



**Regular Meeting of the
Metro Wastewater JPA/Metro Commission**

AGENDA

Thursday, March 2, 2023 - 12:00 p.m.

**PHYSICAL MEETING LOCATION:
9192 Topaz Way (PUD MOC II) Auditorium, San Diego, CA**

3:00 Time Certain Travel to Tour at:

**Pt. Loma Wastewater Treatment Plant
1902 Gatchell Road, San Diego, CA**

"The Metro JPA's mission is to create an equitable partnership with the San Diego City Council and Mayor on regional wastewater issues. Through stakeholder collaboration, open dialogue, and data analysis, the partnership seeks to ensure fair rates for participating agencies, concern for the environment, and regionally balanced decisions."

NOTE: ANY MEMBER OF THE PUBLIC MAY ADDRESS THE METRO WASTEWATER JPA/COMMISSION ON ANY AGENDA ITEM. PLEASE COMPLETE A SPEAKER SLIP AND SUBMIT IT TO THE BOARD SECRETARY PRIOR TO THE START OF THE MEETING, IF POSSIBLE, OR IN ADVANCE OF THE SPECIFIC ITEM BEING CALLED. COMMENTS ARE LIMITED TO THREE (3) MINUTES PER INDIVIDUAL.

**Documentation
Included**

1. **ROLL CALL**
2. **PLEDGE OF ALLEGIANCE TO THE FLAG**
3. **PUBLIC COMMENT:**
Persons speaking during Public Comment may address the Metro Wastewater JPA/Metro Commission on any subject matter within the jurisdiction of the Metro Wastewater JPA/Metro Commission that is not listed as an agenda item. Comments are limited to three (3) minutes.
4. **ACTION: APPROVAL OF AGENDA (Chair Jones)**
- X 5. **ACTION: CONSIDERATION AND POSSIBLE ACTION TO APPROVE THE MINUTES OF THE REGULAR MEETING OF [February 2, 2023](#) (Attachment)**

Documentation
Included

- | | | |
|-----------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X | 6. | <u>ACTION:</u> CONSIDERATION AND POSSIBLE ACTION TO APPROVE THE SECOND AMENDMENT TO THE AGREEMENT WITH ATOLL VENTURES (DBA 'OCEAN IMAGING') FOR THE COASTAL REMOTE SENSING SPECIAL STUDY OF THE POINT LOMA OCEAN OUTFALL (PLOO) AND SOUTH BAY OCEAN OUTFALL (SBOO) REGIONS (Ryan Kempster/Ami Latker) (Attachments) |
| X | 7. | <u>ACTION:</u> CONSIDERATION AND POSSIBLE ACTION TO APPROVE THE PUMP STATION 1 AND 2 IMPROVEMENTS AND MODERNIZATION CAPITAL IMPROVEMENT PROJECT (CIP) (Tom Rosales) (Attachment) |
| X | 8. | <u>ACTION:</u> CONSIDERATION AND POSSIBLE ACTION TO APPROVE THE SECOND AMENDMENT TO THE AS-NEEDED AGREEMENT WITH JACOBS CH2M HILL FOR PROFESSIONAL CONSTRUCTION MANAGEMENT SERVICES FOR PURE WATER PHASE 1 CONVEYANCE PROJECTS (Abi Palaseyed) (Attachments) |
| X | 9. | <u>ACTION:</u> CONSIDERATION AND POSSIBLE ACTION TO APPROVE THE SECOND AMENDMENT TO THE AS-NEEDED AGREEMENT WITH PARSONS-BLACK & VEATCH PROFESSIONAL CONSTRUCTION MANAGEMENT SERVICES FOR PURE WATER PHASE 1 TREATMENT PLANT AND FACILITIES (Abi Palaseyed) (Attachments) |
| | 10. | <u>INFORMATION:</u> PRESENTATION BY SAN DIEGO REGARDING TENTATIVE SETTLEMENT WITH REGIONAL BOARD REGARDING 2020 SANITARY SEWER OVERFLOW EVENT |
| | | ~ TRANSITION TO WORKSHOP ~ |
| 1:00 p.m. | 11. | <u>START OF PT. LOMA WASTEWATER TREATMENT PLANT OVERVIEW</u> |
| | A. | <u>INTRODUCTIONS</u> (Chair Jones)
Juan Guerriero, Director of the City of San Diego Public Utilities Division
Lisa Celaya, Deputy Director of the City of San Diego Public Utilities Division
Tom Rosales, Assistant Director of the City of San Diego Public Utilities Division
Adam Jones, Deputy Director of Finance, Public Utilities Department |
| | B. | <u>OVERVIEW OF WORKSHOP</u> (Karyn Keze) |
| X | C. | <u>WASTEWATER 101</u> (Dexter Wilson) (Attachments) |
| X | D. | <u>METRO FACILITIES</u> (Dexter Wilson) (Attachments) |

**Documentation
Included**

X

**E. METRO WASTEWATER SYSTEM HISTORY (Scott Tulloch)
(Attachments)**

X

F. PURE WATER TRANSITION Pt Loma (Dexter Wilson) (Attachment)

~ TRANSITION TO TOUR ~

3:00

12. LEAVE MOC II FOR TOUR OF POINT LOMA WASTEWATER TREATMENT PLANT (INFORMATION ONLY) – Pt. Loma Wastewater Treatment Plant 1902 Gatchell Road, San Diego, CA

4:30-5:00

13. LEAVE POINT LOMA WASTEWATER TREATMENT PLANT AND RETURN TO MOC II

14. ADJOURNMENT OF THE METRO WASTEWATER JPA/COMMISSION TO THE NEXT REGULAR MEETING TO BE HELD AT NORTH CITY WATER RECLAMATION FACILITY, 4949 EASTGATE MALL, SAN DIEGO, CA 92121 ([April 6, 2023](#))

NOTE: The Metro Wastewater JPA and/or Commission may take action on any item listed in this Agenda whether or not it is listed "For Action."

Materials provided to the Metro Wastewater JPA/Metro Commission related to any open-session item on this agenda are available for public review at our website: <https://www.metrojpa.org>

In compliance with the AMERICANS WITH DISABILITIES ACT

Persons with disabilities that require modifications or accommodations, please *contact General Counsel Adriana Ochoa at adriana.ochoa@procopio.com* by no later than two hours prior to the meeting to request reasonable modifications or accommodations consistent with the Americans with Disabilities Act and Metro Commission/Metro Wastewater JPA shall promptly work with you to resolve the matter in favor of accessibility.

