\$ 1,813	1,945	1,993	2,100	2,235

Projected Cost per MG

FY 2022-23

\$2,894

8

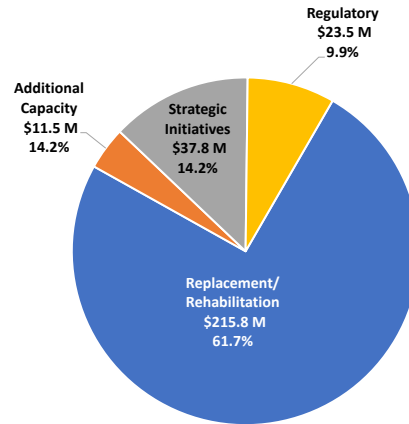
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CAPITAL IMPROVEMENT PROGRAM

CIP Categories

Treatment Projects	\$ 242.3
Collection Projects	34.2
Equipment	12.1
FY 2021-22 CIP Authority	288.6
CIP Savings & Deferrals	(16.6)
Net CIP	\$ 272.0
10-Year Net CIP Outlay	\$ 3.1 Billion

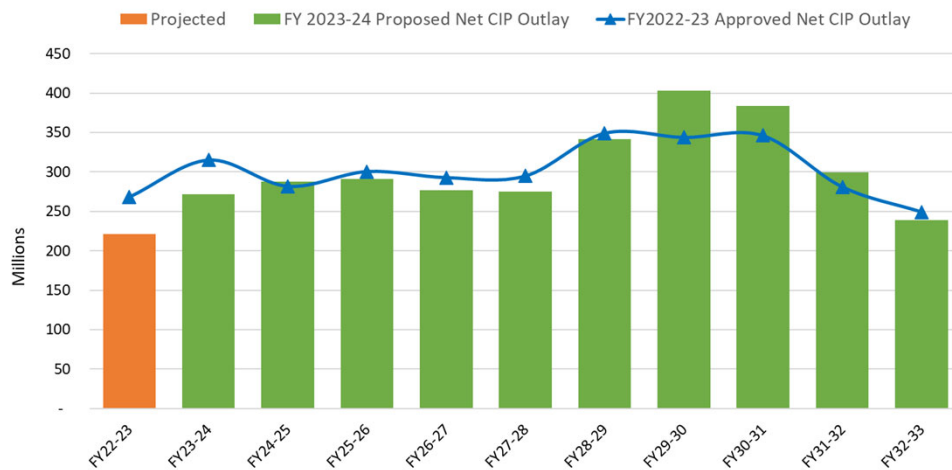
FY 2023-24



9

9

CAPITAL IMPROVEMENT PROGRAM



10

10

DEBT SERVICE

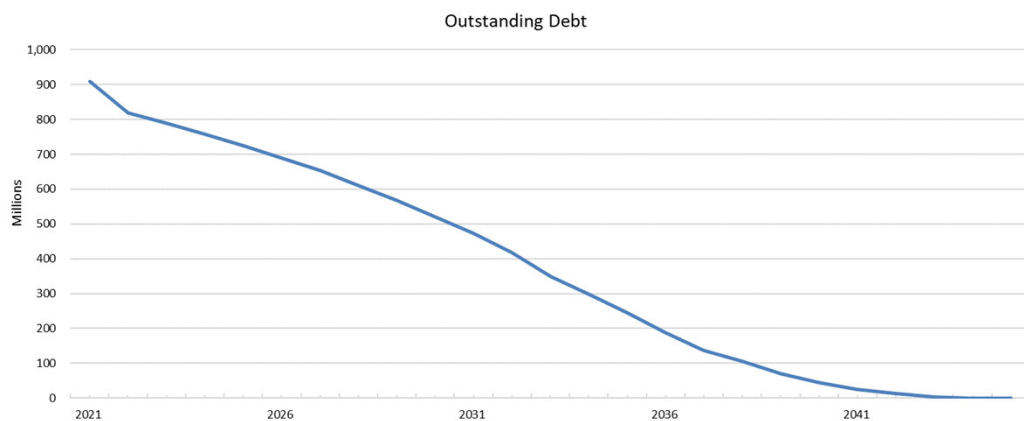
Total Outstanding COP Balance 7/1/23	\$ 789.8M
Blended Interest Rate	2.71%
FY 2023-24 Debt Service	\$ 68.6M

* All outstanding debt to be paid off by 2044

11

11

DEBT SERVICE



* No New Debt Issues are Planned

12

12

SUMMARY

Revenue

Fees & Charges	\$372.3M	
Property Taxes	\$115.9M	
Other	\$ 27.9M	
Interest	\$ 14.1M	
Intradistrict	<u>\$ 3.5M</u>	
Total Revenue		\$533.7M

Expenses

CIP	\$272.0M	
Operating	\$215.4M	
Debt Service	\$ 68.6M	
Other	<u>\$ 7.6M</u>	
Total Expenses		\$563.6M (\$ 29.9M)

13

13

Questions



14

14



OPERATIONS COMMITTEE

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2023-2997

Agenda Date: 6/7/2023

Agenda Item No: 9.

FROM: Robert Thompson, General Manager
Originator: Lan C. Wiborg, Director of Environmental Services

SUBJECT:

ORANGE COUNTY SANITATION DISTRICT ENVIRONMENTAL SERVICES LABORATORY AND OCEAN MONITORING UPDATE

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Information Item.

BACKGROUND

Each month, staff provides an informational presentation on topics of interest to the Board of Directors. This month's topic: Orange County Sanitation District Environmental Services - Environmental Laboratory and Ocean Monitoring Division (ELOM): Protecting Public Health and the Environment.

The work of the ELOM division tends to be complex and diverse. This presentation will focus primarily on who we are, what we do, and our current strategic and collaborative projects and studies.

RELEVANT STANDARDS

- Comply with environmental permit requirements
- Listen to and seriously consider community input on environmental concerns
- Operate and maintain facilities to minimize impacts on surrounding communities including odor, noise, and lighting

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Presentation

Environmental Services Laboratory & Ocean Monitoring Update

Presented by:

Samuel Choi

*Environmental
Protection
Manager*

*Operations
Committee*

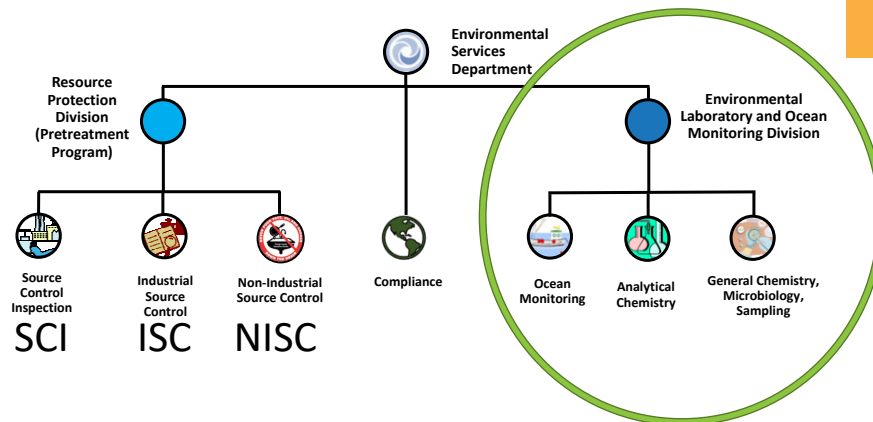
June 7, 2023



OC SAN
ORANGE COUNTY SANITATION DISTRICT

1

Environmental Services Department



2

2

Environmental Monitoring



United States
Environmental Protection
Agency

Code of
Federal
Regulations



STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

California Ocean Plan
Santa Ana RWQCB Basin Plan



NPDES Permit OC San Ocean Monitoring and Reporting Program

Core Compliance Monitoring
Regional Monitoring
Strategic Process Studies

3

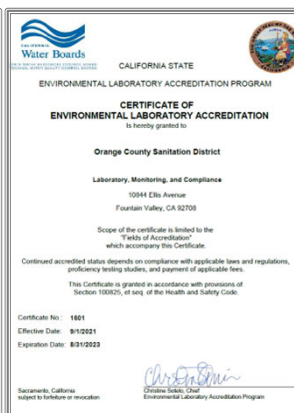
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Accreditations (Quality Assurance)

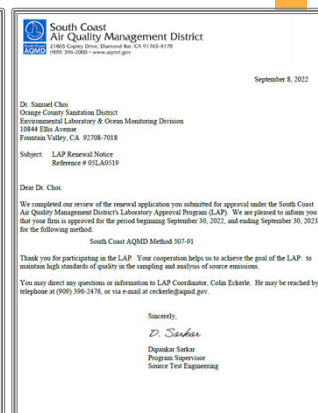
National



State



Regional



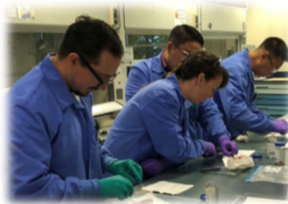
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Laboratory and Ocean Monitoring Division

Mission Statement

To ensure safe recreational and environmental protection; perform sampling, analysis and reporting to document OC San's exemplary regulatory compliance, inclusive of air, biosolids, water recycling and ocean discharge



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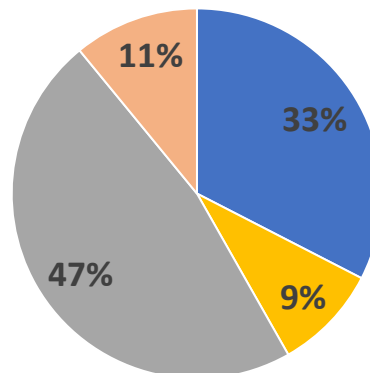
Laboratory Tests

No. of Laboratory Tests

Sample Type	2020	2021	2022
General Chemistry	67,668	67,604	67,752
Metals	10,101	9,989	9,799
Microbiology	23,188	22,066	20,432
Analytical Chemistry	6,160	5,635	5,407
Toxicology	60	70	61
Total	107,177	105,364	103,451

2020 - 2022

- Compliance (NPDES)
- Ocean Monitoring
- Operations
- Pretreatment



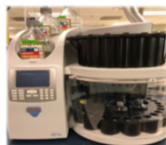
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Laboratory Instruments

Sample Preparation

ASE



Auto Trace



GPC



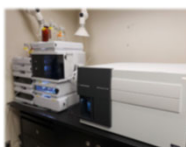
Concentrator



Analytical Instruments

Andor (LC-MS)

PFAS, PPCPs, IEDCs, DA, Hormones



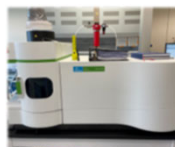
Annikan (TQ GC-MS)

PCBs, Pesticides



ICP-MS

Metals



FTIR

Microplastics



7

7

Ocean Monitoring

R/V Nerissa



Water Quality



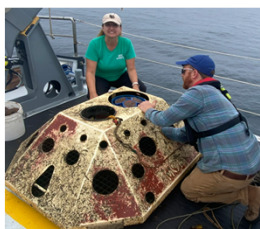
Ocean Bottom Health



Fish Health



Oceanography



Toxicology



8

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2021-2022 OC Beach Report Card



2021-2022	Summer Dry ☀️		Winter Dry ☁️		Wet Weather ☁️🌧️	
GRADE	#	%	#	%	#	%
A	121	96%	101	86%	73	53%
B	4	3%	10	9%	17	12%
C	0	0%	4	3%	19	14%
D	0	0%	1	1%	9	7%
F	1	1%	1	1%	19	14%
A+B	125	99%	111	95%	90	66%
C,D,F	1	1%	6	5%	47	34%

HONOR ROLL 2021-2022

BEACH NAME	COUNTY
Venice City Beach, at Brooks Ave. drain	Los Angeles
Rancho Palos Verdes, Long Point	Los Angeles
Royal Palms State Beach	Los Angeles
Palos Verdes Estates, at Malaga Cove trail outlet	Los Angeles
Las Tunas County Beach, at Pena Creek	Los Angeles
Norwalk Beach, at San Nicolas Channel Causeway	Los Angeles
Dana Point Harbor Youth Dock	Orange
Dana Point Harbor Guest Dock	Orange
Poche Beach	Orange
Doheny Beach	Orange
Doheny State Beach, End of the Park	Orange
Doheny State Beach, at Last Campground	Orange
Corona Del Mar	Orange
Crystal Cove	Orange
Marine Science Institute Beach	Orange
Dana Point, Capistrano County Beach	Orange
Doheny State Beach, Pedestrian Bridge	Orange
Dana Strands Beach	Orange
Huntington City Beach, at 17th Street	Orange
Boika Chica Reserve, at Flood Gates	Orange
Surfside Beach, at Sea Way	Orange
San Clemente, at Avenida Calafia	Orange
Salt Creek Beach	Orange
Laguna Lido	Orange
Treasure Island Beach	Orange
Del Mar, at 15th Street	San Diego

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Team in Action



From Left to Right

Staff

Dr. Jeff Armstrong (Retired)

Laura Terriquez

Former Directors

Keith Curry

Bob Kiley

Upcoming events for our Board

- Rig fishing – 9/23/2023
- Day at the Dock – 10/4/2023

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Looking Forward (Research and Innovation)

Strategic Process Studies (SPS)

- Plume modeling
- Changes in discharge footprint using LABs
- Meiofauna baseline assessment
- Use of bioassays for biological response
- Microplastics characterization

Regional Monitoring

- Leverage resources to address regional issues such as:
 - Ocean acidification and Hypoxia (OAH)
 - Persistent contaminants

Innovation and Research

- Method development – PFAS, Microplastics, Domoic Acid
- Explore cutting edge technologies

COVID-19 Wastewater Surveillance

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OC San Partners











12

12

Serving the Community

Protect Public Health and the Environment

Water Quality: **Safe to Swim**

Sediment Quality: **Health Ecosystem**

Fish Health: **Safe to Eat**

Public Outreach

Laboratory Tours (including virtual)

Open House

Science Fairs

Children's Water Festival



Technical/Professional Organizations

SCAMIT

SETAC

ELTAC

ASM

TNI

Standard Methods

CSEA

CWEA

SCAS

SCAITE

SCUM

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Questions



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For more information

Visit us at: **OCSan.gov**
Follow us: **@OCSanDistrict**



Also on...  

Samuel Choi
Environmental Protection Manager
(714) 593-7497
schoi@ocsan.gov

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OPERATIONS COMMITTEE

Agenda Report

Administration Building
10844 Ellis Avenue
Fountain Valley, CA 92708
(714) 593-7433

File #: 2023-3003

Agenda Date: 6/7/2023

Agenda Item No: 10.

FROM: Robert Thompson, General Manager

SUBJECT:

STRATEGIC PLANNING - CORE VALUES

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Information Item.

BACKGROUND

The Orange County Sanitation District's (OC San) Strategic Plan consists of various elements including the Core Values. OC San's Core Values support our Mission and Vision statements by expressing the values, beliefs, and philosophy that guides our daily actions. They help form the framework of our organization and reinforce our professional work ethic.

The Core Values were updated as part of the 2021 Strategic Plan update and are reflected as follows:

Integrity, Inclusion, Honesty, and Respect

We aspire to the highest degree of integrity, inclusion, honesty, and respect in our interaction with each other, our suppliers, our customers, and our community. We strive to demonstrate these values in our actions, commitments, and service.

Leadership, Teamwork, and Problem Solving

We lead by example, acknowledging the value of our resources and using them wisely to achieve our mission. We strive to reach OC San goals through cooperative efforts and collaboration with each other and our constituencies. We work to solve problems in a creative, cost-effective, and safe manner, and we acknowledge team and individual efforts.

Customer Service, Transparency, and Accountability

We are committed to acting in a timely, accurate, accessible, and transparent manner through excellent customer service. We are committed to act in the best interest of our internal and external stakeholders.

Resiliency, Innovation, and Learning

We continuously develop ourselves, enhancing our talents, skills, and abilities. We recognize that only through personal growth and development will we progress as an agency and as individuals.

Safety

We are committed to providing a safe work environment. We will demonstrate leadership, promote individual accountability, and participate actively in the advancement of our health and safety practices.

RELEVANT STANDARDS

- Build brand, trust, and support with policy makers and community leaders
- Make it easy for people to understand OC San's roles and value to the community

PROBLEM

The Strategic Plan needs to be updated to ensure its relevancy.

PROPOSED SOLUTION

Solicit and incorporate the Board of Directors' input in the update of the proposed Strategic Plan documents.

PRIOR COMMITTEE/BOARD ACTIONS

November 2021 - Adopted the OC San Strategic Plan 2021.

ADDITIONAL INFORMATION

The adopted Strategic Plan will be the basis of Fiscal Year 2024-25 and 2025-26 budget development and for the General Manager's Fiscal Year 2024-25 Work Plan.

CEQA

N/A

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- OC San Strategic Plan 2021
- General Manager's FY 2022-23 Work Plan
- Presentation

ORANGE COUNTY SANITATION DISTRICT

Strategic Plan '21





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Board of Directors

CITIES

Anaheim
Brea
Buena Park
Cypress
Fountain Valley
Fullerton
Garden Grove
Huntington Beach
Irvine
La Habra
La Palma
Los Alamitos
Newport Beach
Orange
Placentia
Santa Ana
Seal Beach
Stanton
Tustin
Villa Park

AGENCIES

Costa Mesa Sanitary District
Midway City Sanitary District
Irvine Ranch Water District
Yorba Linda Water District
Member of the Board
of Supervisors

ACTIVE DIRECTOR

Stephen Faessel
Glenn Parker
Art Brown
Paulo Morales
Patrick Harper
Jesus J. Silva
Steve Jones
Kim Carr
Anthony Kuo
Rose Espinoza
Marshall Goodman
Mark Chirco
Brad Avery
Kim Nichols
Chad Wanke
Johnathan Ryan Hernandez
Sandra Massa-Lavitt
David Shawver
Ryan Gallagher
Chad Zimmerman

Robert Ooten
Andrew Nguyen
John Withers
Brooke Jones

Doug Chaffee

ALTERNATE DIRECTOR

Jose Diaz
Steven Vargas
Connor Traut
Anne Hertz
Glenn Grandis
Nick Dunlap
John O'Neill
Dan Kalmick
Farrah N. Khan
Jose Medrano
Nitesh Patel
Ron Bates
Joy Brenner
Chip Monaco
Ward Smith
Nelida Mendoza
Schelly Sustarsic
Carol Warren
Austin Lumbard
Robert Collacott

Art Perry
Sergio Contreras
Douglas Reinhart
Phil Hawkins

Donald P. Wagner

Message from the GM

The Orange County Sanitation District's (OC San) resilience and preparedness have been clearly demonstrated over the past year and a half as we continued to deliver our mission to protect public health and the environment, while also planning for the future.

Working through the COVID-19 pandemic, we continued to move forward, making progress on the strategies set by our Board of Directors in our previous Strategic Plans. We even adopted a new logo and name that is reflective of our innovation and culture, changing from OCSD to OC San.

This Strategic Plan, which sets the course for our agency for the next few years, is the result of a Board of Directors-driven planning process. The plan is reviewed and updated every two years to verify and validate whether the issues, policies, and initiatives are still relevant and appropriate. This year's update coincided with the addition of eleven new Board Members.

While it may have seemed like inopportune timing to update a plan of this nature, it was actually a great opportunity. The process allowed the new members to become engaged in the important strategic issues facing OC San. This fresh set of eyes created greater clarity and validated the issues and topics being addressed. The Board's direct input into the Strategic Plan has also created organizational alignment ensuring that staff's efforts are in line with the Board's priorities.

I would like to thank our former Board Members for their vision and guidance that set the course we are on today, and our current Board for their trust and confidence giving us the opportunity to grow and excel as we strive to provide industry leading service.