Metro JPA 2023 Meeting Schedule

January 5, 2023

February 2, 2023

March 2, 2023

April 6, 2023

May 4, 2023

June 1, 2023

July 6, 2023

August 3, 2023

September 7, 2023

October 5, 2023

November 2, 2023

December 7, 2023

ATTACHMENT 5

Minutes of the Regular Meeting
of February 2, 2023



Regular Meeting of the Metro Wastewater JPA

and Metro Commission

Zoom Meeting Held Online

February 2, 2023

Minutes

Chairman Jones called the meeting to order at 12:06 p.m. A quorum of the Metro JP/Commission was declared, and the following representatives were present:

1. ROLL CALL

<u>Agencies</u>	<u>Representatives</u>	<u>Alternate</u>
City of Chula Vista	Jose Preciado	
City of Coronado	John Duncan	Carrie Anne Downey
City of Del Mar	Dwight Worden	
City of El Cajon	Gary Kendrick	
City of Imperial Beach	Mitch McKay (absent)	John Fisher
City of La Mesa	Bill Baber (absent)	Jack Shu
Lemon Grove San District	Jerry Jones	
City of National City	Ditas Yamane	
City of Poway	Peter De Hoff (absent)	John Heidemann
County of San Diego	Joel Anderson	
Otay Water District	Mark Robak	
Padre Dam MWD	Karen Jassoy (absent)	
Metro TAC Chair	Beth Gentry	

Others present: Metro JPA General Counsel Adriana Ochoa - Procopio; Metro JPA/Commission Board Secretary Lori Anne Peoples; Beth Gentry – City of Chula Vista; None – City of Coronado; None - City of El Cajon; None – City of Imperial Beach; No one present – City of La Mesa; None – Lemon Grove Sanitation District; Carmen Kasner – City of National City; Bob Kennedy – Otay Water District; None – Padre Dam Municipal Water District; Alisa Nichols – City of Poway; City of San Diego Staff and Consultants: Tom Rosales; Peejay Tubongbanua, Greg Kazmer – County of San Diego; Metro JPA Staff: Lee Ann Jones-Santos – JPA Treasurer; Scott Tulloch – NV5; Karyn Keze – The Keze Group, LLC.; Dexter Wilson - Dexter Wilson Engineering

Additional present: Sanjay Gaur - EC AWP JPA

2. PLEDGE OF ALLEGIANCE TO THE FLAG

Carrie Anne Downey, alternate for Coronado led the Pledge.

3. PUBLIC COMMENT

None

4. ACTION: APPROVAL OF AGENDA

ACTION: Motion by Director Preciado, seconded by Director Anderson to approve the agenda as submitted. Motion carried as follows:

AYES: Preciado, Duncan, Worden, Kendrick, Fisher, Shu, Jones, Yamane, Robak,
Jassoy, Heidemann, Anderson

NAYS: None

ABSTAIN: None

ABSENT: None

5. ACTION: CONSIDERATION AND POSSIBLE ACTION TO MAKE FINDINGS TO CONTINUE HOLDING REMOTE/TELECONFERENCE MEETINGS PURSUANT TO ASSEMBLY BILL 361

General Counsel Ochoa explained that this would be the last meeting we would be able to hold via ZOOM.

ACTION: Motion Director Anderson, seconded by Director Preciado, the findings be approved. Motion carried as follows:

AYES: Preciado, Duncan, Worden, Kendrick, Fisher, Shu, Jones, Yamane, Robak,
Jassoy, Heidemann, Anderson

NAYS: None

ABSTAIN: None

ABSENT: None

6. ACTION: CONSIDERATION AND POSSIBLE ACTION TO APPROVE THE MINUTES OF THE REGULAR MEETING OF December 1, 2022

ACTION: Motion Director Anderson, seconded by Director Preciado, that the minutes be approved. Motion carried as follows:

AYES: Preciado, Duncan, Worden, Kendrick, Fisher, Shu, Jones, Yamane, Robak,
Jassoy, Heidemann, Anderson

NAYS: None

ABSTAIN: None

ABSENT: None

7. PRESENTATION: WELCME TO NEW JPA REPRESENTATIVES AND INTRODUCTION OF METRO WASTEWATER JPA/METRO COMMISSION SUPPORT STAFF

MetroTAC Chair Gentry introduced Metro JPA staff after which, Chair Jones requested all new Directors and Alternates introduce and say a few words about themselves.

8. ACTION: CONSIDERATION AND POSSIBLE ACTION TO APPROVE ELECTION OF OFFICER (VICE-CHAIR)

A. Pursuant to Article III of the Joint Powers Agreement, the Board must elect a Vice-Chair from the Board Directors

B. Board Directors may nominate and vote on a Vice-Chair.

Chair Jones nominated Director Baber for Vice Chair and to also serve on the 2nd ARA Ad Hoc Committee.

ACTION: Motion Director Jones, seconded by Director Anderson, the nomination be approved. Motion carried as follows:

AYES: Preciado, Duncan, Worden, Kendrick, Fisher, Shu, Jones, Yamane, Robak, Jassoy, Heidemann, Anderson

NAYS: None

ABSTAIN: None

ABSENT: None

9. PRESENTATION: METRO BACKGROUND

Karyn Keze provided a brief verbal overview of her PowerPoint presentation included in the agenda package.

10. ACTION: CONSIDERATION AND POSSIBLE ACTION TO APPOINT METRO JPA FINANCE COMMITTEE MEMBERS

- A. Review of JPA finance Committee Membership (5 members plus Alternate)**
- B. Appointment by Chair of 2 Members and an Alternate for Consideration and Approval by the Board**

Karyn Keze provided a brief overview of the Metro JPA Finance Committee responsibilities.

Chair Jones nominated Director Robak and Director Yamane with Director DeHoff as alternate noting that he, Director Baber and Director Jassoy were remaining on the committee from prior years appointments.

ACTION: Motion Director Preciado, seconded by Director Kendrick, the nominations be approved. Motion carried as follows:

AYES: Preciado, Duncan, Worden, Kendrick, Fisher, Shu, Jones, Yamane, Robak, Jassoy, Heidemann, Anderson

NAYS: None

ABSTAIN: None

ABSENT: None

11. ACTION: CONSIDRATION AND POSSIBLE ACTION TO APPOINT "METRO JPA PURE WATER AD HOC COMMITTEE" MEMBERS

- A. Recommendation by JPA Chair of 3 Ad Hoc members for consideration and approval by the Board**

Karyn Keze provided an overview of the purpose of the Ad Hoc Committee which was to finalize the "parking lot" items remaining from the 1st Amended and Restated Agreement (ARA). The members work with JPA Staff on all areas of the 2nd ARA including provisions implementation, new provisions, and Phase 2 including providing oversight and brainstorming. Their role is an advisory committee to the full JPA Board of Directors.

Chair Jones noted that there were only actually 2 appointments remaining and recommended the appointment of Director Preciado and Director Duncan.

ACTION: Motion Director Yamane, seconded by Director Preciado, the nominations be approved. Motion carried as follows:

AYES: Preciado, Duncan, Worden, Kendrick, Fisher, Shu, Jones, Yamane, Robak, Jassoy, Heidemann, Anderson

NAYS: None

ABSTAIN: None

ABSENT: None

12. ACTION: CONSIDRATION AND POSSIBLE APPROVAL OF APPOINTMENT OF IROC MEMBER

Chair Jones noted that he had represented the Metro JPA on this committee for a number of years and was willing to continue as the Metro JPA representative unless someone else would like to serve. As no other Director stepped forward, he will remain the JPA's IROC member.

ACTION: Motion Director Anderson, seconded by Director Yamane, Chair Jones to continue as the Metro JPA representative on the IROC. Motion carried as follows:

AYES: Preciado, Duncan, Worden, Kendrick, Fisher, Shu, Jones, Yamane, Robak, Jassoy, Heidemann, Anderson

NAYS: None

ABSTAIN: None

ABSENT: None

Director Preciado left the meeting.

13. UPDATE: METRO TAC UPDATE/REPORT

MetroTAC Chair Gentry stated that TAC had a full agenda in January and the agenda can be viewed on the website to see the items covered. Financial updates were moving forward and the January 2023 spill.

The MetroTAC Year-End 2022 Work Plan was attached to the agenda.

14. REPORT: GENERAL COUNSEL

General Counsel Ochoa provided an overview of a form that will be made available in Section 15 of the New Directors Manual and noted that AB 361 ends on February 28th ending the availability to hold and attend meetings via ZOOM, however AB 2449 that was approved by the Governor on September 13th which codifies exceptions to the Brown Act Rules is covered in the form she presented and what is required of Directors who wish to attend a meeting under these new exceptions.

15. PROPOSED AGENDA ITEMS FOR THE NEXT METRO COMMISSION/METRO WASTEWATER JPA MEETING March 2, 2023

None

16. METRO COMMISSIONERS' AND JPA BOARD MEMBERS' COMMENTS

General Counsel Ochoa stated that she had received inquiries by staff on participation in Closed Session. She noted that the Attorney General Opinion of May 2020 did not allow for this unless there was an "essential benefit to the Metro JPA NOT the individual PAs. This opinion is in the New Director's Manual at: 14.5 Procedure No. 1 - Memo re AG Opinion 21-1102 - Staff at Closed Session, for individual review as well.

Chair Jones inquired as to whether the Chair had the discretion to bring staff in. Ms. Ochoa stated that would be okay unless another Director objected to that person not being essential.

**17. CLOSED SESSION:
CONFERENCE WITH LEGAL COUNSEL – POTENTIAL LITIGATION
Government Code 54946.9(d)(2)
One (1) potential case**

**18. CLOSED SESSION:
CONFERENCE WITH LEGAL COUNSEL – POTENTIAL LITIGATION
Consideration regarding initiation of litigation pursuant to Government Code 54946.9(d)(4)
One (1) potential case**

At 1:25 p.m. the Directors entered Closed Session

At 1:50 p.m. Directors Anderson and Worden left the meeting.

At 2:07 p.m. the Directors reconvened the meeting with Directors Preciado, Anderson and Worden absent. General Counsel Ochoa declared there was no reportable action

19. ADJOURNMENT

There being no further business, Chair Jones declared the meeting adjourned at 2:08 p.m.

ATTACHMENT 6

Second Amendment to Agr.
with Atoll Ventures for
Coastal Remote Sensing
Special Study of PLOO and
SBOO Regions

METRO JPA/TAC
Staff Report
Date: 2/15/2023

Project Title:

Second Amendment to the Agreement with Atoll Ventures (DBA 'Ocean Imaging') for the Coastal Remote Sensing Special Study of the Point Loma Ocean Outfall (PLOO) and South Bay Ocean Outfall (SBOO) Regions (Ryan Kempster/Ami Latker)

Requested Action:

Consideration and Possible Action to Recommend to the Metro Comm/Metro Wastewater JPA for Approval

Recommendations:

Metro TAC:	Present to JPA as an action item.
IROC:	No IROC presentation planned. Funds for this longstanding agreement are budgeted in the Annual Budget within the Metro Operating Fund and do not require IROC review.
Prior Actions: (Committee/Commission, Date, Result)	

Fiscal Impact:

Is this projected budgeted?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Cost breakdown between Metro & Muni:	100% Metro
Fiscal impact to the Metro JPA:	<p>The total fiscal impact of this agreement is \$1,619,382 (5 years);</p> <ul style="list-style-type: none">• \$360,129 in Fiscal Year 2024,• \$303,667 in Fiscal Year 2025,• \$309,176 in Fiscal Year 2026,• \$318,436 in Fiscal Year 2027, and• \$327,974 in Fiscal Year 2028. <p>Funding for this contract is already included in our annual program budget; thus, no budget increase is needed for the scope of this agreement. A portion of this agreement, an annual amount of 25% of the contract value, is funded/reimbursed by the IBWC.</p>

Capital Improvement Program:

New Project?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Existing Project?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Upgrade/addition <input type="checkbox"/> Change <input type="checkbox"/>

Previous TAC/JPA Action:

Additional/Future Action:

City Council Action:

Not yet heard by council – Expected April 2023

Background: *Provide background information on the need for the project*

This project represents a long-term collaboration between the City of San Diego (City), the International Boundary and Water Commission (USIBWC), and Ocean Imaging that was initiated by the Regional Water Quality Control Board (RWQCB) in 2002. The remote sensing services provided by Ocean Imaging fulfills NPDES permit requirements for the Point Loma Wastewater Treatment Plant, the South Bay Water Reclamation Plant, and the South Bay International Wastewater Treatment Plant. Further, it is a critical component of the City's monitoring program included in the Point Loma NPDES Permit 301(h) Waiver Application. As a result, this project is essential to the Public Utilities Department being able to meet its permit requirements associated with the discharge of wastewater to the Pacific Ocean via the Point Loma Ocean Outfall (PLOO) and South Bay Ocean Outfall (SBOO). Monitoring conducted by Ocean Imaging utilizes various aerial and satellite sensors to detect patterns in natural oceanographic variables, point and non-point source terrestrial runoff, and anthropogenic sources such as San Diego's two large ocean outfalls. Due to the highly technical and tailored services that Ocean Imaging Corp. provides, they are uniquely positioned to conduct this work. Furthermore, Ocean Imaging's existing remote sensing data archive, and customized analysis results linking historical remote sensing, field sampling, and environmental/oceanic parameters, are essential to the City's evaluation of trends in our region. No other organization has such a dataset, or comparable capabilities.

Discussion: *Provide information on decisions made to advance the project*

This program has been ongoing for the past 21 years, after being initiated by the RWQCB in 2002. The RWQCB has since continued to support the continuation of this project as it is consistent with the Board's and City's initiatives to modernize monitoring programs using advanced, scientifically sound technologies to protect the region's coastal marine environment.

Bid Results: *If bidding was done provide bidding format and results*

N/A

Public Utilities Department

Coastal Remote Sensing of the San Diego/Tijuana Region 2023-2028 Second Amendment

Feb 15th, 2023

Peter S. Vroom, Ph.D. (Deputy Public Utilities Director)

Ryan M. Kempster, Ph.D. (Ocean Monitoring Program Manager)

Ami Latker (Marine Biologist III and Contract Coordinator)





Requested Actions

1.

Authorize the Mayor to execute an Amendment to the existing contract with Ocean Imaging, Inc. to continue to provide remote sensing services.

2.

Authorize the expenditure of \$1,619,382 to fund this agreement.

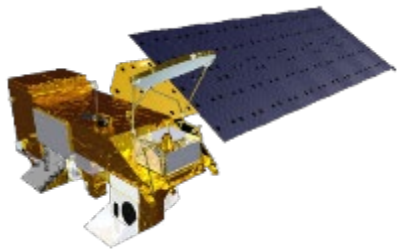


Background and History

Ocean Imaging Inc.

Founded in 1984

Specializes in Satellite Imagery





Background and History

Water Quality Board Initiated Contract in 2002

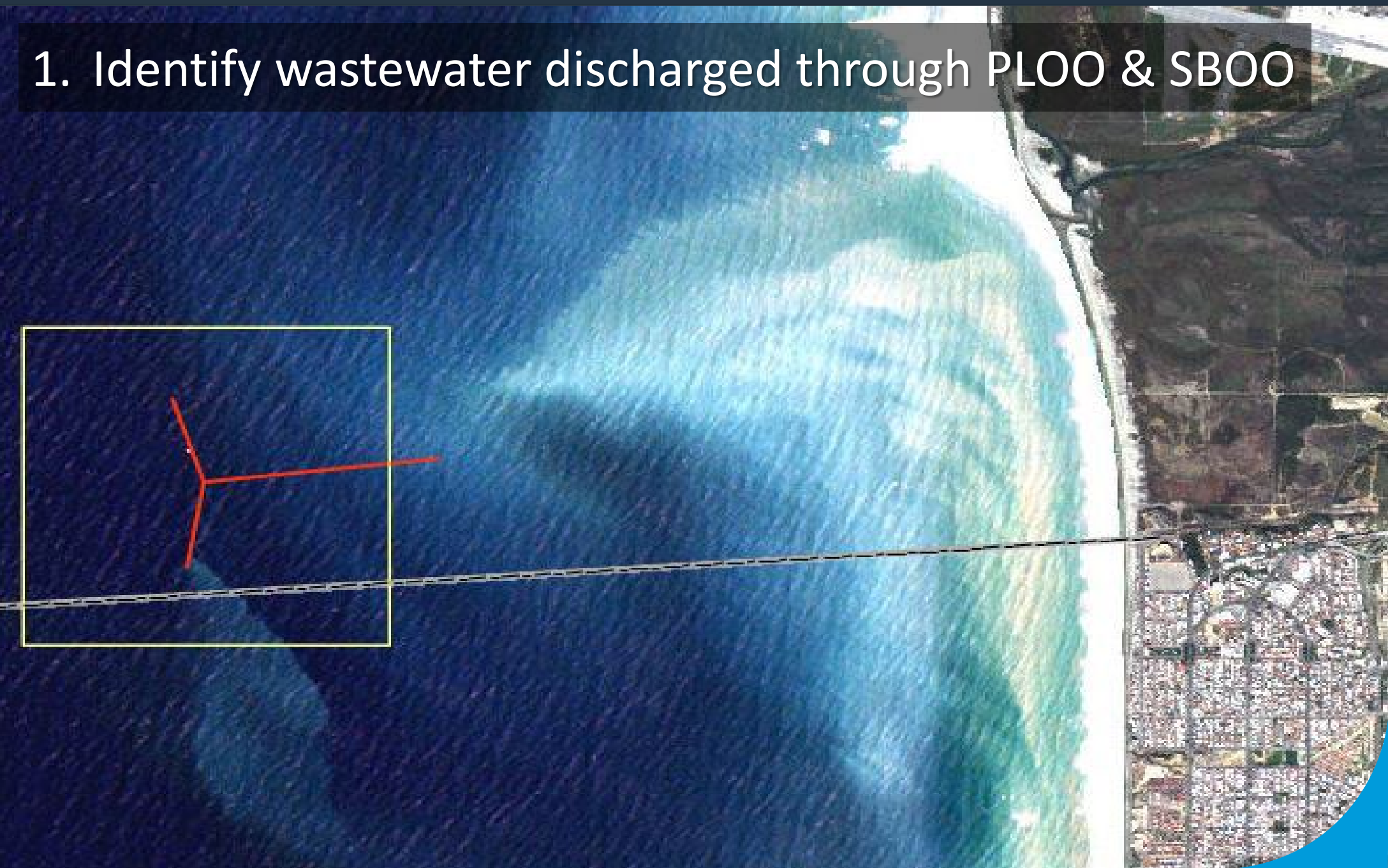
Initially a PLWTP NPDES 'Special Study'