Sincerely,



James D. Herberg
General Manager



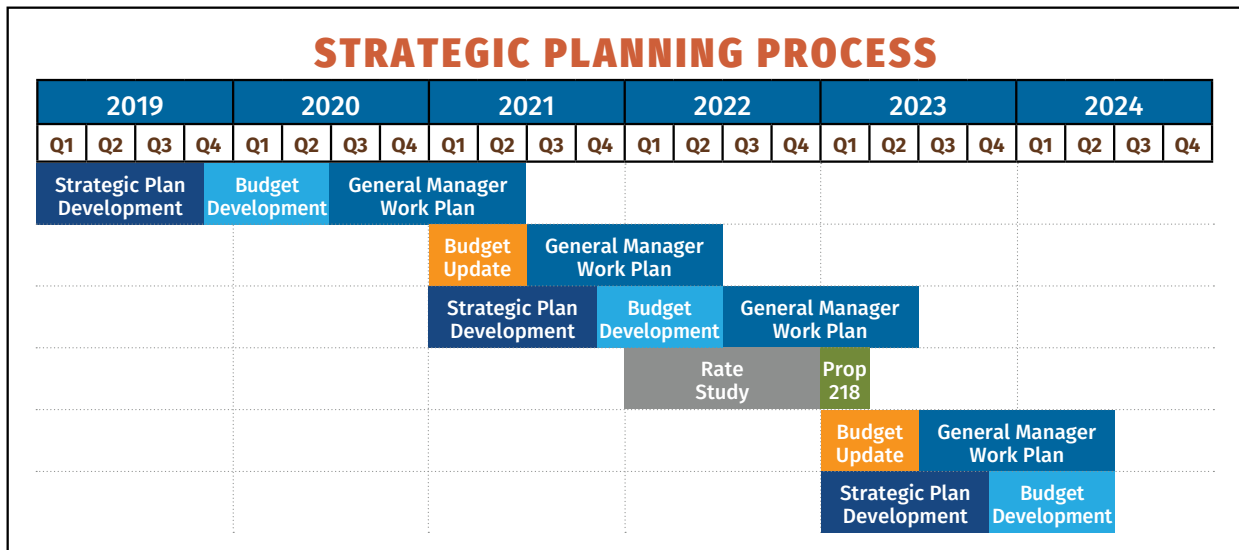
Strategic Plan Executive Summary

The Orange County Sanitation District (OC San) is a resource recovery agency focused on providing reliable and cost-effective public services. OC San uses a two-year, four-step management process that creates and maintains vision alignment between the Board of Directors, staff, and the public we serve. It all begins with a Strategic Plan developed by the Board and staff that provides guidance and direction for long-term financial, capital, and operational efforts.

Strategic planning is the first step to define OC San's ability to have people and assets in place to meet its agreed upon mission. The second step is budget development. The budget document lays out the tactical

planning and resource allocation based on the adopted Strategic Plan. The third step is budget execution which is the day in and day out delivery of services to the public we serve. The final step is reporting on our level of service delivery and goal attainment.

These four steps are repeated every two years to maintain alignment and adjust based on Board Member input, legal and regulatory changes, and the needs of the communities we serve. This management system is intended to carry on over the course of transitioning Board Members and staff to deliver resilient daily services and morph our facilities and systems over time to meet new challenges facing Orange County.



The policy areas from the 2019 Strategic Plan were evaluated and determined to be relevant today, slight modifications were made to address new findings or continue to advance the original goal with new initiatives. We are continuing with four broad categories with 15 policy areas that define our role in the wastewater environment for Orange County.

The areas are:

Business Principles

- Budget Control and Fiscal Discipline
- Asset Management
- Cybersecurity
- Property Management
- Organizational Advocacy and Outreach

Environmental Stewardship

- Energy Independence
- Climate and Catastrophic Event Resiliency
- Food Waste Treatment
- Water Reuse
- Environmental Water Quality, Stormwater Management and Urban Runoff

Wastewater Management

- Chemical Sustainability
- Biosolids Management
- Constituents of Emerging Concern

Workplace Environment

- Resilient Staffing
- Safety and Physical Security

Three workshops were held with the Board of Directors from February to April to introduce and present each area and the corresponding initiatives. Feedback and recommendations were made by the Board leading to revisions of some of the proposed initiatives for each area.

During these workshops, a fifteenth topic was introduced to reinforce the importance of

transparency and communication with our public. Organizational Advocacy and Outreach was added under the category of Business Principles. While OC San already has active communication efforts and programs in place, including it in the Strategic Plan emphasizes to our stakeholders the importance we place on keeping our community informed and involved.

Based on direction from the Board, the Strategic Plan policy papers were finalized and included in the appendix of this report. Each paper includes a policy statement, background information, the current situation, and initiatives to reach the policy goal.

The topics covered in this report will trickle down to supporting documents such as the Budget and General Manager's Work Plan. The work plan is where we will note measurable results on each goal and the supporting initiatives.

As part of the Strategic Plan, the agency's Core Values, and Levels of Service (LOS) were also updated to be reflective of the current status of OC San. The Core Values are intended to reflect and guide the culture practiced at OC San. Our LOS are our commitment to our various stakeholders; that includes the public, regulators, our Board, and our employees. As regulations change, technology advances, expectations change, so must our service to the public. Our LOS were updated to more closely align with the Strategic Plan. They reflect our promise to the public to protect public health and the environment by providing them with state-of-the-art service. OC San's Risk Register was also reviewed and updated to capture the appropriate areas of concern as well as our action plan to mitigate those risks.



Our Mission

"To protect public health and the environment by providing effective wastewater collection, treatment, and recycling."

Our Vision

ORANGE COUNTY SANITATION DISTRICT WILL BE A LEADER IN:

- Providing reliable, responsive, and affordable services in line with customer needs and expectations.
- Protecting public health and the environment utilizing all practical and effective means for wastewater, energy, and solids resource recovery.
- Continually seeking efficiencies to ensure that the public's money is wisely spent.
- Communicating our mission and strategies with those we serve and all other stakeholders.
- Partnering with others to benefit our customers, this region, and our industry.
- Creating the best possible workforce in terms of safety, productivity, customer service, and training.



Core Values

OC San's Core Values support the Mission and Vision Statements by expressing the values, beliefs, and philosophy that guides the agency's daily actions. They help form the framework of the organization and reinforce a professional work ethic. The Core Values were updated this year as part of the overall Strategic Plan update to reflect the agency and workforce we are today. These Core Values more accurately express the philosophy and practice of OC San's workforce.

Integrity, Inclusion, Honesty, and Respect

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Leadership, Teamwork, and Problem Solving

We lead by example, acknowledging the value of our resources and using them wisely to achieve our mission. We strive to reach OC San goals through cooperative efforts and collaboration with each other and our constituencies. We work to solve problems in a creative, cost-effective, and safe manner, and we acknowledge team and individual efforts.

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We continuously develop ourselves, enhancing our talents, skills, and abilities. We recognize that only through personal growth and development will we progress as an agency and as individuals.

Safety

We are committed to providing a safe work environment. We will demonstrate leadership, promote individual accountability, and participate actively in the advancement of our health and safety practices.





Levels of Service

OC San's Levels of Service (LOS) are the commitment made to our rate payers, regulators, employees, and the Board of Directors on our operational efforts. The LOS have been updated from last year to better align with the Strategic Plan and showcase how the initiatives are being implemented and monitored.

ENVIRONMENTAL STEWARDSHIP	LEVELS OF SERVICE
OC San will protect public health and the environment.	
• Compliance with Ocean Discharge Permit	100%
• Dry weather urban runoff collected and treated	Up to 10 MGD
• Major non-conformance audit findings	<5 per permit per audit
• Respond to corrective actions within regulatory timeline for air, solids, and water compliance audits	100%
• Comply with Fleet Air Emission Regulations	100%
• Number of odor complaints under normal operations	< 5 events per treatment plant < 12 events for collection system
• Sanitary Sewer Spills per 100 miles	<2.1
• Compliance with core industrial pretreatment requirements	100%
OC San's effluent, solids and biogas will be recycled.	
• Provide specification effluent to Groundwater Replenishment System	100%
• Beneficially reuse biosolids during normal operations	100%
WASTEWATER MANAGEMENT	
OC San will be a good neighbor and will be responsive to its customers.	
• Respond to collection system spills within one hour of notification	100%
• Respond to odor complaints	Within 1 hour in plants Within 24 hours in collection system
• Respond to public complaints or inquiries regarding construction within 24 hours	100%
• Respond to biosolids contractor violations within one week of violation notice	100%
• Respond to Public Records Act requests within the statutory requirements	Within 10 days
• Dig alert response within 48 hours	100%

OC San will manage its assets to ensure reliability and security.	
• Cybersecurity event monitoring and incident handling, percent successful	>87%
• Annual real property assessments/inspections	25% of properties
• Annual Inspection, documentation, and evaluation of collection system	70 miles of sewers 880 manholes
BUSINESS PRINCIPLES	
OC San will exercise sound financial management.	
• Annual user fees sufficient to cover 100% of O&M Budget	100%
• Collection, treatment, and disposal costs per million gallons	Within 10% of budget
• Maintain Credit Rating* (Moody's, Fitch, S&P)	AAA
WORKPLACE ENVIRONMENT	
OC San will provide a safe, productive workplace.	
• Employee injury incident rate per 100 employees	<4.4
• Annual days away from work, restricted activity, or job transfer resulting from a work-related injury	<2.5
• Annual training hours per employee	45 hours

*As of 2021

Risk Register

The Risk Register is a biennial report that is prepared for management to use as a reference in the daily activities of OC San and in the preparation and support of the Strategic Plan and General Manager's Work Plan. It provides an overview, from an internal perspective, of OC San's risks as identified by the Executive Management Team and Managers.

The 2021 Risk Register was developed by conducting two types of analysis:

- Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis focusing on internal areas that OC San actions can directly impact.
- Political, Economic, Social, and Technology (PEST) Analysis recognizing outside influences that OC San needs to be aware of and may affect OC San operations.

The results from the analysis were further explored to identify possible solutions and level of priority and concern. Due to the nature of the information, specific details are limited to reduce OC San risk.

The risks fell across the board with many of the top concerns having to do with staffing and succession management, cybersecurity, supply chain issues, and operating concerns.

The opportunities included asset management, staffing and succession management, working with other agencies, and technology.

The information included in the 2021 Risk Register is a resource for management. It is part of an effort to maintain and improve the operation and status of OC San going forward.



Policy Areas

The Strategic Plan is broken down into four categories with 15 topic areas. Below are the policy statements and corresponding initiatives to achieve the goals of the plan. The complete policy papers can be found in the appendix.

BUSINESS PRINCIPLES

Budget Control and Fiscal Discipline **POLICY STATEMENT**

OC San will prudently manage the public funds that it collects. It will take a long-term planning approach to its facilities and rate setting that provides a stable setting program, prudent reserves, and pay-as-you-go philosophy for operating and replacement capital expenses.

Initiatives

- Maintain a stable and fiscally responsible financial plan that is based on long-term planning which supports stable rate setting and a pay-as-you-go philosophy for operating and replacement capital expenses.
- Maintain the current investment policy that prioritizes safety, liquidity and return on investment, in that order.
- Maintain a long-term debt program that will pay off all existing debt issuances by 2044 and avoid new debt to support existing facilities.
- Maintain all Post Employment Benefit funding levels between 95% and 105% while minimizing and/or eliminating Unfunded Actuarially Accrued Liabilities.

Asset Management **POLICY STATEMENT**

OC San will assess and manage the collection system and treatment plant systems and assets to improve resilience and reliability while lowering lifecycle costs. This will be accomplished through adaptive operation, coordinated maintenance and condition assessment, and planned capital

investment. Staff will balance maintenance, refurbishment, and replacement strategies to maximize useful life, system availability and efficiency.

Initiatives

- Create an annual Asset Management Plan documenting the condition of the collection system and treatment plants, and upcoming maintenance or capital projects.
- Coordinate the efforts of operations, collections, mechanical maintenance, electrical maintenance, instrument maintenance and engineering through process teams to assure OC San's resources are focused on the high priority work functions.
- Maintain a 20-year forecast of all CIP projects needed to maintain or upgrade OC San's nearly \$11 billion in assets on a prioritized risk basis to establish rate structures.

Cybersecurity **POLICY STATEMENT**

OC San must maintain adequate cybersecurity (information technology security) techniques that protect computer assets, networks, programs, data, and industrial control equipment from unauthorized access or attacks that are aimed for exploitation.

Initiatives

- Conduct various tabletop exercises to determine the organization's ability to respond to a targeted cyberattack and to improve the quality of the response, should an attack occur.
- Evaluate, enhance, and monitor network security including activities to protect the usability, reliability, integrity, and safety of the network by developing Security Operations Center capabilities that support continuous monitoring and is responsible for the continuous threat protection process.

- Conduct a comprehensive third-party cybersecurity operations assessment (Red Team). A thorough Red Team engagement will expose vulnerabilities and risks regarding:

Technology — Networks, applications, routers, switches, appliances, etc.

People — Staff, independent contractors, departments, business partners, etc.

Physical — Offices, warehouses, substations, data centers, buildings, etc.

Property Management POLICY STATEMENT

OC San owns and operates assets throughout its service area located in property owned in fee, through easements, and in the public right-of-way. OC San will identify and protect all of its property rights to assure assets are not encumbered or encroached upon so that the facilities may be properly operated, maintained, upgraded, and replaced.

Initiatives

- Review property rights to identify encroachments or encumbrances that restrict operation, maintenance, inspection, or emergency repair access.
- Work with identified parties to remove encroachments or encumbrances.
- Consolidate real estate and property management activities to maximize its resources and effectiveness.
- Augment OC San resources with contracted specialized real estate services to limit the need for additional staffing.

Organizational Advocacy and Outreach POLICY STATEMENT

OC San will create and disseminate information to our stakeholders with an end goal to educate, inform, and garner support for the services provided thus allowing us to operate in a more efficient and effective manner. OC San will deliver messages that are accurate, transparent, and designed to foster

public trust and confidence. Additionally, following legislative oversight will ensure OC San's interests are explained and protected.

Initiatives

- Relaunch the Vendor Outreach Program with a focus on Orange County firms to enhance the competitive bidding opportunities for OC San. This effort will increase the number of vendor and contractors soliciting OC San projects thus expanding the pool and providing a greater variety of partners.
- Develop an outreach program for member agencies regarding inflow and infiltration issues within their sewer system. The program will aim to educate, inform, and reduce inflow and infiltration affecting the local and regional sewer system.
- Develop an educational display in the Headquarters building to illustrate OC San's reuse and recycling efforts in support of the environment and public health. Display to be revealed when new building is unveiled.
- Commemorate OC San's achievement of reusing 100 percent of the reclaimable flow upon completion of the Groundwater Replenishment System's Final Expansion. Celebrate the milestone and acknowledge the accomplishment with staff and stakeholders.
- Actively monitor and engage regulatory and legislative activity across California and Washington, D.C. And take appropriate action in support of or opposition to, legislative and regulatory initiatives affecting OC San and the wastewater industry. This includes using Monitoring and Analysis, Advocacy Days, Position letters and Funding Requests (as deemed suitable).

ENVIRONMENTAL STEWARDSHIP

Energy Independence **POLICY STATEMENT**

OC San will strive to be a net energy exporter. Electrical, thermal, and methane gas generation will be maximized. Energy utilization will be minimized using sound engineering and financial principles.

Initiatives

- Maximize the anaerobic digestion conversion of organics to methane through receipt of food waste and operational techniques.
- Investigate and install energy storage and photovoltaic systems where practical to achieve energy independence/resilience.
- Continue to support the conversion of biomethane into electricity and heat for process use. Improve systems as necessary to comply with air regulations.
- Pursue technology innovation to reduce energy use, reduce transportation energy impacts, and reduce greenhouse gas impacts.

Climate and Catastrophic Event Resilience Policy **POLICY STATEMENT**

OC San aims to design, maintain, and operate valuable wastewater assets that withstand or adapt to adverse conditions in a reasonable manner that is both cost-effective and sustainable for present and future generations. These adverse conditions include drought, heavy rains, flooding, sea level rise, earthquakes, tsunamis, extreme heat, wildfires, pandemic, and electrical grid interruptions.

Initiatives

- Complete an engineering study of the seismic vulnerabilities of the treatment plants. Incorporate necessary upgrades into future capital improvement projects.
- Complete the biannual high flow exercise to assure readiness for a high flow event.

Maintain a higher level of readiness October 15 through March 15 and in advance of predicted significant rain events.

Food Waste Treatment **POLICY STATEMENT**

The State of California limits the volume of organic waste that may be diverted to landfills. OC San will collaborate with the County of Orange, other local agencies, and waste haulers to find ways to beneficially reuse food waste, a type of organic waste, to assist cities in our service area in meeting their diversion requirements while increasing OC San's energy production.

Initiatives

- OC San will accept a preprocessed food waste slurry from contracted waste haulers that will be fed to existing anaerobic digesters. OC San will charge a tipping fee to offset its costs for capital construction, operations, handling, maintenance, and biosolids disposal.
- Design, build, and operate a food waste receiving station. Create a specification for food waste slurry and contract with solid waste haulers to receive and process food waste.

Water Reuse **POLICY STATEMENT**

OC San will seek to beneficially reuse all reclaimable water for potable, industrial, irrigation, and environmental uses.

Initiatives

- Support the completion of the final phase of the Groundwater Replenishment System and maximize reclaimable wastewater availability to the Orange County Water District.
- Support Green Acres project water production to provide reclaimed water for industrial and irrigation uses.

Environmental Water Quality, Stormwater Management and Urban Runoff

POLICY STATEMENT

OC San will collaborate with regional stakeholders to accept up to ten million gallons per day of dry weather urban runoff at no cost to the dischargers through its permit-based Dry Weather Urban Runoff Diversion Program (DWURD Program). The primary objective of the DWURD Program is to improve water quality in streams, rivers, and beaches in OC San's service area without adversely impacting OC San's occupational safety, collection and treatment systems, reuse initiatives, or permit compliance. Unauthorized discharge of urban runoff to OC San is strictly prohibited.

Initiatives

- Issue dry weather urban runoff connection permits to accept up to a total of ten million gallons per day of controlled discharge of dry weather urban runoff where existing conveyance capacity exists,

and the constituents within the flow will not adversely impact OC San.

- Safeguard OC San's sanitary sewer system against uncontrolled and unregulated discharge by supporting responsible industry practices for flow management and urban runoff pollutant reduction at the source. Utilize OC San's pretreatment expertise to support effective urban runoff best management practices and special purpose discharge requests among OC San's regional stakeholders.
- Conduct a comprehensive study of the feasible opportunities for cooperative projects for urban runoff diversions to OC San to improve water quality and increase water recycling by maximizing the useful capacity of local collection systems, OC San treatment systems, and OCWD recycling and recharge systems.
- Support responsible and practicable urban runoff management and reuse legislations and regulations.



WASTEWATER MANAGEMENT

Chemical Sustainability **POLICY STATEMENT**

OC San has a need to use chemicals in its treatment process to improve plant performance, reduce odor and corrosion potential, and meet its regulatory requirements. These commodity chemicals are provided by outside vendors through the purchasing process. Some of these chemicals are subject to price swings due to market condition changes such as energy cost impacts, raw material cost changes, commercial competition changes, and transportation cost volatility. OC San will identify chemicals key to its operation, investigate the market risks for those chemicals and devise strategies to mitigate identified risks to availability and pricing.

Initiative

- Reduce the exclusive reliance on particular chemicals and individual vendors to establish flexibility to utilize other chemicals/processes to accomplish operational objectives.

Biosolids Management **POLICY STATEMENT**

OC San will remain committed to a sustainable biosolids program and will beneficially reuse biosolids in accordance with Resolution No. OC San 13-03 and the 2017 Biosolids Master Plan.

Initiatives

- Proceed with implementation of new thermophilic biosolids facilities at Plant No. 2 to improve OC San's operational resiliency against seismic events while enhancing biosolids quality and marketability.
- Continue to explore biosolids thermal conversion technology for energy generation and destruction of persistent contaminants.
- Engage with local, state, and federal agencies to ensure that biosolids will continue to be safely and legally used as a soil amendment.
- Stay abreast of new biosolids management options, technologies, and biosolids recycling and renewable energy partnerships in Southern California, with



special emphasis on technologies that address the removal, sequestration, and destruction of contaminants of emerging concern.

Constituents of Emerging Concern **POLICY STATEMENT**

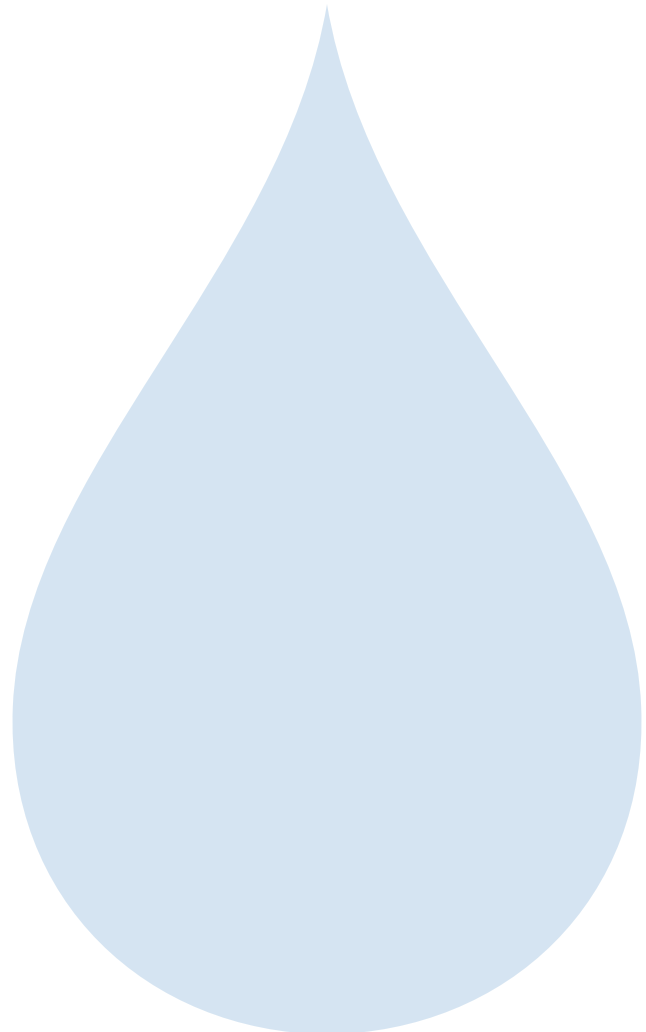
OC San will partner with other agencies, associations, and institutions to support the use of sound science to inform policy and regulatory decisions on constituents (or contaminants) of emerging concern (CECs) at the federal, state, and regional levels. Staff will obtain and maintain current knowledge on CECs under regulatory consideration, including occurrence, analytical methods, regulations, and treatment to support OC San's mission and regulatory compliance.

Initiatives

- Actively engage water and wastewater stakeholders to stay abreast of the scientific progress and any potential operational and financial impacts of CECs and provide timely briefings to OC San's Executive Management Team and Board of Directors to facilitate informed decision making.
- Develop capacity to identify, detect, quantify, and characterize CEC sources throughout the service area and treatment

process to promote source reduction, treatment effectiveness, communication of credible risks, and responsible reuse and disposal.

- Proactively establish internal expertise and develop laboratory capability to research the potential impact of CECs on beneficial reuse of water and biosolids.
OC San will use science-based knowledge to help shape CEC legislation and regulations to protect the public health and environment.
- In the absence of promulgated regulatory limits for specific CECs, OC San will work with regulatory agencies to establish interim source control measures to safeguard its water and biosolids reuse initiatives and ocean discharge against potential adverse impacts.



WORKPLACE ENVIRONMENT

Resilient Staffing **POLICY STATEMENT**

OC San will attract and retain high-quality talent to support its mission and continue to be an industry leader. It will safeguard leadership continuity and support effective performance of the organization by proactively monitoring the changing work environment and requirements to ensure employee development programs are relevant and facilitate building a skilled bench of readily available successors for key leadership and mission-critical positions.

Initiatives

- Maintain and enhance current employee development programs that are in place to provide the direction to identify, develop and select the next generation of prepared, capable, and engaged leaders, which include:
 - Vocational/Professional Student Internship Programs
 - Employee Development Programs
 - Workforce Vulnerability Assessments
 - Talent Readiness Assessments
 - Orange County Sanitation District University (OC San “U”)
- Continue to build the OC San “U” program and evaluate various options to partner with member agencies to share content and interactive development opportunities.
- Continue to build on the employee development opportunities to enhance organizational awareness and strengthening knowledge, skills, and abilities in the areas of OC San business systems, leadership, technology, and communication. Additionally, Human Resources will partner with other member agencies to provide and host training and development programs to foster collaboration and innovation.
- Conduct a Classification & Compensation study to ensure job classifications accurately depict the work being performed, to set

compensation levels accordingly, and stay abreast of market benefit and salary data.

Human Resources and the Board-approved Consultant will work with stakeholders to complete an organization-wide Classification & Compensation Study. It will incorporate feedback on survey agencies solicited from the Board over the past year and union feedback through meet and confer in upcoming labor negotiations.

Safety and Physical Security **POLICY STATEMENT**

OC San will ensure the safety and security of employees, contractors and visitors through standard practices, policies, and procedures that support a safe and secure environment, provide an appropriate level of security and safeguard OC San’s property and physical assets.

Initiatives

Safety

- Complete outstanding safety projects, improvements, and corrective actions to apply and obtain Cal/OSHA Voluntary Protection Program (VPP) status; and continue to foster a culture where employees are accountable for their safety as well as the safety of others.

Emergency Management

- Support facility and countywide emergency preparedness, response, and recovery efforts by partnering with entities, such as the Water Emergency Response Organization of Orange County (WEROC), Orange County Sheriff’s Department, and local fire departments to plan and continue to conduct disaster preparedness training and exercises.

Security

- Continually identify and assess vulnerabilities and implement solutions through the Security Committee and third-party assessments. Prevent/mitigate security breaches using physical security systems such as video monitoring, access control, and armed security patrols.



APPENDIX



Business Principles

Budget Control and Fiscal Discipline Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) will prudently manage the public funds that it collects. It will take a long-term planning approach to its facilities and rate setting that provides a stable setting program, prudent reserves, and pay-as-you-go philosophy for operating and replacement capital expenses.

Background

OC San's annual budget is approximately \$500 million. These funds support OC San's Operating, Capital, and Debt expenditures. OC San focuses its fiscal policy around three distinct areas, (1) Revenues, (2) Portfolio Management and (3) Debt Management and these areas are described in the Budget, Investment Policy and Debt Policy, all of which are updated annually.

Current Situation

1) Revenues

Most of OC San's revenue is generated by user fees and charges. Currently, OC San fees are in the lower third of its comparison agencies.

OC San's revenues come from three general areas: Fees and Charges (74%), Property Taxes (21%) and other smaller revenue sources (5%).

Fees and Charges: User fees are ongoing fees for services paid by Single Family and Multifamily customers connected to the sewer system. Also included in this category are Permit Fees (User fees paid by large industrial and commercial business owners connected to the sewer system and Capital Facility Capacity Charges (CFCC) (a one-time charge imposed at the time a newly constructed building or structure is connected to the OC San system. The OC San policy has been to focus on cost recovery while keeping fees as low as possible.

Property Taxes: OC San receives a share of the basic property tax levy proportionate to what was received in the 1976 to 1978 period less \$3.5 million allocated to school districts. These funds are dedicated to the payment of debt service.

Other Revenue: Other Revenue includes Interest Earnings, Intra-District Transfers, and small revenue sources.

2) Portfolio Management

The OC San Investment Policy is governed by three tenets:

- A. **Safety:** The safety and preservation of principal is the foremost objective of the investment program. Investments shall be selected in a manner that seeks to ensure the preservation of capital in the overall portfolio. This will be accomplished through a program of diversification and maturity limitations.
- B. **Liquidity:** The investment program will be administered in a manner that will ensure that sufficient funds are available for OC San to meet its reasonably anticipated operating expenditure needs.
- C. **Return on Investments:** OC San's investment portfolio will be structured and managed with the objective of achieving a rate of return throughout budgetary and economic cycles, commensurate with legal, safety, and liquidity considerations.

OC San's investments are separated into two distinct portfolios, Long-term and Short-term, with a primary focus on the Long-term portfolio.

The Long-term portfolio always focuses on four elements: duration, sector allocation, term structure, and security selection.

Duration

- Typically, OC San keeps the duration of a portfolio 'close' to the benchmark duration as we feel the benchmark duration is consistent with the risk tolerance of the strategy.
- The investment policy of OC San stipulates the average duration must not exceed 60 months and be within 80-120% of the benchmark.
- Historically, the deviation of the long-term portfolio versus the benchmark is close to 5%. Large deviations in the duration of the portfolio compared to the benchmark are an anomaly.

Sector Allocation

- OC San takes an active approach to asset allocation, differentiating our holdings versus the benchmark, with typically a modestly higher risk exposure compared to the benchmark.
- Some of the asset classes we find more attractive in the current investing environment include Corporate notes, Asset Backed Securities, and Treasury notes relative to the Agency and Supranational sectors.
- The sector allocation of the portfolio will evolve over time as our outlook for the various eligible investment options changes.

Term Structure

- OC San manages the term structure of the portfolio by focusing on either a bullet, ladder, or barbell structure, relative to the benchmark.
- For most of 2019, the structure was gravitating towards more of a bullet structure in light of the change in the yield curve, with short-term interest rates moving higher at a greater velocity than longer maturity securities.
- Currently, with the yield curve very flat, we are migrating back towards more of a barbell structure, with new purchases focused at the short and long end of the eligible maturity distribution. We also find the middle of the maturity distribution, near the three-year maturity point, to be the most expensive from an absolute and relative value perspective, further supporting the barbell structure.

Security Selection

- Within the Corporate and Asset Backed sector, the Chandler team focuses on adding stable to improving credits to be consistent with the overall investment objective of safety, liquidity, and return.
 - As a Corporate holding becomes more seasoned with a short maturity, it is often utilized as a 'source of funds' to facilitate new holdings in the portfolio.
 - Typically, Asset Backed securities are held to maturity, but in the event of a liquidity need and/or a deteriorating credit situation, we would look to reduce the exposure.

- OC San allocates to the Agency and Supranational asset classes when we find the spread over like maturity Treasury notes to be attractive.
 - Considering the lack of issuance in the Agency sector since the financial crisis, the relative value of the sector has become more challenging.
 - OC San has a core view that the Supranational Asset class should offer a modest spread concession to the Agency sector, and the team is typically active in the sector when the additional spread pick-up is compelling.
- Across all asset classes, OC San will remove exposure to a security that is faced with a deteriorating credit situation and/or trading at an irrational valuation where a swap into an alternative security will be beneficial to the portfolio over a reasonable investment time horizon.

3) Debt Management

Due to the magnitude of the capital improvement program, OC San has utilized a combination of user fees, property taxes and debt to meet its total obligations and maintain generational equity.

It is OC San's policy not to issue any new additional debt for any existing obligations. However, OC San will actively review opportunities to refinance existing debt where possible, provided the new refinancing results in a lower total cost and/or shortens the length of the obligations.

The primary debt financing mechanism used is Certificates of Participation (COP). COPs are a repayment obligation based on lease or installment sale agreements. As of July 1, 2020, the total outstanding COP indebtedness was \$940 million with a blended interest rate of 3.05%. It is anticipated that the debt will be paid off by 2044.

Initiatives to Support Progress Toward the Policy Goal

- Maintain a stable and fiscally responsible financial plan that is based on long-term planning which supports stable rate setting and a "pay-as-you-go" philosophy for operating and replacement capital expenses.
- Maintain the current investment policy that prioritizes safety, liquidity and return on investment, in that order.
- Maintain a long-term debt program that will pay off all existing debt issuances by 2044 and avoid new debt to support existing facilities.
- Maintain all Post Employment Benefit funding levels between 95% and 105% while minimizing and/or eliminating and Unfunded Actuarially Accrued Liabilities.



Asset Management Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) will assess and manage the collection system and treatment plant systems and assets to improve resilience and reliability while lowering lifecycle costs. This will be accomplished through adaptive operation, coordinated maintenance and condition assessment, and planned capital investment. Staff will balance maintenance, refurbishment, and replacement strategies to maximize useful life, system availability and efficiency.

Background

OC San is a regional governmental agency principally chartered to protect the public health through collection and treatment of wastewater. The governing Board of Directors has defined this role to include the recovery and utilization of resources from wastewater for the public good as a part of that mission. The environmental impact mitigation of the human activity of 2.6 million people and the natural drainage of the 471 square miles OC San serves is our principal concern.

OC San owns and operates extensive facilities to achieve its mission. OC San estimates the replacement value of the civil, mechanical, and electrical assets in its collection system, Plant No. 1 in Fountain Valley, and Plant No. 2 in Huntington Beach to be nearly \$11 billion. OC San has been building the piping, pumping, and treatment infrastructure it utilizes for more than 65 years. It is necessary to expand, renew, replace, demolish, and rebuild components of the system to deal with wear and tear and meet new challenges.

The early years for OC San were characterized mostly by capacity expansion to meet the challenges of increased flows as the county grew. The late 1970s to the 2000s were more defined by improved levels of treatment. The last ten years have been focused on increasing the level of resource reuse. One of the key success factors for OC San has been the ability to upgrade and repurpose its operating facilities to accomplish high levels of treatment and reuse.

Current Situation

OC San is a highly planned, forward-looking organization. The collection system and each of the treatment plants are broken down into granular functional parts. Each part is well defined and future requirements are estimated. OC San has a detailed understanding of what is owned, what condition it is in, and how it is capable of performing.

The collection system is made up of independent pipe networks that were installed by the former independent sanitation districts to deliver flow to the joint treatment works. Generally speaking, the natural watershed drainages in the service area are served by major trunk sewer systems. OC San has worked with member city and agency staff to understand future development plans, flow estimates, and has collected historical inflow and infiltration rates during wet weather events to assure adequate flow carrying capability exists in each trunk sewer system. OC San also factors in the effects of drought and lower domestic water usage rates to make sure the sewers operate properly at low-flow rates.

The treatment plants are broken down into the discrete process units that make up the whole. Each plant has a headworks unit that brings in flow and does preliminary treatment, a primary treatment unit which does gravity settling, multiple biological secondary treatment systems, solids handling and dewatering, power generation and distribution utilities, water and air

system utilities, and an outfall system to release treated water to the ocean. Each plant can treat 320 million gallons per day of wet weather flow, but only 185 million gallons total on average is treated. OC San must always maintain the ability to treat both the average flow and peak wet weather flow.

OC San understands that every asset has an expected life. Electrical systems are generally limited by component obsolescence to 20 years of life. Mechanical and coating systems are also generally limited by erosion, corrosion, and wear to 20 years of life. Civil structures and pipes are generally limited to 60 to 80 years of life if maintained on a regular basis.

With this in mind, OC San has created a Facilities Master Plan that plans to renew or replace facilities on this regular basis. Collection system projects are driven by growth projections or condition findings. Pipes are upsized or renewed based on flow projections, corrosion observation, coating system failure, or the ability to increase reclamation. The 15 regional pump stations are renewed on a more frequent basis due to the mechanical wear and tear and electrical component obsolescence needs, about every 25 years.

The master plan for the treatment plants is much more dynamic. In addition to the electrical, mechanical, and civil asset considerations, there is also the need to meet new requirements. The new requirements are driven by regulatory agencies or by the Board of Directors to change a discretionary level of service. Examples include: capacity demands (more water, more solids), lower discharge requirements (lower BOD/TSS to the outfall, lower nutrients to the ocean), more water for reclamation, better energy conversion of solids, and many more. The 2017 Facilities Master Plan took a snapshot in time looking at the anticipated needs and levels of service to lay out a detailed project plan to morph OC San infrastructure over time to meet the expectation. Renewal or replacement projects with costs and schedules were laid out for each individual unit of the treatment plants to address capacity, condition, level of service, and anticipated new regulatory drivers.

Future Policy Statement

OC San will continue to invest in the infrastructure necessary to meet its mission. OC San will seek to provide its required level of service at the minimum lifecycle cost for its collection and treatment systems. The 2017 Master Plan was the snapshot basis of the Capital Improvement Plan, but the Asset Management Plan is the means to update and modify the Capital Improvement Plan to meet new requirements and conditions as time goes by.

OC San will understand in a transparent way: what it owns, the condition of those assets, the capacity of collections and treatment required, the level of service required by its regulators and Board of Directors and will anticipate new regulations that may require system improvement. This understanding will drive coherent operations, targeted maintenance, and capital investment strategies to assure resilient, lowest lifecycle cost compliance with the requirements.

Operations is committed to optimizing the operation of the systems to extend equipment life and minimize energy and chemical utilization, while meeting all regulatory and level-of-service requirement. Maintenance is committed to maintain the installed assets in a ready state for operations. Maintenance will seek to balance individual component preventive maintenance, repair, and renewal in harmony with the Capital Improvement Program. The Capital Improvement Program is based on the Master Plan, modified by the annual Asset Management Plan, and will execute the projects to install, renew, or replace trunk sewers or treatment plant units on a scheduled basis.

Asset Management at OC San is the living management of the operation strategies, maintenance plans, and implementation of the Capital Improvement Program. OC San will find creative ways to maximize asset life or meet new capacity or level of service goals through operations and maintenance. OC San will annually reassess its condition, capacity, level of service, and regulatory conditions to drive operations and maintenance practices and modify the Capital Improvement Program projects.

Initiatives to Support Progress Toward the Policy Goal

- Create an annual Asset Management Plan documenting the condition of the collection system and treatment plants, and upcoming maintenance or capital projects.
- Coordinate the efforts of operations, collections, mechanical maintenance, electrical maintenance, instrument maintenance and engineering through process teams to assure OC San's resources are focused on the high priority work functions.
- Maintain a 20-year forecast of all CIP projects needed to maintain or upgrade OC San's nearly \$11 billion in assets on a prioritized risk basis to establish rate structures.



Cybersecurity Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) must maintain adequate cybersecurity (information technology security) techniques that protect computer assets, networks, programs, data, and industrial control equipment from unauthorized access or attacks that are aimed for exploitation.

Background

Developing an effective, sustainable cybersecurity program is a pressing challenge for organizations of all sizes. The reasons behind the scope of the challenge are many. Cyber risk continues to grow at an exponential rate with routine attacks from nation states, criminal elements, hacktivists, and insider threats. The bottom line is cybercrime pays. The booming cybercrime economy is productizing malware and making cybercrime as easy as shopping at Amazon. With this easy access to cybercriminal tools and services, enterprises are experiencing rapid increases in the volume, scale, and sophistication of cyberattacks. Complex and dynamic information security disciplines are subject to continuous changes in the business, technology, and threat environments. Many organizations will struggle to implement security programs that support continuous improvements in this challenging environment.

Current Situation

OC San has evolved over recent years from dedicating less than half of a position towards cybersecurity, to one position, to currently two full-time positions. OC San's cybersecurity portfolio consists of strategic policy management, defense in depth practices, periodic risk assessments, ongoing awareness communication and operational (e.g., security monitoring and incident response, threat and vulnerability management, user provisioning) processes. For example:

- **Cybersecurity Awareness and Training Program** - OC San understands that our employees are our best line of defense in protecting and defending our enterprise from attack. We have built a comprehensive security awareness program by focusing on four critical functions: phishing attack simulations and reporting, quarterly education requirements, targeted training for IT developers and SCADA engineers, and pervasive communications utilizing internal communication tools.
- **Vulnerability Management** - IT staff subscribe to and monitor security advisories and threat bulletins from Microsoft, US-CERT, ICS-CERT, KnowBe4, Cisco, and other vendors to understand and manage new vulnerabilities. All internet accessible servers and applications are scanned weekly for vulnerabilities and remediated, as necessary. Microsoft operating system and application patches are deployed monthly while third party updates are deployed weekly. We use a vulnerability platform for continuous assessment of our security and compliance posture.
- **Intrusion Detection and Response** - We have implemented several security solutions to be able to detect, prevent and respond to malicious network activity. These include firewalls, intrusion prevent systems, web security gateway, and next-generation anti-malware. In addition, we also have user behavior analysis tools to identify insider threats and ransomware activity.
- **Privileged Access Management Program** - We use a privileged access management solution to remove and manage local administrative rights on workstations/servers to prevent lateral

movement. The solution is also used to protect, control, and monitor privileged access across files and systems.

- **Backup and Restore Capabilities** — IT practices a 3-2-1 backup strategy:

- 3 – Keep three copies of critical data
- 2 – Have your data on two types of media
- 1 – One copy must be offsite and offline

Restores are performed on at least a weekly basis in response to customer incidents. Disaster Recovery Testing is performed monthly by selecting a major system and testing restore capabilities of that system to our secondary treatment facility, as well as our remote site. We sandbox the restores and provide access to our application subject matter experts to conduct application specific testing. These tests are logged and kept for auditing and management purposes.

- **Security Incident Response** — A security incident response plan is an organized approach to handle a cyberattack. We have developed an incident response plan, playbooks, and procedures for various attacks as well as trained IT security staff. In addition, there are external contacts we can call for assistance including the FBI, Department of Homeland Security and organizations that specialize in incident response like Mandiant, Cylance, and Microsoft.
- **Security Assessments** — The purpose of a security assessment is to identify the current security posture of a system, network, or organization. The assessment provides recommendations to improve the security posture by mitigating identified risks. Our goal is to do one or two security assessments per year.

Future Policy Statement

The main objective of our information security program is the establishment of a continuous, iterative regimen of planning, building, running, and governing security capabilities that are derived from business requirements. Our security program cannot be a static entity. It must be adapted and continuously refined to keep pace with the ever-changing threat environment and changes in how OC San adopts digital business practices. Cybersecurity incidents are inevitable. Mistakes and/or a lack of preparation in the response can have serious repercussions. The ability of an organization to respond effectively to a security incident is a direct result of the time spent preparing for such an eventuality. If you fail to prepare, then you effectively prepare to fail. OC San will be prepared. This will be accomplished by the following proposed initiatives.