Permit Mandated Component of OMP



Special Study Goals

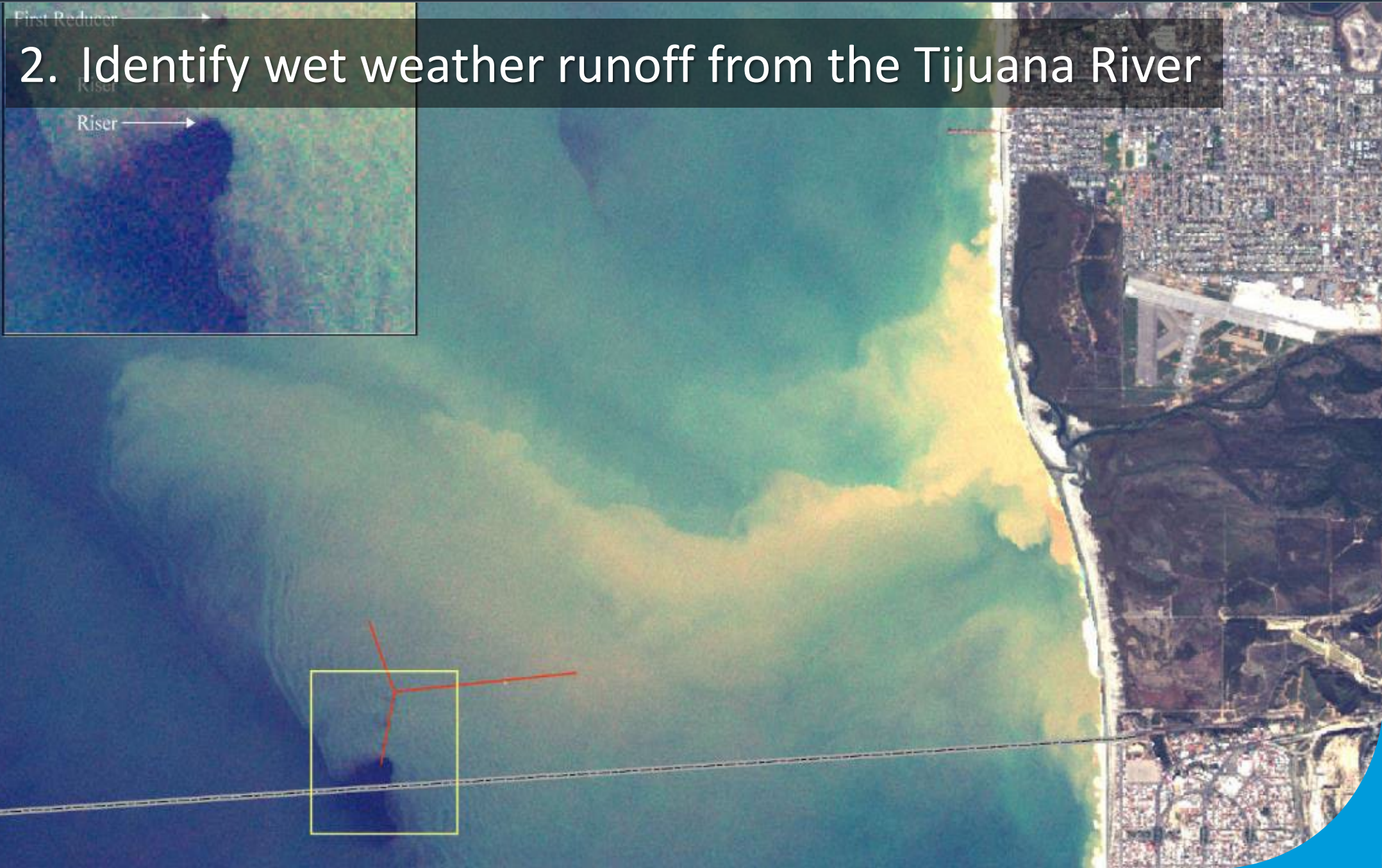
1. Identify wastewater discharged through PLOO & SBOO