Initiatives to Support Progress Toward the Policy Goal

- Conduct various tabletop exercises to determine the organization's ability to respond to a targeted cyberattack and to improve the quality of the response, should an attack occur.
- Evaluate, enhance, and monitor network security including activities to protect the usability, reliability, integrity, and safety of the network by developing Security Operations Center capabilities that support continuous monitoring and is responsible for the continuous threat protection process.
- Conduct a comprehensive third-party cybersecurity operations assessment (Red Team). A thorough Red Team engagement will expose vulnerabilities and risks regarding:
 - Technology — Networks, applications, routers, switches, appliances, etc.
 - People — Staff, independent contractors, departments, business partners, etc.
 - Physical — Offices, warehouses, substations, data centers, buildings, etc.



Property Management Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) owns and operates assets throughout our service area located in property owned in fee, through easements, and in the public right-of-way. OC San will identify and protect all of its property rights to assure that our assets are not encumbered or encroached upon so that the facilities may be properly operated, maintained, upgraded, and replaced.

Background

OC San owns and operates more than \$11 billion in assets. A portion of those assets include buildings, easements, rights-of-way, and other encroachments. OC San has recently sold and purchased property to support its efforts. OC San does not maintain expertise in the real estate discipline. Since these transactions are limited and not core to OC San, it has been determined that it is more cost effective to augment OC San resources with contracted specialized real estate services.

Current Situation

OC San manages its physical property and property rights. Additionally, it manages landscaping, building maintenance, security and building maintenance. OC San staff primarily manages these activities.

Future Policy Statement

OC San will effectively manage its assets and proactively research and maintain all encroachments, encumbrances, and easements. Many of these activities are not core to OC San's mission. When prudent, OC San will augment resources with contracted specialized real estate and property management services. Although OC San is not in the business of managing property as a revenue enhancement or core activity, it does own and operate millions in physical property and property rights.

Initiatives to Support Progress Toward the Policy Goal

- Review property rights to identify encroachments or encumbrances that restrict operation, maintenance, inspection, or emergency repair access.
- Work with identified parties to remove encroachments or encumbrances.
- Consolidate real estate and property management activities to maximize resources and effectiveness.
- Augment OC San resources with contracted specialized real estate services to limit the need for additional staffing.



Organizational Advocacy and Outreach Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) will create and disseminate information to our stakeholders with an end goal to educate, inform, and garner support for the services provided, thus allowing us to operate in a more efficient and effective manner. OC San will deliver messages that are accurate, transparent, and designed to foster public trust and confidence. Additionally, following legislative activity will ensure OC San's interests are explained and considered.

Background

OC San provides regional sewer service for 2.6 million people living, working, and commuting in central and northwest Orange County. The various stakeholders include over 600 employees, 50 local elected officials appointed to our Board of Directors, regulators, policy makers, and the public. It is critical for OC San to have a multi-pronged outreach program to reach the intended audiences and to gain support for OC San's mission.

OC San provides services and tools to effectively communicate about the various programs that help achieve its mission. These programs include:

- **Student Educational Outreach**

Promoting and educating the youth within our service area on OC San's mission and the essential services provided. Reaching out to students allows for future generations to be aware of the environmental impact we each make and what we can accomplish working together. This knowledge will help our future generations to take action and make positive changes. It also introduces them to an industry they may be unaware of as a career choice. We do this through programs such as Inside the Outdoors which goes directly into classrooms to teach the wastewater treatment process; school-based plant tours that give them an inside view into a treatment plant and how the system works; events such as the Youth Environmental Summit (YES) which provides an opportunity to reach thousands of local children in a short amount of time with clear and direct messaging; and contests such as the Public Service Announcement, which is an incentive for students to get involved in developing messages for environmental issues.

- **Infrastructure Outreach**

OC San has \$11 billion in infrastructure that must be designed, operated, maintained, replaced, and enhanced to continue providing the essential service of protecting public health and the environment. Forming a positive presence in the community prior to the start of construction projects or maintenance activities is imperative to build trust, understanding, and support for the necessary construction. This is done through an extensive outreach program that develops and implements communication tools, such as dedicated Community Liaisons, construction webpages, collateral material, and presentations, to engage the communities affected by OC San Construction projects. Over the next fiscal year about two dozen projects will be in construction with various degrees of public impacts.

- **Employee Engagement**

Open and honest communication with our employees creates a positive and trusting environment, thus resulting in a more engaged workforce and ambassadors for our

agency. OC San creates employee engagement by utilizing various communication methods to share agency-wide messages. A diverse toolkit of communication pieces allows messages to be delivered to over 600 staff with various professional backgrounds, work shifts, work locations, and access to online materials. This toolkit of communication pieces includes The San Box (intranet), *Pipeline* Newsletter, Digester (messaging piece), Three Things to Know email, etc.

- **Brand Recognition**

As an industry leader, OC San must ensure its brand and image are portrayed accurately and positively. A cohesive voice, message, look, and feel are critical to maintaining a positive public perception and the trust granted to us by the community we serve and the stakeholders we work with. To build and maintain a positive image, we engage in general outreach efforts such as plant tours; community newsletters; a Speakers Bureau Program (which allows us to go into the community and meet with various groups to inform them of who we are and what we do); an informative and educational website, an active social media presence; and the development of programs such as Wastewater 101 Academy which provides an opportunity to showcase OC San's operations and initiatives for our ratepayers, fellow agencies, and influential public.

- **Regulatory and Legislative Advocacy**

OC San also recognizes the need for an active regulatory and legislative advocacy program at the local, state, and federal levels to ensure that the interests of the rate payers and the Board of Directors are communicated, understood, and supported. Towards this end, the legislative and regulatory team actively monitors and engages officials across California and in Washington, D.C., and takes appropriate action in support of, or opposition to, legislative and regulatory initiatives.

Current Situation

OC San is an industry leader involved in innovative and significant programs. However, it is most often seen as a silent utility due to its consistent attainment of its mission. News coverage for a wastewater resource recovery agency is most often about a mission failure. People tend not to think about their wastewater or where it goes until a beach is closed or a spill occurs.

In addition, OC San has no direct connection to its rate payers. User fees are paid via property tax bills thus eliminating an opportunity to reach our customers directly. This ultimately results in a limited understanding of OC San, what we do, and the important service provided to the community.

To that extent, OC San's outreach efforts are imperative to positively inform and educate the public we serve about the value we provide, including policy makers and regulators.

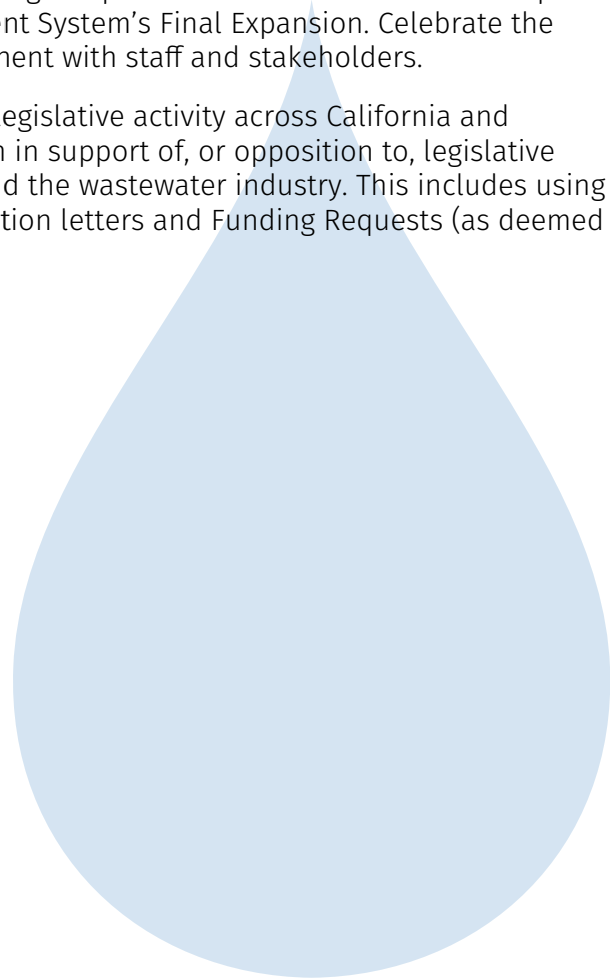
Future Policy Statement

OC San will creatively and effectively develop communication tools and tactics to inform and educate our various stakeholders. As a silent utility, it is imperative that OC San connect with the public we serve in a clear and transparent way to create a bank of trust, and garner support for the programs that allow us to continue protecting the public health and the environment.

OC San will maintain an active legislative and regulatory outreach program to help inform and guide leaders to ensure the wastewater industry is able to protect the public health and environment in a cost-effective way.

Initiatives to Support Progress Toward the Policy Goal

- Relaunch the Vendor Outreach Program with a focus on Orange County firms to enhance the competitive bidding opportunities for OC San. This effort will increase the number of vendors and contractors soliciting OC San projects, thus expanding the pool of service providers thus generating a greater variety of partners.
- Develop an outreach program for member agencies regarding inflow and infiltration issues within their sewer systems. The program will aim to educate, inform, and reduce inflow and infiltration affecting the local and regional sewer system.
- Develop an educational display in the Headquarters building to illustrate OC San's reuse and recycling efforts in support of the environment and public health. Display to be revealed when new building is unveiled.
- Commemorate OC San's achievement of reusing 100 percent of the reclaimable flow upon completion of the Groundwater Replenishment System's Final Expansion. Celebrate the milestone and acknowledge the accomplishment with staff and stakeholders.
- Actively monitor and engage regulatory and legislative activity across California and Washington, D.C., and take appropriate action in support of, or opposition to, legislative and regulatory initiatives affecting OC San and the wastewater industry. This includes using Monitoring and Analysis, Advocacy Days, Position letters and Funding Requests (as deemed suitable).







Environmental Stewardship

Energy Independence Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) will strive to be a net energy exporter. Electrical, thermal, and methane gas generation will be maximized. Energy utilization will be minimized using sound engineering and financial principles.

Background

OC San must balance the impacts of its operation between land, air, and water. For example, as a water focused utility, OC San seeks to produce the cleanest water possible to minimize the impacts of human activity on the ocean, as well as to renew freshwater resources for further domestic and commercial use. A natural result of cleaning this water is the separation and concentration of constituent solid and gaseous materials. These solid and gaseous products can impact land and air. The balance of impact on land, air, and water are shifted by application or creation of energy through chemical, biological, or thermal conversion techniques.

OC San is also committed to being a good neighbor. As such, significant amounts of energy are spent capturing and converting odorous air and vapor streams. OC San has pursued a comprehensive program to cover and seal its liquid and solid processes. Air streams are ducted to large fans which move thousands of cubic feet of foul air per minute through chemical, biological, and activated carbon beds to scrub the air of odorants that are regulated or may be perceived as a nuisance by the community.

OC San has utilized an anaerobic digestion process that relies on biological conversion of solid organic material to methane and carbon dioxide gas or Biogas. The Biogas is converted to electrical and heat energy in power plants for internal use. OC San's secondary treatment system is another example of using energy to convert water impacts to air emissions. Approximately 23% of OC San's energy usage within the treatment process is devoted to aerating water so biological agents can convert soluble organic material to nitrogen and carbon dioxide. The generation of energy itself creates an impact on the environment in air and thermal emissions.

Current Situation

The potential exists to further shift environmental impacts between land, air, and water through the utilization of energy. OC San is an environmental steward that seeks to balance and minimize overall impact by efficiently utilizing the energy inputs to its processes and maximizing the harvesting of energy available in the incoming wastewater.

On the energy use side of the ledger, OC San invests prudently in lifecycle energy efficiency to minimize the use of energy to achieve its mission. Pumping systems to lift water and move material are premium efficiency. Thermal energy is harvested from power production for use in the process and to heat and cool occupied buildings. Aeration compressors and diffusers are selected by overall efficiency. Lighting systems are upgraded over time to more efficient technologies and lighting levels are balanced between safety and security needs versus energy utilization and light pollution concerns. Facility designers and operators make careful choices regarding the utilization of every watt of electricity, British Thermal Unit of heat, and therm of gas consumed.

On the energy generation side of the ledger, OC San seeks to maximize the internal creation of energy. The primary source of energy creation is in Biogas. Organic solids collected and concentrated in the water treatment processes are converted biologically to Biogas composed of 65% methane, 34% carbon dioxide, and other trace constituents. OC San has been using this technology since the 1950s. Research has been ongoing since that time to maximize the production of digester gas. Some of the areas of research include improved mixing and

heating; improved feeding; chemical addition to limit trace pollutant production; introduction of food waste; injection of fats, oils, and grease; and cell lysing.

OC San cleans the Biogas and converts this Biogas into electricity, heat, and exhaust gas. The exhaust gas is regulated even more tightly for nitrogen compounds, carbon monoxide, particulates, and volatile organic compounds which require costly and performance degrading engine control technologies. This is another example of an air impact/energy trade off. These internal systems of energy harvesting provide roughly 66% of OC San's electrical demand and 92% of OC San's thermal demand in the treatment plants. OC San can shift the digester gas between treatment plants via an interplant pipeline and has roughly eight megawatts of additional generation capacity if more gas is produced.

In addition, OC San has installed electrical battery storage capacity. This system is primarily in place to lower operating cost by importing electricity for charging during low-cost nighttime hours and discharging that energy for process use during peak-cost hours. The slight energy loss due to system inefficiencies is outweighed by the cost savings and benefit to the region by lowering the peak demand of OC San by up to five megawatts.

Future Policy Statement

OC San seeks to be energy independent by self-generating all the electrical and thermal energy necessary to sustain its operations. This will be accomplished by economically minimizing its utilization requirements and maximizing energy harvested from the wastewater it receives. Energy independence will improve OC San's environmental impact and improve its operational reliability and resiliency.

OC San will also study and use photovoltaic cells in non-process areas where it makes economic sense. For example, the new Administration Building will include photovoltaic panels linked to the treatment plant. Staff will also investigate the installation of photovoltaic arrays over OC San owned property between the treatment plants with additional battery storage systems.

OC San also plans to investigate the treatment and sale of Biogas to external users. The State of California has set goals for renewable energy utilization for electrical production and hydrogen transportation fuels. OC San's Biogas is viewed favorably in these industries to meet the State of California targets. OC San is working very diligently and creatively to maximize the production of gas and reduce its own energy needs, but energy independence is the first goal which has not yet been met.

Staff recommends that innovative research continue to maximize energy harvesting and to minimize energy usage to make OC San energy independent in the most basic mission of protecting the public health and the environment. Super Critical Water Oxidation and other biosolids thermal conversion technologies offer some exciting opportunities to cut power use, reduce diesel fueled transportation, and create useful energy.

Initiatives to Support Progress Toward the Policy Goal

- Maximize the anaerobic digestion conversion of organics to methane through receipt of food waste and operational techniques.
- Investigate and install energy storage and photovoltaic systems where practical to achieve energy independence/resilience.
- Continue to support the conversion of biomethane into electricity and heat for process use. Improve systems as necessary to comply with air regulations.
- Pursue technology innovation to reduce energy use, reduce transportation energy impacts, and reduce greenhouse gas impacts.



Climate and Catastrophic Event Resilience Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) aims to design, maintain, and operate valuable wastewater assets that withstand or adapt to adverse conditions in a reasonable manner that is both cost-effective and sustainable for present and future generations. These adverse conditions include drought, heavy rains, flooding, sea level rise, earthquakes, tsunamis, extreme heat, wildfires, pandemic, and electrical grid interruptions.

Background

OC San owns and operates extensive wastewater collection and treatment facilities valued at nearly \$11 billion. The OC San service area faces special challenges because of the geographic location of its facilities. These challenges include: its position on and near seismic risk factors, its proximity to the Pacific Coast, adjacency of its treatment facilities to the Santa Ana River, and being served by increasingly fragile energy utilities.

OC San's facilities are situated on or near several seismic risk factors. Plant No. 2 is located directly on top of the Newport-Inglewood fault. Both plants and the collection system are influenced by many adjacent major and minor faults capable of delivering damaging energy. Both of our treatment plants and the majority of our collection system sit on top of silty, alluvial soils that can have the effect of amplifying the earth motion and risk liquefaction during a seismic event. OC San has invested significantly over the last 50 years to improve the soils, foundations, and structures to mitigate these seismic risks. As geotechnical and structural knowledge and building codes progress, upgrades and facility replacements will be necessary.

Another seismic risk associated with having a treatment plant and several pump stations located on the Pacific Coast is the risk of tsunami inundation. OC San has been working with and reviewing the plans of the City of Huntington Beach and the City of Newport Beach to understand and quantify this risk. The American Society of Civil Engineers (ASCE) has created a new standard, ASCE 7-16, to layout design parameters for lateral forces an inundation zone associated with potential tsunamis.

OC San understands that climactic factors we face change widely over time. OC San's systems must perform in extreme wet weather situations (atmospheric rivers), extreme dry weather conditions (drought), extreme tidal conditions (king tides, rising sea levels), as well



as high and low temperature extremes. OC San generally designs for historical and expected “average conditions” for optimal performance but must also assure operations for extreme weather events.

OC San serves a critical public health role. Its operations must be reliable 24-hours per day, 365 days a year. Electricity, and to a lesser extent natural gas, are necessary for pumping and treatment operations. Both electricity and natural gas supplies have become increasingly vulnerable to interruption. Electricity deliveries are more vulnerable due to wildfire outage criteria, loss of local generation assets, aging infrastructure, and extreme weather events. Natural gas supplies are more vulnerable due to the loss of local storage capacity, aging infrastructure, line corrosion, and more stringent regulatory requirements. OC San has significant capacity to self-supply critical energy requirement for extended periods.

Current Situation

OC San has spent considerable effort quantifying its seismic, climate, and utility supply risks. Several key studies have been initiated and will be completed in the next two years. The most acute risk factor faced by OC San is seismic risk. Climate and utility supply risks are more accurately described as chronic risks.

Seismic risk factors include ground shaking, liquefaction, lateral spreading, and fault rupture. Both treatment plants are situated in a historic riverbed with poor soil conditions. The collection system is vulnerable to failures during seismic events. The state of the art for seismic design has changed greatly over OC San’s history and will continue to do so. Many of our critical structures were designed or installed prior to the advancements that occurred as a result of the various earthquakes of the 1990s. Significant effort has been expended to better characterize the soil conditions under our treatment plants and pump stations. Projects to refurbish or replace existing unit processes are, or soon will be, scoped and budgeted to provide enhanced seismic resilience. These measures include soil mixing to stiffen the soil, various foundation designs and building structure improvements.

Tsunami resilience and flooding protection can go hand in hand. To a great extent, these two risk factors can be mitigated in the same way. The Tsunami guidelines for inundation in ASCE 7-16 are a reasonable peer reviewed standard. By complying with this standard for Huntington Beach and Newport Beach, OC San will be reasonably prepared for flooding caused by extreme storm events and conservative sea level rise estimates at Plant No. 2 and pump stations in the City of Newport Beach.

OC San has also expended significant effort to prepare for the effects of weather extremes on its operations. Extreme wet weather impacts operations. Inflow and infiltration during intense storm activity have multiplied average dry weather flow rate by up to three times in recent years. OC San has significant wet weather capacity and will continue to maintain a 640 million gallon per day influent and outfall capacity which is roughly 3.5 times our average dry weather flow. Historically, high rains as seen in 1863 and 1938 will push our systems to the limit.

OC San has also adapted its systems to perform in extreme dry weather. OC San in cooperation with OCWD operates the largest potable water reuse system in the world. This is made possible by replumbing our treatment plants and adding new smaller pump stations to deal with extreme low outfall flow rates in the morning hours. OC San also continues to grow the ability to shift influent flow between its treatment plants which creates additional resilience for risk factors.

Finally, on the topic of utility supply, OC San built redundant supplies for its most critical needs: electricity, natural gas, and water. OC San has maintained three sources of electricity supply for more than 25 years. The treatment plants can be supplied with power from Southern California Edison, OC San's Central Generation Plants, or on-site diesel generation systems to maintain basic operation to protect public health. In terms of natural gas, OC San has been producing bio-methane through anaerobic digestion since the 1950s with enough capacity to provide electricity and necessary process heat.

Future Policy Statement

OC San will continue to build and improve its facilities to meet the seismic, climate and energy infrastructure risks that it faces with a long-term, planned approach. Acute life-safety risks that are identified or facilities that are damaged or fail in a catastrophic event will be addressed very quickly. However, it is not practical to update \$11 billion in facilities every time a code is updated, or a new climate change estimate is released. OC San will stay abreast of code and climate change estimates as they occur and will implement improvements or replacements to facilities on a long-term basis in line with its asset management practices. OC San generally plans to refurbish or replace its mechanical and electrical assets every 20 to 25 years with an average capital improvement investment of \$250 million per year.

OC San facilities are designed to meet industry codes. As time goes on and codes are updated, it is not required to upgrade existing facilities to meet those latest codes unless there is a mandate to do so, or an unacceptable risk in not doing so is recognized. OC San will accept some incremental risk in having some facilities that are not necessarily compliant with the latest building codes until a project to rehabilitate or replace these facilities is developed. All of OC San's facilities have a planned life span with two to three refurbishment cycles. Identified seismic or flooding vulnerabilities may drive a replacement versus refurbishment decision in the normal capital planning process.

OC San will continue to aspire to energy independence which will help mitigate vulnerabilities to loss of electrical and gas utilities. In addition, OC San will continue to maintain third level, diesel generator, electrical supply capability for critical loads. On-site diesel storage will provide up to three days of power to run the plants. Pump stations diesel generation will be site specific in its design based on flow risks, hydraulic storage capacity, and site constraints. Either on-site generation or quickly deployable mobile generators will provide emergency power for up to several days at a time.

Initiatives to Support Progress Toward the Policy Goal

- Complete an engineering study of the seismic vulnerabilities of the treatment plants. Incorporate necessary upgrades into future capital improvement projects.
- Complete the biannual high flow exercise to assure readiness for a high flow event. Maintain a higher level of readiness October 15 through March 15 and in advance of predicted significant rain events.



Food Waste Treatment Policy

Summary Policy Statement

The State of California limits the volume of organic waste that may be diverted to landfills. The Orange County Sanitation District (OC San) will collaborate with the County of Orange, other local agencies, and waste haulers to find ways to beneficially reuse food waste, a type of organic waste, to assist cities in our service area in meeting their diversion requirements while increasing OC San's energy production.

Background

Whether supplying secondary treated wastewater for the Groundwater Replenishment System, creating renewable energy in the form of biogas from anaerobic digestion to produce electricity, or benefiting from the use of biosolids as a soil amendment, OC San is a resource recovery agency committed to providing resilient and reliable wastewater treatment service while protecting the public health and the environment.

In recent years, there has been a significant change in the regulatory landscape in California related to the diversion of organics such as food, green material, wood, paper, biosolids, digestate, and sludges from landfills. Currently, much of the state's diverted organics are being composted or used as alternative daily cover on landfills. With the phaseout of organics as alternative daily cover, the regulatory shift is creating an organics market for the wastewater sector to provide a solution to manage organics such as food waste by way of co-digestion. There is an opportunity for OC San to produce additional biogas, reducing the need to purchase electricity from the local utility.

Anaerobic digestion is currently at the nexus of important State of California mandates, namely: (1) organics diversion from landfills (AB 1826 and SB 1383), and (2) increased renewable energy and fuels generation (SB 32 and SB 100). The primary alternatives for organics management are anaerobic digestion and composting – of which anaerobic digestion is the only process offering energy recovery potential. Over the next few years, California's cities and counties, along with municipal solid waste haulers, material recovery facilities, and landfills will need to develop collection, processing, and energy recovery infrastructure to address new state legislation and goals. Existing wastewater treatment plants such as OC San are uniquely positioned to play a role in the new organics marketplace since solid waste management facilities do not typically have anaerobic digesters, the energy recovery infrastructure in place, or experience regarding the management of biosolids for beneficial use.

In 2017, OC San completed a comprehensive Biosolids Master Plan (Plan) that provides a roadmap and framework for sustainable and cost-effective biosolids management options and future capital facilities improvement over a 20-year planning horizon. Considering the timeliness of the regulatory mandates requiring organic diversion from landfills and increased renewable energy, the Plan evaluated the feasibility of implementing a high strength organic waste receiving program involving the co-digestion of preprocessed food waste.

While food waste digestion appears to be feasible, OC San's existing infrastructure isn't well suited for receiving, handling, or digesting green waste. Current digester feed, mixing, heating, dewatering and truck loading facilities aren't designed to deal with cellulosic products in green waste. The highly fibrous material doesn't readily break down and clogs the various systems optimized for sewage sludge treatment. In addition, there are legal hurdles specified in the California Health and Safety Code, Section 4700, that must be addressed before OC San could operate a refuse transfer facility.

Current Situation

Project Viability

OC San's Plan concluded that the costs to construct and operate a food waste receiving facility could be offset by tipping fees charged to food waste processors/haulers and by additional power generated from the increased digester gas production. The Plan recommended that OC San build an interim food waste receiving station immediately to take advantage of existing digestion and power generation capacity of approximately 150-250 wet tons per day at Plant No. 2. OC San will construct a more permanent facility in the future to coincide with the planned construction of new digesters at Plant No. 2, allowing additional capacity to co-digest approximately 500 wet tons per day of food waste. OC San also has at least six megawatts of installed electrical generation capacity that can convert the produced digester gas to electricity and heat.

Based on these recommendations, in 2018, OC San's Board approved a project (P2-124) to construct an interim (10-15 year service life) food waste facility to receive, store, and feed preprocessed food waste slurry to the digester complex at Plant No. 2 to generate additional digester gas. This project will be designed to accept approximately 150 wet tons per day of preprocessed food waste and will produce approximately 15 percent more methane gas for onsite energy production. This results in a greenhouse gas reduction of approximately 10,800 metric tons of carbon dioxide, which is equivalent to the annual greenhouse gases generated by approximately 2,000 passenger vehicles. This is consistent with OC San's Energy Independence Policy, which is to strive to be energy independent by minimizing energy utilization and maximizing useful energy recovery from the sewage it receives.

The final biosolids product currently produced by OC San is anticipated to be largely unaffected by the addition of food waste slurry. Pilot testing conducted by OC San indicates that there will be increased gas production due to mixing sewage sludge and food waste feed stock, but the final biosolids product will remain largely unchanged.

A draft Preliminary Design Report was issued in June 2019 for the interim receiving facility which included a viability evaluation concluding that the project is economically justifiable based on project costs and anticipated tipping fees. Final design of the interim food waste receiving station is complete and ready to bid for construction. The tipping fee and food slurry specifications are complete, and OC San is soliciting waste hauling partners to contract deliveries of material. When contracts for food waste deliveries are signed, OC San will commence bidding and construction to be in a position to receive material within two years.

There are three large municipal solid waste haulers that have expressed interest in collaborating with OC San to provide preprocessed food waste for digestion. Of these, two haulers are located within the county, and one is located outside the county. Another important partner for OC San is Orange County Waste and Recycling (OCWR). OC San has met with OCWR, and they have expressed interest in partnering with OC San to find local solutions to meet SB 1383's organics diversion mandate including in-county biosolids management, composting, food waste co-digestion, and biogas production.

Future Policy Statement

Food Waste Slurry

OC San will only accept a preprocessed food waste slurry. We do not have available land or air permits to handle, sort, and process solid or green wastes. OC San will work with other public agencies and waste haulers to develop an industry standard for food waste slurry

that specifies water, organic, metal, plastic, and glass content requirements. A common specification for slurry will help all parties make investment decisions.

Food Waste Volume

OC San has identified available capacity within its infrastructure at Plant No. 2 to accommodate food waste conversion to energy. The processes impacted by food waste conversion are digestion, gas cleaning, gas compression, generation, process heating, biosolid dewatering, and biosolids loading. Each of these impacted systems at Plant No. 2 in Huntington Beach have the capacity to accept 150 to 250 wet tons per day for the next ten years. Beyond ten years, OC San plans on upgrading its digestion, gas compression, and gas treatment systems. Based on the lessons learned from the interim system and the development of the food waste market, OC San plans to be able to accept up to 500 wet tons per day when the new digestion, gas compression, and gas treatment systems are completed.

OC San believes that the full implementation of the current regulations will create a food waste slurry market significantly greater than 500 wet tons per day in Southern California.

Tipping Fee Basis

The acceptance of food waste has the opportunity to more fully utilize the system capacity that already exists for the benefit of OC San's rate payers.

OC San staff will develop a base tipping fee rate schedule for Board of Directors' approval that meets the following criteria:

- Recover all capital costs to construct facilities within ten years (this will allow OC San and waste haulers to properly invest in processing facilities);
- Recover all on-going costs including operating cost, maintenance cost, electricity usage, biosolids dewatering, and reuse costs;
- Food Waste will not be operated "for profit" but rather a cost recovered service with tipping fees offsetting costs to not impact OC San's wastewater service fee structure.

Food waste generated and processed within the service area will be charged the base rate and will be prioritized over food waste from outside the service area. This is justified by the fact that the underlying infrastructure of OC San is already owned by service area rate payers. OC San contracts with service area waste haulers must provide for a pass-through savings to OC San rate payers. That means waste haulers may charge for collection and processing of food waste but must disclose to their City or Special District franchise partner OC San's tipping fees and negotiate pricing adjustments as necessary with City or Special District franchise partners.

If additional capacity exists, but isn't utilized by in-service area users, then that capacity may be contracted by out-of-service area users at a premium to help offset the cost of the underlying infrastructure necessary to process the food waste.

OC San will pursue grant opportunities to the extent possible to reduce the overall capital and operating cost basis for the program to reduce the tipping fee base rate.

Initiatives to Support Progress Toward the Policy Goal

- OC San will accept a preprocessed food waste slurry from contracted waste haulers that will be fed to existing anaerobic digesters. OC San will charge a tipping fee to offset its costs for capital construction, operations, handling, maintenance, and biosolids disposal.
- Design, build, and operate a food waste receiving station. Create a specification for food waste slurry and contract with solid waste haulers to receive and process food waste.



Water Reuse Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) will seek to beneficially reuse all reclaimable water for potable, industrial, irrigation, and environmental uses.

Background

For over 40 years, OC San and the Orange County Water District (OCWD) have partnered to beneficially reuse treated wastewater from OC San. OCWD, which serves roughly the same service area as OC San, manages and replenishes the groundwater basin in northern and central Orange County, ensures water reliability and quality, prevents seawater intrusion, and protects Orange County's rights to Santa Ana River water.

Beginning in 1975, OC San contributed treated wastewater from its Plant No. 1 to OCWD for the operation of Water Factory 21, which reclaimed the treated wastewater and injected it along with deep well water into the groundwater basin to prevent seawater intrusion. In the mid-1990s, OCWD needed to expand Water Factory 21. At the same time, OC San faced the challenge of having to build a second ocean outfall pipe to discharge treated wastewater into the Pacific Ocean. Both agencies collaborated to build an advanced water purification facility to resolve these challenges. This state-of-the-art facility, known as the Groundwater Replenishment System (GWRS), took the place of Water Factory 21, and began operation in 2008.

The GWRS treats secondary treated wastewater from OC San Plant No. 1 to drinking water standards and uses the purified water for both injection and percolation, through injection wells and recharge basins, as source water to replenish the groundwater basin's drinking water supplies. With approximately 75 percent of the water demand in northern and central Orange County cities coming from the groundwater basin, GWRS supplements existing water supplies by providing a new, reliable, high-quality source of water. OC San made a considerable investment to improve its level of treatment and source control to support the GWRS partnership. The upgrade to full secondary treatment and shifting the source control regulations, testing, and enforcement from a focus on ocean discharge to drinking water supply was very significant.

While the original GWRS facility was initially constructed to supply up to 70 million gallons per day (MGD) of purified water, the facility was designed for an ultimate treatment and conveyance capacity of 130 MGD. The original GWRS design intent was to expand the GWRS facility in two phases – an initial and a final expansion of an additional 30 MGD of treatment capacity with each expansion. The GWRS Initial Expansion Project was completed in June 2015 and has been producing up to 100 MGD of purified water for groundwater injection and recharge. The Final Expansion of GWRS is scheduled to be completed in 2023 and will produce the maximum capacity of 130 MGD.

In addition to providing treated wastewater to the GWRS, OC San also provides treated water to OCWD's Green Acres Project and OC San uses treated effluent within the treatment plants to offset potable water use. The Green Acres Project provides recycled water for landscape irrigation at parks, schools, and golf courses; and industrial uses, such as carpet dying; toilet flushing; and power generation cooling. OC San uses nearly 10 MGD of treated effluent, called Plant Water, within the treatment plants for engine and equipment cooling, polymer make-down, equipment flushing and washdown, and other uses.

Current Situation

The GWRS currently produces 100 million gallons per day of purified water – enough water for about 850,000 people. All of OC San’s Plant No. 1 secondary effluent, between 120-130 MGD, is made available to OCWD for the GWRS and Green Acres Project. However, secondary effluent from OC San’s Plant No. 2 and other non-reclaimable flows, such as brine from inland desalters and GWRS’s reverse osmosis process, and OC San’s process sidestreams, continue to be released into the ocean.

In 2016, OC San and OCWD jointly conducted the Effluent Reuse Study, which evaluated the feasibility of recycling OC San’s secondary effluent from Plant No. 2 and identified projects required to achieve the final expansion of the GWRS. The GWRS final expansion effort will include implementation of projects to construct new, modified or rehabilitated facilities at Plant No. 2 to separate reclaimable flows from non-reclaimable flows; to equalize, pump, and convey secondary effluent from OC San’s Plant No. 2 to the GWRS facility; and to treat the additional source water to produce 130 MGD of purified water.

Reverse Osmosis brine generated at the GWRS is currently discharged into the ocean. The 2016 Effluent Reuse Study identified alternative brine management strategies such as evaporation ponds, deep well injection, and engineered wetlands. Evaporation ponds are land intensive and are also energy intensive when combined with a brine crystallizer to remove solids from highly concentrated brine system using heat and pressure. While the areas around both OC San treatment plants have the appropriate geology for brine injection, there are concerns with contamination of drinking water aquifers, and seismic risks due to the Newport-Inglewood zones near Plant No. 2. At this time, it does not appear economically feasible to provide alternative management strategies for the brine discharge.

In November 2016, OC San Board of Directors adopted the Second Amended and Restated Joint Exercise of Powers Agreement for the Development, Operation, and Maintenance of the Groundwater Replenishment System and Green Acres Project, which committed the agency to continue supporting the GWRS and the Green Acres Project, and specifically, the final expansion of the GWRS. The implementation of the final phase of the expansion will be executed by multiple projects, some executed by OC San while the others executed by OCWD. Project costs related to the GWRS are funded by OCWD, including up to \$50 million in reimbursements to OC San for its costs incurred to execute related projects.

By supporting the GWRS Final Expansion, OC San will be able to recycle all reclaimable wastewater generated in its service area and treated at its two treatment plants, and OCWD will have sufficient water to run the GWRS facility to full capacity.

Future Policy Statement

The treated effluent produced from OC San’s Plant Nos. 1 and 2 is a valuable resource that can help boost local water resources and reduce dependence on imported water, while reducing the effluent discharged to the ocean. OC San will continue to seek opportunities for beneficial reuse of all reclaimable wastewater collected and treated at its facilities.

OC San will continue to support the completion of the final expansion of the GWRS in accordance with the adopted Second Amended and Restated Joint Exercise of Powers Agreement for the Development, Operation, and Maintenance of the Groundwater Replenishment System and Green Acres Project. This includes providing secondary effluent as source water for the GWRS free of charge; allowing OCWD to discharge brine via OC San’s ocean outfall free of charge; leasing approximately 10 acres of land to OCWD at \$1 per year for GWRS;

allowing OCWD to discharge North and South Basin extraction well flows to OC San sewers; managing the design and construction efforts of the Plant No. 2 Headworks Modifications Project and the Plant Water Pump Station Replacement Project (OCWD will reimburse up to \$50 million of project cost); managing and financing the construction of the Ocean Outfall Low Flow Pump Station at Plant No. 2, and the construction of Plant No. 2 primary and secondary facilities to allow segregation of non-reclaimable flows.

OC San will continue to maximize the delivery of secondary effluent available to GWRS and the Green Acres Project in order to maximize full production of purified recycled water for indirect potable reuse, and industrial and irrigational uses. OC San has been operating the Steve Anderson Lift Station to divert more flows to Plant No. 1. The two agencies regularly communicate and coordinate OC San operations and construction projects that may have impacts on GWRS operation and will continue this collaboration effort.

OC San has adequate flow to maximize the production of the GWRS through final expansion. Diversion of additional non-wastewater into the sewer system is unnecessary. Non-wastewater diversions create high flow risks during wet weather conditions and can introduce constituents of concern to existing water and biosolid reuse programs.

Initiatives to Support Progress Toward the Policy Goal

- Support the completion of the final phase of the Groundwater Replenishment System and maximize reclaimable wastewater availability to OCWD.
- Support Green Acres project water production to provide reclaimed water for industrial and irrigation uses.



Environmental Water Quality, Stormwater Management, and Urban Runoff Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) will collaborate with regional stakeholders to accept up to ten million gallons per day (MGD) of dry weather urban runoff at no cost to the dischargers through its permit-based Dry Weather Urban Runoff Diversion Program. The primary objective of the Dry Weather Urban Runoff Diversion Program is to improve water quality in streams, rivers, and beaches in OC San's service area without adversely impacting OC San's occupational safety, collection and treatment systems, reuse initiatives, or permit compliance. Unauthorized discharge of urban runoff to OC San is strictly prohibited.

Background

OC San is a regional governmental agency principally chartered to protect public health and the environment through an extensive regional sanitary sewer system and a highly effective wastewater treatment operation. The governing Board of Directors (Board) has refined this role to include the recovery and utilization of resources from wastewater for the public good. In addition to beneficial reuse of biosolids and responsible ocean discharge, OC San delivers high-quality treated wastewater to Orange County Water District's (OCWD) Groundwater Replenishment System (GWRS) for advance treatment and purification followed by storage in the Orange County groundwater basin.

OC San operates its regional wastewater collection system in accordance with its Sewer System Management Plan, which was developed in compliance with the California Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ. The Board periodically updates OC San's Wastewater Discharge Regulations Ordinance (Ordinance) to set uniform requirements for all users of OC San's system and enable OC San to comply with all applicable state and federal regulations. The Ordinance establishes limits on all wastewater discharges which may adversely affect OC San's system and includes language that prohibits sewer users from discharging groundwater, stormwater, surface runoff, or subsurface drainage to the sewer without written authorization or a valid permit. Uncontrolled discharge of any type is strictly prohibited and any person who violates any provision of the Ordinance is subject to administrative, civil and criminal penalties.

Most of the local sanitary sewer systems within OC San's highly urbanized service area are owned and operated by cities, water districts, or sanitary districts. These local systems are designed to transport wastewater from homes and businesses to OC San's regional sewers. These local and regional wastewater systems are designed to be wholly separate from Orange County's Municipal Separate Stormwater Sewer System (MS4), which is a system of conveyances that includes roads, streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains that carry surface runoff into receiving waters and is regulated by the Santa Ana Regional Water Quality Control Board. Throughout the year, dry and wet weather urban runoff are collected through the MS4 and discharged along the coastline.

During wet weather, the vast majority of urban runoff is comprised of stormwater from rainfall that either travels at a flow rate that does not allow enough time to soak into the ground or whose volume has exceeded the ability of the soil to hold any more moisture. In communities with a high percentage of covered or impervious surfaces, the runoff volume and velocity can be considerably greater when compared to rural areas. Additionally, sheets of runoff in these communities can pick up pollutants and debris from transportation, construction, industrial, and residential sources as they travel by gravity toward storm drains or other low points. Stormwater runoff carries trash, debris, bacteria, chemicals, oil, silt, sediments, microplastics,

and other common and emerging contaminants, and is the responsibility of MS4 permittees, who typically have jurisdiction over land use practices and flood control.

During wet weather, the volume of surface runoff is well beyond the capacity of OC San's conveyance and treatment systems. Inflow and infiltration into the sanitary sewer system during storm events can strain the hydraulic capacity of OC San to its limit of under 1,000 cubic feet per second. In addition, storm flow runoff also contains a much greater debris load that would compromise the sanitary sewer system.

During dry weather, OC San has the capacity normally reserved for inflow and infiltration to accept urban runoff. The Best Management Practices (BMPs) required of MS4 permit holders such as screening, street sweeping, spill prevention, and waste reduction campaigns help to effectively remove trash, silt, and other debris which help make these relatively small flows more compatible with the sanitary sewer. However, pollutants and pathogens that are not removed by the BMPs are carried by runoff from sources such as excess outdoor irrigation into storm drains which is discharged along the coastline.

In response to the significant and persistent adverse impacts from urban runoff to coastal beaches and waters, OC San sought support from the California legislature to accept controlled discharge of surface urban runoff into its wastewater system and was authorized in April 2000 to initiate a permit-based Dry Weather Urban Runoff Diversion Program to accept up to three million gallons of dry weather flow per day. OC San Board Resolution No. 00-04 allowed local agencies to apply for a Dry Weather Urban Runoff Permit where there was not an economically or practically feasible alternative and permittees are subject to requirements of the Ordinance.