Special Study Goals

2. Identify wet weather runoff from the Tijuana River





3. Identify other sources of coastal runoff





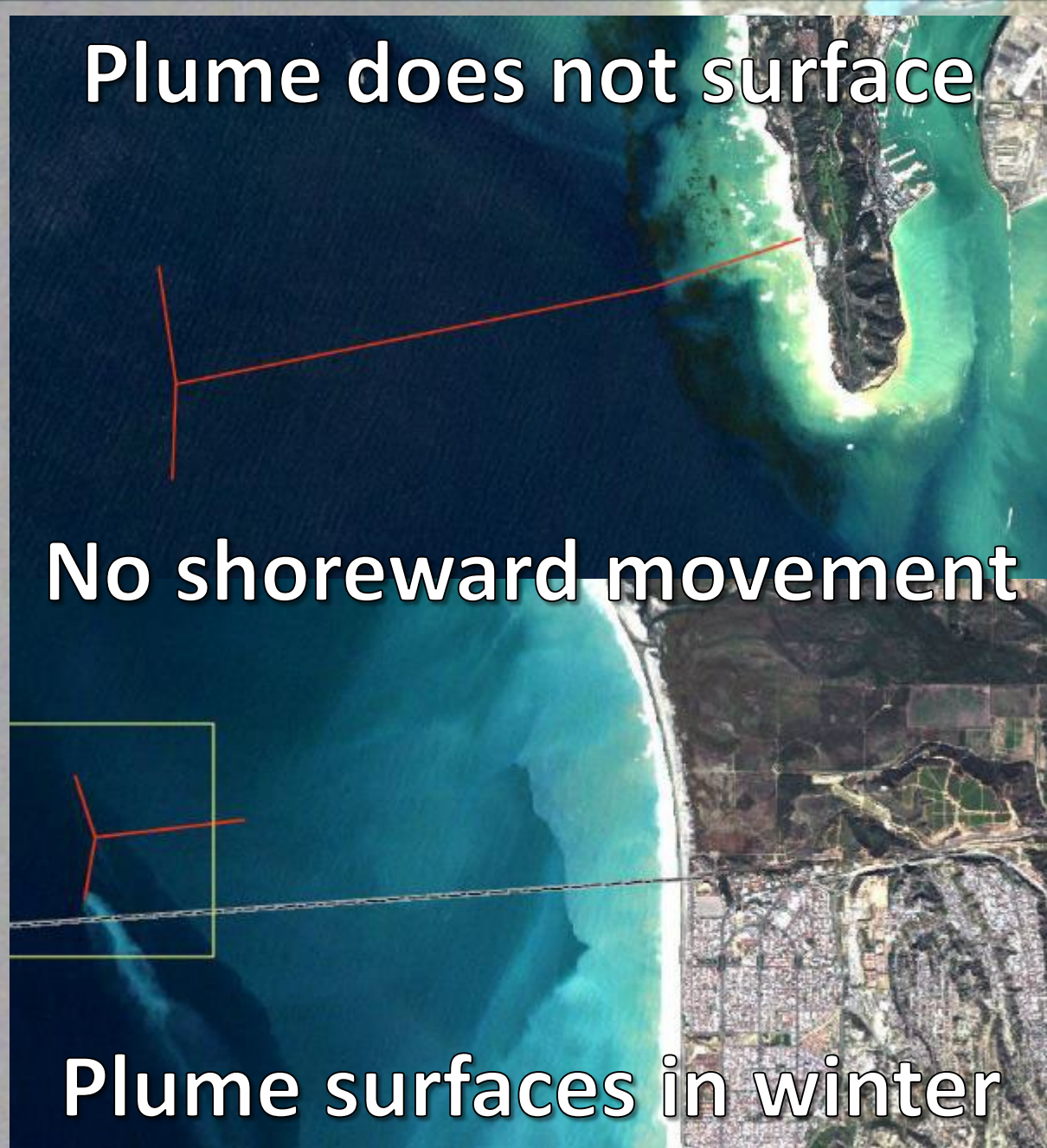
Point Loma

Plume does not surface

No shoreward movement

South Bay

Plume surfaces in winter





Benefits to the City

1. Represents a significant contribution to the City's enhanced ocean monitoring efforts for the San Diego region.
2. Fulfills an NPDES permit requirement for the PLWTP, SBWRP, and the SBIWTP.
3. Provides critical scientific information in support of the City's 301(h) modified permit for PLWTP.
4. Differentiates effects of wastewater discharge on coastal ecosystems relative to other anthropogenic or natural factors.
5. Continues scientifically unique, long-term program essential to assessing wastewater effects on San Diego coastal environment



Ocean Imaging - Contract Amendment

Extends agreement with Ocean Imaging through June 2028 (5 years)

Provide satellite imagery of PLOO and SBOO regions

To identify:

1. Wastewater
2. Coastal runoff
3. Other sources of pollution
4. Harmful Algal Blooms (HABs)



Ocean Imaging - Contract Amendment

Budget Requested

FY24 (7/1/2023 – 6/30/2024)

\$360,129

FY25 (7/1/2024 – 6/30/2025)

\$303,667

FY26 (7/1/2025 – 6/30/2026)

\$309,176

FY27 (7/1/2026 – 6/30/2027)

\$318,436

FY28 (7/1/2027 – 6/30/2028)

\$327,974

Total

\$1,619,382*

** ~25% of total cost is reimbursed by the USIBWC*



“It is anticipated that this program will continue in future years” *2002 NPDES Permit*

SDRWQCB

Continues to support this monitoring in NPDES Permit renewals for the PLWTP, SBWRP, and the SBIWTP.

USIBWC

Continues to financially support this long term investigation as part of their ongoing contract with the City.

City
Council

Original contract approved by council (Aug, 2015)
Current amendment will be presented on April 11th

Metro JPA

Current amendment will be presented on March 2nd



Project Contacts

City of San Diego

Peter S. Vroom, Ph.D.

Deputy Director
pvroom@saniego.gov

Ryan M. Kempster, Ph.D.

Ocean Monitoring Program Manager
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Ami Latker

Marine Biologist III
Contract Administrator
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Ocean Imaging

Jan Svejksky, Ph.D.

Principal Investigator
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Mark Hess, Ph.D.

Principal Investigator
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ATTACHMENT 7

Pump Station 1 and 2 Improvements and Modernization Capital Improvement Project

METRO JPA/TAC
Staff Report
Date: February 15, 2023

Project Title:

Pump Station 1 and 2 Improvements and Modernization – Capital Improvement Project (CIP)

Requested Action:

Consideration and possible action to recommend to the Metro Commission/Metro Wastewater JPA approval of PS1 and PS2 Improvements and Modernization Capital Improvement Project and award of design contract not to exceed \$5,800,000

Recommendations:

Approval

Metro TAC:	Present to JPA as an Action Item
IROC:	No IROC presentation planned.
Prior Actions: (Committee/Commission, Date, Result)	N/A

Fiscal Impact:

Is this projected budgeted?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Cost breakdown between Metro & Muni:	100% Metro
Fiscal impact to the Metro JPA:	The City is currently negotiating the design fee.

Capital Improvement Program:

New Project?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Existing Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Upgrade/addition <input type="checkbox"/> Change <input type="checkbox"/>

Previous TAC/JPA Action:

N/A

Additional/Future Action:

N/A

City Council Action:

Item to anticipated to be presented to the Environment Committee and City Council in February/March 2023 to create the CIP project and authorize appropriation and expenditure of funding for design.

Background: Provide background information on the need for the project

The City of San Diego's (City) Public Utilities Department operates wastewater conveyance, treatment and disposal facilities that serve both City of San Diego customers and the 12 participating agencies of the Metropolitan Joint Powers Authority (Metro JPA). Pump Stations 1 (PS 1) and 2 (PS 2) are the largest pump stations within the City's wastewater system. Wastewater from the South Bay region is delivered to PS 1 (located at 3550 East Harbor Drive, San Diego, CA 92101 near the border with National City) via the South Metro Interceptor (SMI). PS 1 has been in service since 1963 and has been upgraded in phases. In 1976, pumping capacity was increased from 4 to 5 pumps, and in 1993 capacity was increased with the addition of a 6th pump. PS 1 also has two (2) backup generators that were installed in 2015 to maintain

power to the pump station should the SDG&E utility power be lost. PS 1 discharges through the SMI sewer pipe in the downtown area, to PS 2, located west of the San Diego International Airport.

Pump Station 2 is the final pump station for the North Metro Interceptor (NMI) and SMI systems and is responsible for pumping all wastewater to the Point Loma Wastewater Treatment Plant for treatment and disposal. PS 2 has a design capacity of 432MGD (million gallons/day). PS 2 pumps an average daily flow of 140MGD. PS 2 has been in service since 1963 and has been upgraded in phases. In 1986, 1987 and 1992 additional pumps were added taking the total pumps from 5 to 8. In 1992 natural gas engines for Pumps No. 4 and 5 were added to provide multiple sources of power for the pump station. PS 2 also had two (2) backup generators installed in 2016 to maintain power to the pump station should the SDG&E utility power be lost.

The proposed capital project addresses improvements and modernization at both PS 1 and PS 2 since the operations of both pump stations are closely tied together. With a single designer, the proposed upgrades and equipment replacements can be more economically and efficiently designed while the improvements are done at the same time. A combined project will assist the acclimation of the City staff to the new equipment and increase operational flexibility to deploy staff at either location in the future.

A condition assessment was completed in 2018 which is the primary driver of the project.

Discussion: *Provide information on decisions made to advance the project*

N/A

Bid Results: *If bidding was done provide bidding format and results*

An RFP for a design consultant was issued in April 2022. The City could not reach an agreement with the first consultant, Lee & Ro, so negotiations began with the next consultant, Brown & Caldwell. Negotiations are continuing and are expected to be completed soon. The City received approval from its Environment Committee on February 9, 2023 to continue negotiations for a not to exceed amount of \$5,800,000 and provide a memorandum to City Council once an agreement has been reached.

Public Utilities Department

Pump Stations 1 and 2 Improvements and Modernization Capital Improvement Project (CIP)

Metro TAC
February 15, 2023

Background

- Pump Stations 1 and 2 are the largest pump stations in the City's system and critical to moving the region's wastewater for treatment at Point Loma Wastewater Treatment Plant
- Both stations were constructed and put into operation in 1963
- Needed upgrades and improvements were identified in a 2018 Condition Assessment performed by HDR
- Requested Action is to authorize the creation and execution of Capital Improvement Project for Pump Stations 1 and 2 Improvements and Modernization and award design consultant contract not to exceed \$5.8M



Pump Station 1 pump room.

City of San Diego Existing Major Metropolitan Wastewater Facilities



CIP Pump Station 1

Pump Station 1

Scope of work includes:

- Rehabilitation of wet wells 1 and 2.
- Raising mechanical screens above ground and adjusting the conveyor to match above grade screen.
- Replacement of all six electric motors and pumps.
- Replacement of liquid rheostats with variable frequency drives (VFDs).
- Replacement of suction pipes, gate valves, and flow meters.



Pump Station 1 – suction valve (upper) and screens (lower).

CIP Pump Station 2

Pump Station 2

Scope of Work includes:

- Repairing liner and concrete in the influent channel.
- Replacement of corroded top supports at mechanical screens 1 through 4.
- Line wet wells 1 and 2.
- Rehabilitating six electric motors and eight pumps.
- Replacement of liquid rheostats with variable frequency drives (VFDs).
- Replacement of pump cone valves and actuators.



Pump Station 2 - suction valve (upper) screens below grade (lower).

Schedule and Cost

- Preliminary engineering project started in FY 2022.
- Design is anticipated to be completed in FY 2025.
- Construction is anticipated to be completed by December 2028.
- Project costs estimated \$30M. Expected to increase from inflation and improved detail of final design.



Pump Station 1 (upper) and Pump Station 2 (lower).



Requested Action

Consideration and possible action to recommend to the Metro Commission/Metro Wastewater JPA approval of PS1 and PS2 Improvements and Modernization Capital Improvement Project and award of design contract not to exceed \$5,800,000



Questions?

ATTACHMENT 8

Second Amendment to as-needed Agr. with Jacobs CH2M Hill for Professional Construction Mgt. Svs. for Pure Water Phase 1 Conveyance Projects

METRO JPA/TAC**Staff Report**

Date:

Project Title: Pure Water Program Extension to Jacobs CH2M Hill Contract**Presenter(s) Name:**

Abi Palaseyed

Presenter(s) Title:

Assistant Deputy Director

Requested Action:**Consideration and Possible Action to Recommend to the Metro Comm/Metro Wastewater JPA Approval of Second Amendment to the as-needed Agreement with Jacobs CH2M Hill for professional construction management services for Pure Water Phase 1 conveyance projects****Recommendations:****Approve amendment**

Metro TAC:

Approve the subject item and forward to Metro JPA/ Metro Commission for approval

IROC:

N/A

Prior Actions:

N/A

(Committee/Commission, Date, Result)

Fiscal Impact:

Is this projected budgeted?

Yes ☒No ☐

Cost breakdown between Metro & Muni:

These as-needed services will be issued in dedicated task orders for each capital project or non-capital expenses. Non-capital expenses will use the default 38% 62% cost allocation for Pure Water expenses, which will be adjusted based on final cost allocation for the project. Capital expenses are allocated based on the capital work covered under the task order based on the utility system benefiting from the work.

Fiscal impact to the Metro JPA:

Capital costs are allocated to member agencies under their percentages under Exhibit G allocation, listed in the ARA as the Pure Water capital cost rate. All pure water O&M costs are tracked and will be cost allocated in the year in which they occur and a final allocation will be done after the completion of the capital project.

Capital Improvement Program:

New Project?

Yes ☐No ☒N/A ☐

Existing Project?

Yes ☒No ☐Upgrade/addition ☐Change ☒**Previous TAC/JPA Action:**

None

Additional/Future Action:

Present item to Metro JPA/ Metro Commission in February 2023.

City Council Action:

City Council approval expected in March 2023.