Since its inception, the Dry Weather Urban Runoff Diversion Program has significantly improved beach water quality throughout OC San's service area as evidenced by excellent ratings in Heal the Bay's Annual Beach Report Cards and a notable decrease in water quality-based beach closures. In June 2013, OC San modified the Dry Weather Urban Runoff Policy (Resolution No. 13-09) to cap discharges received to 10 million MGD and waived fees associated with the program until discharges exceeded 10 MGD, or until the policy is revised. The Board established an action threshold of nine MGD to trigger revisiting the policy.

In addition to Dry Weather Urban Runoff Permits, OC San's Ordinance allows for normally prohibited wastes such as groundwater, stormwater, surface runoff, and subsurface drainage to be discharged to OC San through a Special Purpose Discharge Permit or written authorization from OC San when no alternate method of disposal is reasonably available to mitigate an environmental risk or health hazard.

Both Dry Weather Urban Runoff and Special Purpose Discharge permits carry strict wet weather shut-off and debris limiting provisions to protect the sanitary sewer system from hydraulic overload and the associated sewer spills. These permits also require flow monitoring and constituent sampling so that OC San can assure that water reused, water discharged to the ocean, and biosolids reused for agriculture are safe and fit for their greater environmental and resource recovery programs.

Current Situation

As of April 2021, OC San has issued 21 Dry Weather Urban Runoff Permits for diversions owned and operated by the City of Huntington Beach, the City of Newport Beach, OC Public Works, Irvine Ranch Water District, and an LLC responsible for the areas in and around Pelican Point community. For the July to December 2020 reporting period, OC San received on average 1.4 MGD from these facilities, which is well below the current 10 MGD policy cap and nine

MGD action threshold. Since the program's inception in 2000, the Dry Weather Urban Runoff Program has treated over 10 billion gallons of urban runoff.

Under special circumstances, OC San may also accept runoff on a limited-term and limited-volume basis through the SPDP or direct authorization process if there is adequate capacity, the runoff/wastewater meets applicable effluent discharge standards, there is no practical alternative method of disposal, and the runoff/wastewater is captured and held until it can be safely discharged to OC San.

In combination, these practices have enabled responsible management of persistent urban runoff challenges in OC San's service area and support a thriving and healthy local economy.

Future Policy Statement

Since the inception of OC San's Dry Weather Urban Runoff Diversion Program, the program success has depended on collaboration among stakeholders to improve beach water quality, urban runoff diversion water quality, coordinate flow management, and minimize any potential adverse impact on OC San's ocean discharge, biosolids management, and potable reuse.

OC San's enhanced source control program and vigilant operations provide a solid foundation for GWRS water's safety and reliability. Much of the current urban runoff diversion is attributable to Plant No. 2 in Huntington Beach which does not provide source water for OCWD. However, as OC San and OCWD progress toward maximizing potable reuse at GWRS to 130 MGD in 2023, OC San is keenly aware of the critical role of source water quality and the need for a region-wide commitment to prevent Constituents of Emerging Concern from entering OC San's system.

Although OC San will continue to accept controlled discharge from Dry Weather Urban Runoff Diversion Program in accordance with Resolution No. 13-09, which supports long-term integrated regional water management, OC San recognizes that urban runoff is a source of Contaminants of Emerging Concern such as microplastics which were measured at levels many times higher than raw wastewater in a 2020 study by the San Francisco Estuary Institute. Contaminants in urban runoff will continue to be studied in the future, and the results of these scientific studies will be of utmost importance when considering the viability of future diversions to OC San's system.

There is continuing interest in maximizing urban runoff diversions to OC San's wastewater system to help improve water quality in streams, estuaries, and beaches; and to potentially increase water available for recycling. One potential driver of additional urban runoff diversions is assumed reductions in future wastewater flows due to enhanced indoor water conservation. Reduced wastewater flows may free up system capacity for increased urban runoff diversions.

However, the future available capacity in OC San's system to handle additional urban runoff flows, and the OCWD's need for additional effluent for recycling have not been the subject of a comprehensive engineering study that identifies the opportunities and costs of increasing diversions. Such a study is being jointly planned by OC San, OCWD and the Orange County Flood Control District.

Initiatives to Support Progress Toward the Policy Goal

- Issue dry weather urban runoff connection permits to accept up to a total of ten million gallons per day of controlled discharge of dry weather urban runoff where existing conveyance capacity exists, and the constituents within the flow will not adversely impact OC San.

- Safeguard OC San’s sanitary sewer system against uncontrolled and unregulated discharge by supporting responsible industry practices for flow management and urban runoff pollutant reduction at the source. Utilize OC San’s pretreatment expertise to support effective urban runoff best management practices and special purpose discharge requests among OC San’s regional stakeholders.
- Conduct a comprehensive study of the feasible opportunities for cooperative projects for urban runoff diversions to OC San to improve water quality and increase water recycling by maximizing the useful capacity of local collection systems , OC San treatment systems, and OCWD recycling and recharge systems.
- Support responsible and practicable urban runoff management and reuse legislations and regulations.





Wastewater Management

Chemical Sustainability Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) has a need to use chemicals in its treatment process to improve plant performance, reduce odor and corrosion potential, and meet its regulatory requirements. These commodity chemicals are provided by outside vendors through the purchasing process. Some of these chemicals are subject to price swings due to market condition changes such as energy cost impacts, raw material cost changes, commercial competition changes, and transportation cost volatility. OC San will identify chemicals key to its operation, investigate the market risks for those chemicals and devise strategies to mitigate identified risks to availability and pricing.

Background

OC San's treatment plants and collection system use several bulk chemicals. A sustainable supply of these chemicals is critical to maintaining an acceptable level of treatment and for ensuring compliance with all regulatory requirements. OC San spends about \$13 million annually on the procurement of eight key chemicals which generally can be broken down into four categories: coagulants, odor/corrosion control, disinfection, and boiler water treatment. Boiler water treatment chemicals are low volume and readily available and will not be considered here.

Coagulant Chemicals

Coagulant chemicals include ferric chloride, anionic polymer, and cationic polymer. These chemicals are the workhorses of the sewage treatment process. Coagulant chemicals work to clump together organic material so it can more readily be separated from water. Ferric chloride is the first chemical added in the treatment process. It is a powerful settling agent that causes organics to clump together and settle to the bottom of primary basins. It is a double-duty chemical in that it also controls the formation of hydrogen sulfide gas, which is a major odorant, by binding to suspended sulphur compounds and causing them to settle before they can be converted by natural bacterial processes to hydrogen sulfide.

Ferric chloride is an iron salt that is produced by reacting iron with hydrochloric acid. It is generally a byproduct of steel treatment, a leftover pickling agent. Ferric chloride is commonly used in the water and wastewater industries. Historically, this chemical has been the subject of a limited supplier base in Southern California. OC San has been actively splitting supply contracts to multiple vendors to ensure multiple vendors are available. On-site generation of the chemical is impractical due to the hazardous nature of the manufacturing process and acid handling, the bulk steel handling logistics, and waste products disposal.

Anionic polymer works with ferric chloride to further aid in the coagulation or settling of organic compounds in the primary treatment process. These long-chain molecules are designed to be negatively charged to attract or collect positively charged ferric chloride induced organic clumps or flocculant. The use of ferric chloride and anionic polymer is called Chemically Enhanced Primary Treatment or CEPT. OC San has been using CEPT for more than thirty years.

Anionic polymers are specially designed chains with many potential variants and multiple vendors. Part of the purchasing process for polymers involves polymer trials to document the efficacy of different products from different vendors to get the best cost-performance balance.

Cationic polymer is generally used to thicken sludge or biosolids in centrifuges or dissolved air floatation thickeners (DAFT). These long-chained, positively charged molecules are essential to

the proper operation of centrifuges and DAFT units. Part of the purchasing process for these polymers also involves polymer trials to document the efficacy of different products from different vendors to get the best cost-performance balance. It is important to note that it is entirely possible that four different cationic polymers will be used to optimize the performance of Plant No. 1 dewatering centrifuges, Plant No. 1 thickening centrifuges, Plant No. 2 dewatering centrifuges, and Plant No. 2 DAFTs, because the performance can vary greatly depending on the equipment or process. Each process will have its own polymer trial to determine the cost-performance balance for each application.

Odor Control Chemicals

OC San uses several chemicals in the collection system and the treatment plant to reduce the odors normally attributed to sewage and sewage treatment. These chemicals can either prevent the formation of odor causing compounds, called odorants, or they can destroy odorants that already exist. Chemicals that prevent the formation of odorants include ferrous chloride, calcium nitrate, magnesium hydroxide, and caustic.

Chemicals used in the collection systems tend to be more benign than chemicals used in the treatment plants due to their proximity to the public. Ferrous chloride is closely related to Ferric chloride as described above. It is a powerful settling agent that prevents the formation of hydrogen sulfide by tying up and settling sulfide compounds in the collection system. It is a preferred chemical because of its dual role, but it is not as benign as other choices.

Calcium nitrate is another choice for collection system odor control. It works in a different way. Calcium nitrate alters the biological equilibrium in sewage. Generally, bacteria that live by respiring oxygen are the most robust organisms, followed by nitrogen respiring bacteria, and finally sulfur respiring bacteria. Adding calcium nitrate to sewage creates an environment where sulfur loving bacteria do not thrive or create hydrogen sulfide.

Magnesium hydroxide is a third choice for collection system odor control. It works primarily by raising the pH of sewage to a point that is not conducive for odor causing bacteria to thrive. Magnesium hydroxide is the most benign of the chemical choices as it is the main ingredient in Milk of Magnesia.

All three of these chemicals are continuously fed into sewer systems at different points to consistently control the formation of odorants in the system. Where OC San does not have the ability to site a chemical dosing station and persistent odors are being experienced, there is the option to utilize caustic slug dosing. Caustic slug dosing involves using tanker trucks to discharge up to 6,000 gallons of sodium hydroxide into a sewer manhole structure. The very high pH has the effect of killing the bioslime layer on sewer pipes that creates hydrogen sulfide. This treatment has an instant benefit that reduces hydrogen sulfide production for days to weeks depending on system conditions.

The final major odor fighting chemical is bleach. Bleach is used in treatment plant chemical scrubbers to oxidize odorants in air scrubber units. Bleach is an effective neutralizer of hydrogen sulfide, methyl mercaptan, methyl disulfide, dimethyl disulfide, and many others.

Disinfection

OC San successfully discontinued disinfection of its effluent to the long outfall. This means that thousands of gallons of bleach and sodium bisulfate are no longer required to be purchased or discharged to the ocean. However, in the event of a discharge to the short outfall or river overflow, disinfection by bleach will be required. Significant on-site storage of bleach and dechlorination chemical, sodium bisulfite, is necessary for this emergency contingency. Bleach does have a shelf life of about six months. OC San rotates its disinfection supply to its odor control and plant water treatment systems to prevent product waste.

Process Specific Chemicals

OC San uses pure oxygen to support its activated sludge secondary treatment process for Plant No. 2. OC San previously self-generated pure oxygen using a cryogenic oxygen plant rated at 70 tons per day. This plant was removed because it was inefficient at the current average utilization of 35 tons per day and was at the end of its useful life. OC San contracts for delivery of liquid oxygen and uses a vaporization system to deliver pure gaseous oxygen to the activated sludge process.

Chemical Supply — Purchase vs. Make

OC San has relied on purchasing bulk commodity chemicals for its treatment plants and collection system. This has proven to be an effective strategy for operational flexibility and to allow concentration on core business. Operationally, the types and volume of chemicals change over time. Over time the types of polymers that are most efficient change. There is a need for more or less volume of chemicals based on sewage flow rates, sewage composition, and flow splits between plants. Managing the generation of specialized chemicals using hazardous materials imposes a significant training burden on staff, increases the regulatory oversight and requirements, and increases overall risk to the organization.

OC San maintains a policy to split the volume of orders between two vendors to assure competition exists in the marketplace for ferric chloride. While OC San generally cooperates with other public agencies to pool purchasing power to secure the lowest possible cost through high volume purchasing, some specialty chemicals like ferric chloride require split orders to maintain competitive market forces.

Current Situation

OC San is constantly changing and improving its facilities to meet new challenges. Each of the facility changes offer new opportunities to reconsider how OC San operates its processes and how chemicals are used. The best chemical stability outcome is to cost-effectively eliminate the use of the chemical. This is the strategy behind cessation of bleach disinfection of the outfall effluent.

Staff is studying the potential to operate the treatment plants differently to minimize or eliminate use of selected chemicals. Facilities like centrifuge sludge thickening provide new opportunities to adjust ferric chloride and anionic polymer usage. Opportunities for substitute chemicals will be explored to understand overall cost and efficiency savings potential. This includes iron vs. aluminum coagulant studies, anionic polymer trials, and cationic polymer trials. Staff also evaluate operating parameters such as in-basin sludge co-thickening, primary basin sludge blanket level parameters, as well as the greater loading of the secondary treatment systems.

Future Policy Statement

OC San will thoroughly understand its treatment processes, the potential modes of operation, and the benefit and cost of chemicals to improve or stabilize its process. OC San will maintain a list of necessary chemicals for optimal treatment operations which will consider chemical cost, chemical availability, treatment stability, energy utilization, energy creation, nuisance odor control, biosolids generation/cost, and regulatory permit compliance risks.

Chemicals that are deemed most beneficial will be procured at the lowest overall cost from market providers to the extent possible. Where there are market stability concerns, the purchasing division will devise procurement strategies to mitigate procurement risks. Where

procurement risk cannot be satisfactorily mitigated, technical staff will evaluate alternatives such as alternate operating methods, substitute chemical usage, or on-site generation of a chemical if feasible.

Initiatives to Support Progress Toward the Policy Goal

- Reduce the exclusive reliance on particular chemicals and individual vendors to establish flexibility to utilize other chemicals/processes to accomplish operational objectives.



Biosolids Management Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) will remain committed to a sustainable biosolids program and will beneficially reuse biosolids in accordance with Resolution No. OC San 13-03 and the 2017 Biosolids Master Plan.

Background

Wastewater solids at both our treatment plants are separated, thickened, digested, and dewatered before being recycled offsite by contractors for composting and land application. Biogas created from the digesters is used to generate electricity to offset the need to purchase power from a local utility. Although OC San currently receives sewage sludge from the Irvine Ranch Water District (IRWD) at Plant No. 1, IRWD is currently commissioning its own solids treatment facility and is anticipated to discontinue the sludge transfer to OC San by the second half of 2021.

Prior to 2019, OC San produced an average of 800 wet tons per day (~20 percent solids) of Class B biosolids that were dewatered by belt presses. Following the commissioning of the co-thickening sludge and dewatering centrifuge system in 2019, OC San has been producing approximately 500-600 wet tons per day (23-28 percent solids), which resulted in an approximately \$4 million per year reduction of biosolids hauling costs.

OC San's biosolids program is developed in compliance with federal, state, and local regulations, OC San's biosolids policy (Board Resolution 13-03), biosolids management system, and the 2017 Biosolids Master Plan (Plan). OC San's adaptive and highly effective biosolids program emphasizes diversification of beneficial reuse options and markets for biosolids. Although cost is a key consideration, the incorporation of failsafe options is considered paramount. These principles align with the policy and Plan and provide a framework for identifying and adopting reliable and sustainable biosolids management options while minimizing cost. Moreover, through innovation and continuous improvements in its biosolids management practice, OC San has been well-positioned to sustain regulatory compliance and its commitment to beneficially reuse biosolids. Currently, about 20 percent of the annual biosolids production is going to a bioenergy facility in California to create pellets and biochar while producing renewable energy, about 50 percent is used to produce Class A compost in California, and about 30 percent is used for Class B land application in Arizona.

The Plan forecasted future capital improvements projects needed to sustain responsible and cost-effective biosolids management over a 20-year planning horizon. As an example, OC San has initiated a project at Plant No. 2 to construct new thermophilic digesters and batch holding tanks that will generate Class A biosolids beginning in 2030. These new digesters are needed to increase operational resiliency against seismic events and biosolids reuse options. Plant No. 1 will continue to produce Class B biosolids.

According to the Plan, upon commissioning the new thermophilic digesters, future biosolids management options may include:

- Emerging markets: Management options and technologies that become available following the adoption of the Plan, such as mine and fire reclamation, gasification, pyrolysis, supercritical water oxidation, fluidized bed combustion, and cement kiln drying.

- Soil blending: Partner with local soil blenders to deliver and blend Class A biosolids with soil to produce a high-quality soil amendment that can be used in a larger variety of markets than current Class A compost such as construction back-fill.
- California land application: While Class A compost and granules are currently land-applied in California, land application of Class A biosolids is still restricted in most counties. However, with the recent implementation of California's organics diversion regulations and planned enforcement in 2022, stringent local ordinances that unreasonably restrict land application of biosolids are prohibited.
- Arizona land application: Land application in Arizona will continue to be a part of OC San's overall biosolids program and serves as a large-capacity outlet for biosolids management.

Current Situation

The legislative and regulatory landscapes in California are changing regarding organics management. Since 2003, direct land application of Class B biosolids in Southern California has largely been prohibited due to strict ordinances and conditional use requirements that preempted state recycling laws. However, in recent years there has been a greater focus on healthy soils, renewable energy, organics diversion from landfills, and reduction of Greenhouse Gases (GHGs), which are reflected in several bills and initiatives that have been adopted:

- AB 1826 (2014) — Mandatory Organics Recycling for Businesses.
- SB 1383 (2016) — 50% organics diversion from landfill by 2020 and 75% by 2025, which includes biosolids and mandatory organics procurement (compost and biogas) for impacted jurisdiction.
- SB 32 (2016) — 40% Reduction GHG below 1990 levels by 2030
- SB 100 (2018) — 50% renewable resources (i.e., anaerobic co-digestion of food waste) target by December 31, 2026, and to achieve a 60% target by December 31, 2030
- Increasing soil carbon and carbon sequestration under the Healthy Soils Initiative and Forest Carbon Plan.

In combination, these measures are expanding the “organic waste markets”, thereby stimulating interest in siting more composting facilities and organic waste-to-energy projects and could also support soil blending and direct land application of biosolids and create opportunities for wastewater agencies to innovate. Agencies such as the State Water Resources Control Board (SWRCB), CalRecycle, California Department of Food and Agriculture, California Air Resources Board, and California Energy Commission are developing regulations to implement the new laws. Throughout the rulemaking process, OC San has been actively involved through the California Association of Sanitation Agencies (CASA) and the Southern California Alliance of POTWs (SCAP) to encourage regulators to open more biosolids management options in California. In particular, the recently adopted regulations for SB 1383 require jurisdictions such as cities and counties to procure recycled organics such as compost and biogas for localized beneficial reuse.

It is worth noting that while there is growing interest in California for enhanced organics management, there has also been a rising concern from the regulatory community regarding emerging contaminants such as polyfluoroalkyl substances (PFAS) and microplastics. These

ubiquitous, often household, compounds have been detected in the wastewater pathway and biosolids, and OC San has been actively monitoring the development of the science and regulations across all water, wastewater, air, and soil sectors. To date, PFAS regulations have been established for drinking water and a series of phased investigative orders were issued by the SWRCB to examine the fate and transport of PFAS. OC San was among 249 wastewater treatment plants that were included in Phase three of the investigative order, and OC San is on track to complete all required sampling, analysis, and reporting. Additionally, effective in Fall 2021, OC San is sending 100 tons per day to a state-of-the-technology bioenergy facility which will be sampled for PFAS to potentially demonstrate the destruction of PFAS in biosolids using pyrolysis while creating biochar for recycling and renewable energy for distribution.

Future Policy Statement

As environmental regulations continue to drive the organic waste markets in California, OC San will continue to leverage its memberships with various professional/industry associations to encourage local, state, and federal agencies to promote the beneficial reuse of biosolids. OC San will also continue to monitor the development of regulations for constituents of emerging concern that may impact the beneficial reuse of biosolids.

OC San's long-standing leadership role in key professional organizations will continue to ensure timely and meaningful engagement on key regional, state, and national biosolids management policies.

OC San will continue to stay abreast of new biosolids management options, technologies, and regional biosolids recycling and renewable energy partnerships within Southern California, especially those that address the removal, sequestration, and destruction of constituents of emerging concern.

Based on the findings from the abovementioned pyrolysis PFAS demonstration project and any regulation that are developed in the coming years, staff will update OC San's biosolids strategy to account for emerging contaminant management.

Consistent with the Plan, staff will work with OC Waste and Recycling (OCWR) to explore regional biosolids management opportunities as well as local solutions to meet SB 1383's organics diversion mandates, with emphasis on in-county biosolids utilization, composting, food waste co-digestion, and biogas production.

Initiatives to Support Progress Toward the Policy Goal

- Proceed with implementation of new thermophilic biosolids facilities at Plant No. 2 to improve OC San's operational resiliency against seismic events while enhancing biosolids quality and marketability.
- Continue to explore biosolids thermal conversion technology for energy generation and destruction of persistent contaminants.
- Engage with local, state, and federal agencies to ensure that biosolids will continue to be safely and legally used as a soil amendment.
- Stay abreast of new biosolids management options, technologies, and biosolids recycling and renewable energy partnerships in Southern California, with special emphasis on technologies that address the removal, sequestration, and destruction of contaminants of emerging concern.



Constituents of Emerging Concern Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) will partner with other agencies, associations, and institutions to support the use of sound science to inform policy and regulatory decisions on constituents (or contaminants) of emerging concern (CECs) at the federal, state, and regional levels. Staff will obtain and maintain current knowledge on CECs under regulatory consideration, including occurrence, analytical methods, regulations, and treatment to support OC San's mission and regulatory compliance.

Background

CECs are pollutants that are not necessarily subject to existing regulations but have the potential to pose significant risk to public health and/or the environment. Wastewater treatment systems are generally not designed to remove or destroy CECs but can serve as a pathway for persistent CECs such as per- and polyfluoroalkyl substances (commonly known as the Forever Compound, or PFAS) and microplastics that enter the system from sources such as residential dwellings, commercial establishments, industrial facilities, dry weather urban runoff diversions, and special purpose discharges. In fact, certain CECs have the potential to compromise wastewater treatment and reuse operations, if found at levels that impair OC San's biological treatment systems, digester gas utilization, or advance water purification at the Groundwater Replenishment System.

As with most pollutants, reduction of CECs at the source is by far the most effective means of safeguarding public health and the environment. However, since the full range of adverse effects associated with each CEC is often unknown until contamination has become widespread, OC San routinely coordinates with environmental regulators, industry partners, and community stakeholder to maintain up-to-date scientific knowledge, technological developments, and relevant regulatory and legislative initiatives.

It is worth noting that some of today's regulated pollutants were once considered CECs, such as 1,4-dioxane and polychlorinated biphenyls (PCBs), and OC San is engaged in multiple regional collaborations to continuously increase our collective understanding of pollutant fate and transport and develop integrated water quality improvement strategies.

With steadfast support from the OC San Board of Directors, multiple generations of staff have acquired and conveyed considerable institutional knowledge and experience with identifying, monitoring, and reducing CECs through a combination of source control, treatment optimization, analytical innovations, outreach, and responsible reuse and disposal.

A key takeaway from OC San's decades-long experience with CECs is that there is no such thing as 'away' for some pollutants. Thus, we must consider CEC management in every facet of OC San operation, with special emphasis on advance planning for source control, beneficial reuse, and responsible ocean discharge.

Current Situation

OC San has prioritized CEC source control to prevent potential adverse impacts to its mission of protecting public health and the environment. Industrial and certain non-domestic discharges are regulated by OC San's Pre-treatment Program through a permitting and source control inspection program that enforces OC San's Waste Discharge Ordinance and federal, state, and local mandates. For CECs that are undergoing regulatory development, OC San may choose to utilize interim guidelines and recommended thresholds from federal, state, and

local regulatory agencies to safeguard our ocean discharge and beneficial reuse of water and biosolids.

Specifically, OC San has worked with regulators at the federal, state, and local levels in advance of CEC regulations to develop special projects that can be incorporated into its National Pollutant Discharge Elimination System (NPDES) Permit to evaluate the presence and quantity of CECs in our final discharge to the ocean and the background levels in the receiving environment. OC San's current CEC monitoring program includes constituents in the following category: Hormones (8), Industrial Endocrine Disrupting Compounds (7), Pharmaceuticals and Personal Care Products (13), and Flame Retardants (9). Data from OC San's ongoing CEC program were reviewed by the regulatory and natural resource agencies during the recent NPDES permit renewal consultations, and additional CECs have been added to the 2021 NPDES permit.

Over time, OC San's source control program has been enhanced and updated to meet the needs of the Groundwater Replenishment System (GWRS) as it underwent expansion to increase water supply reliability for north-central Orange County. Through formal agreements and staff-level coordination, OC San and the Orange County Water District (OCWD) have forged a world-class partnership that currently produces 100 million gallons per day (MGD) of purified water and is on track to increase production to 130 MGD in 2023.

To safeguard this potable reuse effort against CECs and other pollutants that are not removed by conventional wastewater treatment systems, OC San and OCWD established a response plan that is activated whenever a pollutant or pollutant precursor becomes a concern to either agency. Where the source can be identified, the plan organizes responsive actions from OC San and OCWD for industrial and commercial facilities. A typical response could include source investigation by OC San that begins with data review, accelerated sampling, laboratory analysis, and result in inspections and enforcement actions. CECs from suspected domestic and residential sources are typically addressed by way of educational outreach to the public. However, OC San's Board of Directors have also authorized financial and in-kind services to support targeted research at academic institutions that investigate CECs from domestic and residential origins.

CECs that are not removed through the treatment process can also be found in biosolids. At high concentrations, CECs may preclude beneficial reuse of biosolids as soil amendments for non-food crop and force OC San to dispose of biosolids in landfills or pursue costly means of destruction.

Thus, responsible legislations and regulations that reduce the production and use CECs, encourage substitution with less toxic materials, and promote adaptive source control programs are essential for sustaining OC San's mission and commitments to the community.

If source control, education and outreach, or legislative and regulatory efforts are not successful, OC San may be required to implement a technological or operational process change/investment to address a CEC.

Future Policy Statement

OC San shall align its resources to manage CECs throughout its service area and treatment process to comply with existing and anticipated regulatory requirements and sustain beneficial reuse of treated effluent and biosolids.

OC San shall acquire and maintain a high level of subject matter expertise and engagement across the wastewater, water, water reuse, air quality, ocean monitoring, and biosolids sectors to monitor the environmental, operational, and financial threats posed by CECs.

OC San shall continue to work with other agencies and professional organizations to develop robust analytical methods and routinely monitor its local limits in order to shape and comply with regulation to protect public health and the environment.

OC San shall continue to implement and update the GWRS Response Plan to sustain effective water reuse and prepare for next-generation CECs and emerging regulatory obligations.

Initiatives to Support Progress Toward the Policy Goal

- Actively engage water and wastewater stakeholders to stay abreast of the scientific progress and any potential operational and financial impacts of CECs and provide timely briefings to OC San's Executive Management Team and Board of Directors to facilitate informed decision making.
- Develop capacity to identify, detect, quantify, and characterize CEC sources throughout the service area and treatment process to promote source reduction, treatment effectiveness, communication of credible risks, and responsible reuse and disposal.
- Proactively establish internal expertise and develop laboratory capability to research the potential impact of CECs on beneficial reuse of water and biosolids. OC San will use science-based knowledge to help shape CEC legislation and regulations to protect the public health and environment.
- In the absence of promulgated regulatory limits for specific CECs, OC San will work with regulatory agencies to establish interim source control measures to safeguard its water and biosolids reuse initiatives and ocean discharge against potential adverse impacts.





Workforce Environment

Resilient Staffing Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) will attract and retain high-quality talent to support its mission and continue to be an industry leader. It will safeguard leadership continuity and support effective performance of the organization by proactively monitoring the changing work environment and requirements to ensure employee development programs are relevant and facilitate building a skilled bench of readily available successors for key leadership and mission-critical positions.

Background

At OC San, employees are the organization's most valuable resource. With over 600 highly skilled and dedicated employees whose collective efforts make OC San an industry leader, resulting in national awards and recognition. OC San has a continuing commitment to providing educational and training opportunities to its employees, resulting in a prepared, highly skilled, and educated workforce to carry out the mission of protecting public health and the environment.

OC San has a diverse workforce and a wide range of expertise with approximately 70 percent of positions requiring a degree, certification, and/or license. Occupations include scientists, engineers, environmental and regulatory specialists, operators, mechanics, construction inspectors, as well as professionals in public affairs, finance, IT, safety, and human resources.

To cultivate a committed and engaged workforce in a competitive economy, OC San must promote initiatives to attract and retain talent and also prepare staff for both current and future key positions to ensure succession management of our most critical positions. Strategic succession management initiatives have been developed and adopted that support the design and implementation of comprehensive workforce planning and development tools accompanied by activities that facilitate the improvement of workforce capability, adaptability, efficiency, and accountability. Strategic workforce planning empowers management to project the loss of knowledge and experience caused by retirement and attrition and utilizes a variety of methods to ensure that OC San has adequate access to talent internally, and externally through the recruitment, promotion, and selection process.

OC San has a competitive recruitment process that ensures we hire the best person for the job based on qualifications and merit. Human Resources utilizes an objective multi-hurdle approach to hiring which includes, among other processes, assessment centers and skills testing, screening, and recommendation to the hiring authority of only those candidates that meet job specifications. The process also includes a second review by the subject matter expert in the department of those applications that have been forwarded, panel interviews (both for technical skills and fit), and full background and reference checks.

Programs that have proven effective in attracting, retaining, and developing highly skilled staff for key positions, include:

- **Vocational/Professional Student Internship Programs**

Vocational students from the Water Utility Science Program at Santiago Canyon College, and Los Angeles Trade Technical College work 28 hours a week and rotate through five technical trades for 53 weeks in our Operations and Maintenance Department. Furthermore, 23 of the program participants have been hired full-time since the program inception. OC San is piloting the program with other technical colleges in Southern California to include Cypress College.

In addition to the Vocational Internship Program, OC San also offers a Professional Student Internship Program that allows students at local Universities an opportunity to work at the professional ranks while attending college full-time for a two-year maximum duration. OC San partners with Cal State Fullerton, Long Beach, Cal Poly Pomona, and UC Irvine, among others.

- **Employee Development Program**

In addition to providing all legally mandated training, OC San provides training and development opportunities for the purpose of increasing job knowledge and to maximize skill sets in employees' current positions and to prepare them for future mission-critical positions. Comprehensive training programs include technical training through industry-specific associations or groups, local schools, and professional associations including informal on the job training. Employees are encouraged to obtain job-related training necessary to keep OC San current with recent industry best practices and developments in their respective fields of expertise and can be eligible to receive Development Pay in select categories that OC San deems mission critical. As 70 percent of OC San's positions require a degree, certificate and/or license, OC San also promotes professional development through its tuition and certification reimbursement programs for courses completed toward obtaining an associate's, bachelor's or master's degree at accredited colleges, universities, or other institutions or industry-specific certifications.

- **Workforce Vulnerability Assessments**

Each year, OC San management conducts an evaluation of their respective departments and identifies key and vulnerable positions based on three criteria: criticality, retention, and difficulty to fill. Vulnerability assessments provide a broader view into the areas of the agency that could potentially be facing a high risk in turnover and are essential to operations. Management is tasked with identifying positions based on the criteria above, then making recommendations on the level of action that is required, complete with proposed action plans. Human Resources staff facilitates the workforce vulnerability assessments and develops current and future staffing plans based on the management outcomes annually. It is essential that OC San continues its planning efforts in this area and to prioritize sufficient staffing to service the community we serve.

- **Talent Readiness Assessments**

The process includes departmental leadership evaluating staff preparedness for key positions as well as reviewing current and future development efforts. Key positions along with the positions that feed into those positions is identified with the expectation that talent pools are developed to align with agency goals and builds the talent pipeline.

- **Orange County Sanitation District University (OC San "U")**

In 2011, OC San began offering a comprehensive voluntary development program to employees. The program was designed to help address the potential loss of talent due to ongoing retirements and to develop employees from within the organization for succession management. The program is currently known as OC San "U" (Orange County Sanitation District University) and it is administered by volunteer employees from across the agency with oversight by the Human Resources Department. Under this program, employees can participate in various learning options to increase their knowledge, skills, abilities, and enhance organizational awareness. The focus of the program and the types of learning options offered have varied over the years to meet the evolving needs of OC San. Employees

may choose to attend on demand web-based courses and live instructor-led virtual trainings on various topics that pertain to OC San business systems, technology, leadership, communications, and more. Employees may also apply to participate in the Cal State Fullerton 14-week Leadership Academy and OC San “U” recently launched a mentoring program. Additionally, OC San U will expand its partnerships for success section of the program to include offerings to outside organizations. The intent is to promote and provide information on OC San as well as network and expand our offerings.

Additionally, OC San partnered with UC Irvine, Cal State University at Long Beach and California Polytechnic University at Pomona, which provided students an opportunity to job shadow Human Resources and Engineering staff to gain insight into the profession, employment in the public sector and the wastewater industry. OC San employees also serve on Advisory Councils that weigh in on course curriculum at various schools, both at the high school and college level, across Southern California.

Throughout the agency, we have several employees who are active members of various professional associations, serve on a Board, or volunteer in various capacities within the industry. OC San is regularly invited to present and teach others about resource recovery. Recruiters attend job fairs, and work closely with universities, professional organizations, and serve on advisory committees.

Education and workforce investment programs represent the most important preparation we can accomplish today to safeguard the agency’s future for tomorrow. Finding an adequate pool of applicants and retaining qualified workers is increasingly difficult, which we anticipate will continue. Retirements are disrupting employment within our industry and changes in technology have made work more complex.

Current Situation

Currently, the majority of OC San’s executives are eligible for retirement. Managers, our next level of leadership, closely follow with 43 percent of them eligible to retire now, and that number increases to 71 percent in five years. For trades and professional occupations, 48 percent are eligible to retire in the next five years. OC San has many long-term employees with vast knowledge in their respective areas of expertise. The average years of service is 10 years with some employees having been a part of the OC San family for over 35 years. Looking at OC San’s total attrition over the last five years, we have lost 2,980 years of knowledge and experience by 128 individuals leaving the agency since 2016.

In 2010, OC San proactively implemented a second retirement benefit formula (“classic open plan”) ahead of the Public Employee Pension Reform Act, which offered candidates moving from other public sector agencies to OC San with a retirement benefit of 2.43 percent at 65, with zero employer paid member contribution. Based on OC San’s classic open retirement plan, competing for experienced and highly skilled talent from surrounding municipalities, who offer a more attractive retirement benefit of 2.5 percent or 2.7 percent at 55 in addition to paying for a portion of the employees’ contribution has been challenging. Since implementation of the classic open plan in 2010, approximately 35 percent of new hires come from other public sector agencies which limits our ability to hire already trained and experienced staff which can be particularly difficult for technical, scientific, and management positions. OC San has had experience with public sector candidates withdrawing from the process or declining job offers once they learn of the impact to their retirement benefit formula. Given the legal restrictions which bind OC San to the classic open retirement formula, it is critical OC San focus its efforts on retaining current staff, attracting qualified and experienced candidates, and investing in

developing and growing employees' knowledge, skills, and abilities for the future, to address any potential talent shortages.

Future Policy Statement

Human Resources will continue to implement strategic initiatives that ensure workforce capabilities match the work required to meet OC San's mission and levels of service. Staff is dedicated to proactively monitoring the changing work environment and requirements to implement programs now that address future vulnerabilities. Assessments of changes in business needs, workforce composition, and legal requirements are necessary to ensure resilient staffing.

Initiatives to Support Progress Toward the Policy Goal

- Maintain and enhance current employee development programs that are in place to provide the direction to identify, develop and select the next generation of prepared, capable, and engaged leaders, which include:
 - Vocational/Professional Student Internship Programs
 - Employee Development Programs
 - Workforce Vulnerability Assessments
 - Talent Readiness Assessments
 - Orange County Sanitation District University (OC San "U")
- Continue to build the OC San "U" program and evaluate various options to partner with member agencies to share content and interactive development opportunities.
- Continue to build on the employee development opportunities to enhance organizational awareness and strengthening knowledge, skills, and abilities in the areas of OC San business systems, leadership, technology, and communication. Additionally, Human Resources will partner with other member agencies to provide and host training and development programs to foster collaboration and innovation.
- Conduct a Classification & Compensation study to ensure job classifications accurately depict the work being performed, to set compensation levels accordingly, and stay abreast of market benefit and salary data. Human Resources and the Board-approved Consultant will work with stakeholders to complete an organization-wide Classification & Compensation Study. It will incorporate feedback on survey agencies solicited from the Board over the past year and union feedback through meet and confer in upcoming labor negotiations.



Safety and Physical Security Policy

Summary Policy Statement

The Orange County Sanitation District (OC San) will ensure the safety and security of employees, contractors, and visitors through standard practices, policies, and procedures that support a safe and secure environment, provide an appropriate level of security, and safeguard OC San's property and physical assets.

Background

In California, employers must furnish employees with a place of employment free from recognized hazards that cause death or serious physical harm, that is compliant with all legal requirements, and aligns with industry best practices. The safety and wellness of the public and employees is our number one priority. OC San is committed to identifying all hazards through inspection and providing engineering controls, job specific safety training, and personal protective equipment.

Programs that have proved effective in ensuring the safety and wellness of OC San's workforce, visitors, and contractors include:

Safety Assessments and Engineering Controls

In 2014, OC San conducted a Facility-Wide Safety Assessment Project (SP-145-1) to identify process equipment design and configuration issues that may impact worker safety, and compliance with regulations. The main purpose of this effort was to enhance worker safety and ensure compliance with safety codes. At the same time, safety improvements allow for reliable and efficient operation, so that our facilities can meet regulatory, and process demands, while providing cost-effective operation. All the Project SP-145-1 recommendations to be implemented by OC San have either been addressed by Maintenance or have been incorporated into the Safety Improvement Project (J-126).

Emergency Management

OC San must be prepared to control risks to the organization, and routinely recognize, evaluate, and prepare for emergencies. An emergency can include a major explosion, fire, verified bomb threat, civil disorder, active shooter situation, or uncontrolled materials release which interrupts OC San's ability to provide safe and environmentally responsible wastewater treatment. The Sanitation District's protocol to control and respond to emergencies is contained within the Integrated Emergency Response Plan (IERP).

The IERP identifies and assesses hazards regarding emergency events which OC San may be confronted with and contains policies, plans, and procedures for preparing and responding to emergencies. The Sanitation District's emergency response organization, called the Incident Command System (ICS), is activated when an emergency condition cannot be effectively responded to under routine operations. Once the immediate emergency has been controlled, then OC San must resume normal operations. In the event of a prolonged emergency state, the return to normal operations is guided by a Continuity of Operations Plan (COOP). In May 2018, a COOP was completed with all divisions contributing to its development. Business continuity planning is an ongoing process for OC San with plans being updated as information changes.

OC San collaborates with local agencies to ensure available resources are identified and engaged in the event of an emergency. OC San has partnered with local agencies in the areas of emergency response for evacuation drills and resource sharing.

- 1) OC San participated in the 2019 Orange Crush Regional Emergency Preparedness and Training Exercise in January 2019. This county-wide exercise used a scenario of a magnitude 7.8 earthquake strike along the San Andreas Fault. A full Emergency Operations Center activation occurred for this functional exercise and gave OC San the opportunity to test the Integrated Emergency Response Plan.
- 2) The Orange County Sheriff's Department and the Orange County Health Care Agency established a Joint Information Center at Plant No. 2 on May 13-14, 2019, to host an enforcement event in Talbert Park. In addition, the operation was overseen by three federal judges who were present to ensure the rights of all citizens were not violated by law enforcement or The Health Care Agency. Officials utilized Plant No. 2 contractor gates for points of entry.
- 3) OC San is a member and funding agency of the Water Emergency Response of Orange County (WEROC), which is an organization that is administered by the Municipal Water District of Orange County (MWDOC). It supports and manages countywide emergency preparedness, planning, response and recovery efforts among Orange County water and wastewater utilities.

Security

The Department of Homeland Security has designated 16 critical infrastructure sectors, which includes water and wastewater systems. Wastewater systems are vulnerable to a variety of attacks, including acts of terrorism, contamination with deadly agents; physical attacks, such as the release of toxic gaseous chemicals, and cyberattacks. In addition, the Department of Homeland Security indicates that the average time it takes for a critical incident to take place is up to 12 minutes while the average police response time can be up to 11 minutes, and that time could increase should there be a natural disaster.

Additional security concerns include physical violence, vandalism, theft, and trespassers. With approximately 100 acres at each site, 600 employees, contractors, and members of the public on site for tours and meetings, it is essential to maintain a security force that can respond to security threats promptly.

OC San contracts with a security firm that supplies four armed and five unarmed guards to provide round the clock security monitoring of over 80 cameras, monitoring gate access, and patrolling the perimeter at both plants.

Current Situation

The Risk Management division has been given the responsibility and an adequate budget to assess and control the safety, security, and health risks that employees, contractors, and guests may be exposed to from OC San operations. Assessment and control of risks is achieved collaboratively between Risk Management staff and internal stakeholders. Risk Management, managers, and staff collaborate to develop written procedures (e.g., policies) that are used for controlling and eliminating hazards at OC San; thus, ensuring compliance with occupational health and safety standards and laws.

Safety

As the health and safety of employees, contractors, and visitors is the number one priority, OC San strives to achieve safety excellence. This is exemplified by our pursuit of the California Voluntary Protection Program (Cal/VPP). The Cal/VPP is a program created by Cal/OSHA to recognize organizations who have implemented safety and health programs that effectively

prevent and control occupational hazards. A Cal/VPP workplace is expected to continually improve its safety program, which means a safe workplace for all. A reduction in injuries and illness has been documented at sites that have committed to the VPP approach. Cal/VPP is recognized as a higher level of protection for the workplace, for this reason, OC San is pursuing this designation.

In preparation for application to the Cal/VPP program, OC San conducted a Cal/VPP readiness assessment in January 2019 and developed an implementation strategy. The assessment included interviews with various OC San subject matter experts and discussions with employees during facility tours. OC San procedures and records were reviewed, and limited visual inspection of work locations and facilities was conducted. The assessment considered basic Cal/OSHA regulatory compliance and additional best management practices that are expected to be implemented in VPP certified workplaces. Based on the results of the VPP assessment, OC San is working toward applying for VPP before the end of calendar year 2019. The timing coincides with the implementation of most of the Safety Improvement Project (J-126), which are critical for success in our VPP pursuit.

This Safety Improvement Project (J-126) is progressing on-schedule. Of the eleven J-126 projects, two have been completed, seven are in the construction phase, and two are pending contractor award. It is important to note that interim measures have been taken to ensure worker safety at the locations identified for safety improvements. Workers are not exposed to hazards while projects are completed.

Eliminating hazards through engineering projects is critical, along with a positive safety culture. In order to assess the safety culture at OC San, a survey was conducted from February to April 2019. The results of this survey indicated employees believe the safety culture is improving, desired an increase in communication on safety issues, and wanted less online and more hands-on customized safety training.

Emergency Management

OC San partners with local agencies to ensure available resources are identified and engaged in the event of an emergency. Collaborations currently scheduled include:

- 1) In conjunction with WEROC, OC San participated in the development of the Orange County Water and Wastewater Hazard Mitigation Plan (Plan) which will be submitted for approval to the State. The Plan provides a framework for participating water and wastewater utilities to plan for natural and man-made hazards in Orange County. OC San is an active participant in the Plan, and developed a hazard mitigation plan, which is Annex C of the Plan. The resources and information within the Plan will allow OC San, and participating jurisdictions to identify and prioritize future mitigation projects, meet the requirements of federal assistance programs and grant applications, and encourage coordination and collaboration in meeting mitigation goals.
- 2) On July 27, 2019, the Sanitation District partnered with the Fountain Valley Police Department Explorers during OC San's Open House event. The Police Explorers assisted Human Resources and Risk Management with crowd and traffic control. Their assistance was beneficial in the management of public during this important event.

Security

The designation of wastewater systems as critical infrastructure by the Department of Homeland Security requires OC San to be diligent in protecting people and property from security breaches. OC San seeks to continually improve the security program. On June 7, 2019,

OC San issued a Request for Proposal (RFP) for Security Services, which included a potential expansion of security services for OC San's new Headquarters Complex. As part of the RFP evaluation, OC San will review procedural and technical enhancements/innovations that may improve the existing program.

In addition, OC San has established a Security Committee, which includes stakeholders from a cross-section of the organization, to collect input and assess physical and cybersecurity concerns and suggestions. Responsibilities of the committee include, but are not limited to, development of a physical and cybersecurity plan, reviewing orders and policies, reviewing incident reports, and planning drills. The first meeting of the committee was held on June 6, 2019.

Future Policy Statement

Risk Management has and will continue to implement strategic initiatives that will ensure the safety, health, and security of its workforce, and proactively plan for emergencies to ensure continuity of operations. Staff is dedicated to proactively monitoring the changing work environment and requirements to implement programs now that address future vulnerabilities. Assessments of changes in business needs, plant processes, and legal requirements are necessary to ensure a safe and secure work environment. The results of improvement will be measured using leading metric indicators and reported to the workforce to foster employee engagement.

Initiatives to Support Progress Toward the Policy Goal

Safety

- Complete outstanding safety projects, improvements, and corrective actions to apply and obtain Cal/OSHA Voluntary Protection Program (VPP) status; and continue to foster a culture where employees are accountable for their safety, as well as the safety of others.

Emergency Management

- Support facility and countywide emergency preparedness, response, and recovery efforts by partnering with entities, such as, the Water Emergency Response Organization of Orange County (WEROC), Orange County Sheriff's Department, and local fire departments to plan and continue to conduct disaster preparedness training and exercises.

Security

- Continually identify and assess vulnerabilities and implement solutions through the Security Committee and third-party assessments. Prevent/mitigate security breaches using physical security systems such as video monitoring, access control, and armed security patrols.

Reclamation Plant No. 1

(Administration Offices)
10844 Ellis Avenue
Fountain Valley, California 92708
714.962.2411

Treatment Plant No. 2

22212 Brookhurst Street
Huntington Beach, California 92646

For more information

Email: ForInformation@ocsan.gov
Phone: 714.962.2411

www.ocsan.gov



June 15, 2022

TO: Chairman and Members of the Board of Directors

FROM: James D. Herberg, General Manager

SUBJECT: General Manager's Fiscal Year 2022-2023 Work Plan

I am pleased to present my work plan for Fiscal Year 2022-2023. This plan has been developed based on the 2021 Strategic Plan adopted by the Board of Directors on November 17, 2021 and is organized under the four Strategic Planning categories: Business Principles, Environmental Stewardship, Wastewater Management, and Workplace Environment. The 17 work plan goals that I am proposing for next year support our efforts to ensure that our operations are safe; we continue to attract, develop, and retain a capable workforce; that we enhance our sustainability by maximizing water recycling; and implement sound financial practices. This forward-looking work plan is designed to position our agency to continue providing our customers with a high level of service while seizing opportunities and meeting future challenges.

1. Business Principles

- **Rate Study** – In preparation for establishing a new five-year rate program, conduct a five-year rate study to determine customers' fair and equitable share of collection, treatment, and disposal costs. Develop an accurate rate model which ensures full cost recovery and provides support to the Proposition 218 notifications. This comprehensive rate study allocates costs to Flow, Biochemical Oxygen Demand, and Total Suspended Solids for the purpose of billing different customer classes including high flow and high strength dischargers and will be applicable to all fees and charges including annexation fees and urban runoff fees. Study to be completed by December 31, 2022.
- **Asset Management Plan** – Create an annual Asset Management Plan documenting the condition for the collection system, treatment plants, and upcoming maintenance or capital projects by December 31, 2022.
- **Interagency Agreements for Wastewater Service** – Conduct an analysis of consolidated agreements set to expire to determine affected agencies, potential risks, opportunities, and a path moving forward by June 30, 2023.

2. **Environmental Stewardship**

- **Food Waste Treatment** – Continue to meet on a quarterly basis with potential food waste pre-processors on the feasibility of potential food waste process technology and siting logistics. Collaborate with CASA to draft uniform standards for food waste slurry with an update to the Board of Directors by December 31, 2022.
- **Urban Runoff Optimization Study** – Advertise for a Request for Proposal for an interagency study among OC San, Orange County Water District, and Orange County Watersheds to study the feasibility of accepting additional dry weather urban runoff and potential stormwater harvesting by October 31, 2022.
- **Energy Resilience** – Investigate energy storage options to build resilience and offer potential cost savings. Work with the consultant as part of the Energy Master Plan Study and report to the Board of Directors by June 30, 2023.
- **Fleet Long-term Strategy** – The current fleet of vehicles is aging and will be subject to new regulations that will require a change in the way vehicles are fueled and will require significant new infrastructure facility changes. Staff will prepare a study based on probable adopted requirements outlining fleet procurements and infrastructure changes necessary to meet the new requirements by December 31, 2022.
- **Headquarters Educational Display** – Develop an educational display for the headquarters building to illustrate OC San's reuse and recycling efforts in support of the environment and public health. Have plan approved and in production by June 30, 2023, for installation by December 2023.
- **Member Agency Outreach Program** – Develop an outreach program for member agencies regarding inflow and infiltration, FOG, and saltwater issues within their sewer systems. The program will aim to educate, inform, and reduce these elements affecting the local and regional sewer system by June 2023.
- **Industrial Users Award Program** – Develop an award program with the qualifying criteria for an Industrial Users Award Program for consideration by the Board of Directors by December 31, 2022.

3. **Wastewater Management**

- **Supercritical Water Oxidization** – Complete the commissioning and begin demonstration of the pilot project by June 30, 2023, subject to regulatory permitting.
- **Chemical Sustainability Policy** – Utilize the recently produced Chemical Sustainability Study to perform testing for dosage reduction or chemical substitution and report back to the Board of Directors by June 30, 2023.
- **GWRS Final Expansion** – Headworks Modifications at Plant No. 2 for GWRS Final Expansion will be substantially completed by January 2023. OC San will host a celebration to commemorate OC San's achievement of reusing 100 percent of the reclaimable flow upon completion of the Groundwater Replenishment System's Final Expansion. Celebrate the milestone and acknowledge the accomplishment with staff and stakeholders by June 2023.

4. **Workplace Environment**

- **Scanning & Paper Reduction** – Continue implementation of the trusted system in the Contracts, Purchasing, and Finance divisions while incorporating a fully digital processes to reduce the use of paper by June 30, 2023.
- **Emergency Management** – Support countywide emergency preparedness, response, and recovery efforts by partnering with entities, such as the Water Emergency Response Organization of Orange County, Orange County Sheriff's Department, and local fire departments, to plan and continue to conduct two emergency preparedness exercises by June 30, 2023.
- **Warehouse Modernization** – Implement remote warehousing at Plant No. 2 to allow for the demolition of the current warehouse facility for construction of new digesters. Relocate the Plant No. 2 Warehouse staff and inventory to Plant No. 1 by June 2023. Advertise Warehouse Stations and Demolition at Plant No. 2, FE21-05, for construction bids by March 31, 2023.
- **Centralized Training Program** – Develop a Centralized Training Program with levels of service to be implemented by June 30, 2023.

OC San's Core Values

Presented by:

*Jennifer Cabral,
Administration
Manager*

*Operations
Committee*

June 7, 2023



1

Core Values

Integrity, Inclusion, Honesty, and Respect

Leadership, Teamwork, and Problem Solving

Customer Service, Transparency, and Accountability


Resiliency, Innovation, and Learning

Safety

2

2

Integrity, Inclusion, Honesty, and Respect




We aspire to the highest degree of integrity, inclusion, honesty, and respect in our interaction with each other, our suppliers, our customers, and our community. We strive to demonstrate these values in our actions, commitments, and service.

3

3

Leadership, Teamwork, and Problem Solving




We lead by example, acknowledging the value of our resources and using them wisely to achieve our mission. We strive to reach OC San goals through cooperative efforts and collaboration with each other and our constituencies. We work to solve problems in a creative, cost-effective, and safe manner, and we acknowledge team and individual efforts.

4

4

Customer Service, Transparency, and Accountability




We are committed to acting in a timely, accurate, accessible, and transparent manner through excellent customer service. We are committed to act in the best interest of our internal and external stakeholders.

5

5

Resiliency, Innovation, & Learning



We continuously develop ourselves, enhancing our talents, skills, and abilities. We recognize that only through personal growth and development will we progress as an agency and as individuals

6

6

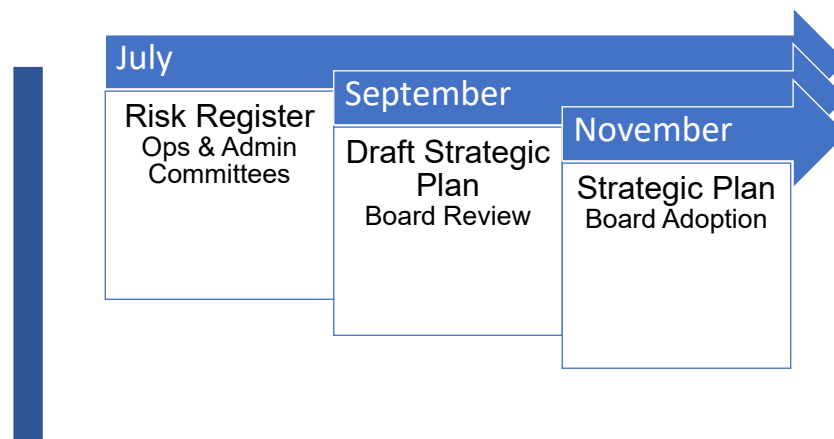
Safety

We are committed to providing a safe work environment. We will demonstrate leadership, promote individual accountability, and participate actively in the advancement of our health and safety practices.

7

7

Next Steps...



8

8

ORANGE COUNTY SANITATION DISTRICT COMMON ACRONYMS

ACWA	Association of California Water Agencies	LOS	Level Of Service	RFP	Request For Proposal
APWA	American Public Works Association	MGD	Million Gallons Per Day	RWQCB	Regional Water Quality Control Board
AQMD	Air Quality Management District	MOU	Memorandum of Understanding	SARFPA	Santa Ana River Flood Protection Agency
ASCE	American Society of Civil Engineers	NACWA	National Association of Clean Water Agencies	SARI	Santa Ana River Interceptor
BOD	Biochemical Oxygen Demand	NEPA	National Environmental Policy Act	SARWQCB	Santa Ana Regional Water Quality Control Board
CARB	California Air Resources Board	NGOs	Non-Governmental Organizations	SAWPA	Santa Ana Watershed Project Authority
CASA	California Association of Sanitation Agencies	NPDES	National Pollutant Discharge Elimination System	SCADA	Supervisory Control And Data Acquisition
CCTV	Closed Circuit Television	NWRI	National Water Research Institute	SCAP	Southern California Alliance of Publicly Owned Treatment Works
CEQA	California Environmental Quality Act	O & M	Operations & Maintenance	SCAQMD	South Coast Air Quality Management District
CIP	Capital Improvement Program	OCCOG	Orange County Council of Governments	SOCWA	South Orange County Wastewater Authority
CRWQCB	California Regional Water Quality Control Board	OCHCA	Orange County Health Care Agency	SRF	Clean Water State Revolving Fund
CWA	Clean Water Act	OCSD	Orange County Sanitation District	SSMP	Sewer System Management Plan
CWEA	California Water Environment Association	OCWD	Orange County Water District	SSO	Sanitary Sewer Overflow
EIR	Environmental Impact Report	OOBS	Ocean Outfall Booster Station	SWRCB	State Water Resources Control Board
EMT	Executive Management Team	OSHA	Occupational Safety and Health Administration	TDS	Total Dissolved Solids
EPA	US Environmental Protection Agency	PCSA	Professional Consultant/Construction Services Agreement	TMDL	Total Maximum Daily Load
FOG	Fats, Oils, and Grease	PDSA	Professional Design Services Agreement	TSS	Total Suspended Solids
gpd	gallons per day	PFAS	Per- and Polyfluoroalkyl Substances	WDR	Waste Discharge Requirements
GWRS	Groundwater Replenishment System	PFOA	Perfluorooctanoic Acid	WEF	Water Environment Federation
ICS	Incident Command System	PFOS	Perfluorooctanesulfonic Acid	WERF	Water Environment & Reuse Foundation
IERP	Integrated Emergency Response Plan	POTW	Publicly Owned Treatment Works	WIFIA	Water Infrastructure Finance and Innovation Act
JPA	Joint Powers Authority	ppm	parts per million	WIIN	Water Infrastructure Improvements for the Nation Act
LAFCO	Local Agency Formation Commission	PSA	Professional Services Agreement	WRDA	Water Resources Development Act

ORANGE COUNTY SANITATION DISTRICT GLOSSARY OF TERMS

ACTIVATED SLUDGE PROCESS – A secondary biological wastewater treatment process where bacteria reproduce at a high rate with the introduction of excess air or oxygen and consume dissolved nutrients in the wastewater.

BENTHOS – The community of organisms, such as sea stars, worms, and shrimp, which live on, in, or near the seabed, also known as the benthic zone.

BIOCHEMICAL OXYGEN DEMAND (BOD) – The amount of oxygen used when organic matter undergoes decomposition by microorganisms. Testing for BOD is done to assess the amount of organic matter in water.

BIOGAS – A gas that is produced by the action of anaerobic bacteria on organic waste matter in a digester tank that can be used as a fuel.

BIOSOLIDS – Biosolids are nutrient rich organic and highly treated solid materials produced by the wastewater treatment process. This high-quality product can be recycled as a soil amendment on farmland or further processed as an earth-like product for commercial and home gardens to improve and maintain fertile soil and stimulate plant growth.

CAPITAL IMPROVEMENT PROGRAM (CIP) – Projects for repair, rehabilitation, and replacement of assets. Also includes treatment improvements, additional capacity, and projects for the support facilities.

COLIFORM BACTERIA – A group of bacteria found in the intestines of humans and other animals, but also occasionally found elsewhere, used as indicators of sewage pollution. E. coli are the most common bacteria in wastewater.

COLLECTIONS SYSTEM – In wastewater, it is the system of typically underground pipes that receive and convey sanitary wastewater or storm water.

CERTIFICATE OF PARTICIPATION (COP) – A type of financing where an investor purchases a share of the lease revenues of a program rather than the bond being secured by those revenues.

CONTAMINANTS OF POTENTIAL CONCERN (CPC) – Pharmaceuticals, hormones, and other organic wastewater contaminants.

DILUTION TO THRESHOLD (D/T) – The dilution at which the majority of people detect the odor becomes the D/T for that air sample.

GREENHOUSE GASES (GHG) – In the order of relative abundance water vapor, carbon dioxide, methane, nitrous oxide, and ozone gases that are considered the cause of global warming ("greenhouse effect").

GROUNDWATER REPLENISHMENT SYSTEM (GWRS) – A joint water reclamation project that proactively responds to Southern California's current and future water needs. This joint project between the Orange County Water District and OCSD provides 70 million gallons per day of drinking quality water to replenish the local groundwater supply.

LEVEL OF SERVICE (LOS) – Goals to support environmental and public expectations for performance.

N-NITROSODIMETHYLAMINE (NDMA) – A N-nitrosamine suspected cancer-causing agent. It has been found in the GWRS process and is eliminated using hydrogen peroxide with extra ultra-violet treatment.

NATIONAL BIOSOLIDS PARTNERSHIP (NBP) – An alliance of the NACWA and WEF, with advisory support from the EPA. NBP is committed to developing and advancing environmentally sound and sustainable biosolids management practices that go beyond regulatory compliance and promote public participation to enhance the credibility of local agency biosolids programs and improved communications that lead to public acceptance.

PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) – A large group (over 6,000) of human-made compounds that are resistant to heat, water, and oil and used for a variety of applications including firefighting foam, stain and water-resistant clothing, cosmetics, and food packaging. Two PFAS compounds, perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) have been the focus of increasing regulatory scrutiny in drinking water and may result in adverse health effects including developmental effects to fetuses during pregnancy, cancer, liver damage, immunosuppression, thyroid effects, and other effects.

PERFLUOROOCTANOIC ACID (PFOA) – An ingredient for several industrial applications including carpeting, upholstery, apparel, floor wax, textiles, sealants, food packaging, and cookware (Teflon).

PERFLUOROOCTANESULFONIC ACID (PFOS) – A key ingredient in Scotchgard, a fabric protector made by 3M, and used in numerous stain repellents.

PLUME – A visible or measurable concentration of discharge from a stationary source or fixed facility.

PUBLICLY OWNED TREATMENT WORKS (POTW) – A municipal wastewater treatment plant.

SANTA ANA RIVER INTERCEPTOR (SARI) LINE – A regional brine line designed to convey 30 million gallons per day of non-reclaimable wastewater from the upper Santa Ana River basin to the ocean for disposal, after treatment.

SANITARY SEWER – Separate sewer systems specifically for the carrying of domestic and industrial wastewater.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD) – Regional regulatory agency that develops plans and regulations designed to achieve public health standards by reducing emissions from business and industry.

SECONDARY TREATMENT – Biological wastewater treatment, particularly the activated sludge process, where bacteria and other microorganisms consume dissolved nutrients in wastewater.

SLUDGE – Untreated solid material created by the treatment of wastewater.

TOTAL SUSPENDED SOLIDS (TSS) – The amount of solids floating and in suspension in wastewater.

ORANGE COUNTY SANITATION DISTRICT GLOSSARY OF TERMS

TRICKLING FILTER – A biological secondary treatment process in which bacteria and other microorganisms, growing as slime on the surface of rocks or plastic media, consume nutrients in wastewater as it trickles over them.

URBAN RUNOFF – Water from city streets and domestic properties that carry pollutants into the storm drains, rivers, lakes, and oceans.

WASTEWATER – Any water that enters the sanitary sewer.

WATERSHED – A land area from which water drains to a particular water body. OCSD's service area is in the Santa Ana River Watershed.