Background: Provide background information on the need for the project

The City entered into agreement with CH2M Hill (Jacobs-CH2M Hill) on April 30, 2018 for 5 years and \$45,000,000.00. The contract is for professional construction management services for Pure Water Phase 1 conveyance projects on an as-needed, hourly fee basis. Task Order scope and fees are negotiated by the City with Jacobs-CH2M Hill and their subconsultant and are based on the necessary resources and support services needed to hold contractors accountable for their construction work on Pure Water Phase 1. It is important to note that the original contract fee of \$45,000,000 was estimated using the information that was known at the time of the Request for Proposal (RFP) in October 2017 and that design of Pure Water Phase 1 conveyance projects had not been completed. The RFP estimated the total construction cost for the Pure Water Phase 1 conveyance projects to be approximately \$245,100,000, however, to date approximately \$499,000,000 has been awarded or is anticipated to be

awarded. It was expected that Jacobs-CH2M Hill costs will increase as construction costs and construction schedules increase.

Additional service items not originally planned to be completed by Jacobs-CH2M Hill but are necessary to include in this amendment are material sampling & testing which was originally planned to be performed by the City Lab Section, field surveying which was originally planned to be performed by the City Survey Section, ariel/drone photography, development of monument perpetuation plan sheets, risk mitigation advisors and analyses, construction schedule changes from daywork to nightwork and coordination of utility conflicts during design phase. To date, a total of seven tasks have been issued to Jacobs-CH2M Hill and one additional task order is anticipated.

This is a planned amendment as it was known at the time of contract procurement that the overall schedule for Pure Water Phase 1, including construction contract durations, start-up and integration period, acceptance, mitigation and monitoring and warranty would extend beyond 5 years. Additionally, due to a lawsuit filed by the Associated General Contractors (AGC), the construction contracts delayed advertising as originally scheduled in the RFP by approximately 1 year and six months. The Projects originally began advertising in February of 2019. AGC filed an injunction against the City in June of 2019 and subsequently filed a lawsuit in October 2019 challenging the Pure Water Construction Contracts. The City was not allowed to resume advertisement of the construction contracts until August 2020.

This amendment is requesting an additional three years and three months for a total contract duration of eight years and three months which covers the remaining construction contract durations, Pure Water Phase 1 start-up and integration period, acceptance and warranty period as well as the delay time associated with the ACG lawsuit. This amendment is also requesting an additional \$40,000,000.00 for a total contract amount of \$85,000,000.00.

Discussion: *Provide information on decisions made to advance the project*

Bid Results: *If bidding was done provide bidding format and results*
N/A

Metro Wastewater JPA TAC

**Amendment No. 2 to the Agreement with Parsons-Black & Veatch
Joint Venture for As-Needed Construction Manager - Treatment
Plant and Facilities Projects - Contract Number H176935**

&

**Amendment No. 3 to the Agreement with Jacobs-CH2M Hill
Engineers, Inc. for As-Needed Construction Management Services –
Conveyance Projects - Contract Number H176955**



Strategic Capital Projects Department



Actions

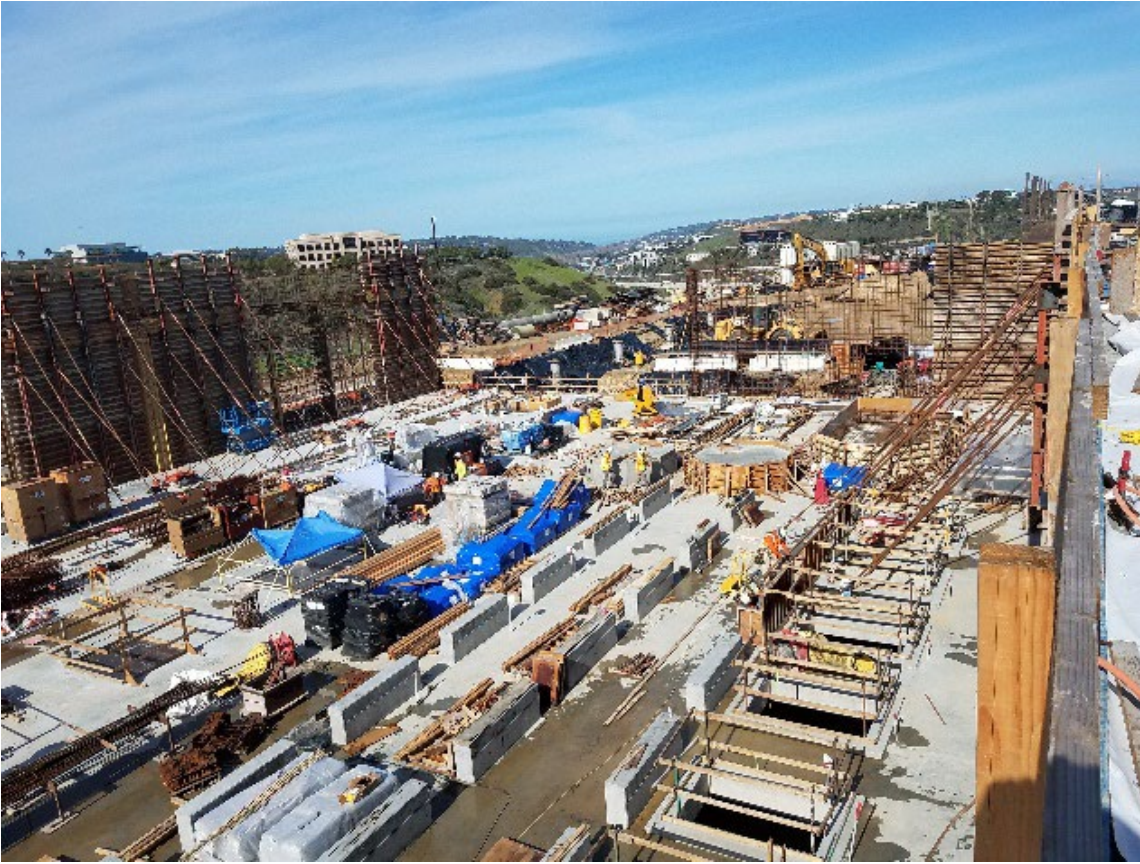
Jacobs-CH2M Hill

1. An ordinance authorizing the Third Amendment to the agreement with Jacobs-CH2M Hill Engineers, Inc. for As-Needed Construction Management Services – Conveyance Projects (H176955) for an additional amount not to exceed \$40,000,000.00 and for a contract extension of 39 months.
2. Authorizing the Chief Financial Officer to expend an amount not to exceed \$40,000,000.00 in total from the following two Water Funds: 700011 (Water Utility Operating), 700010 (Water Utility CIP); and the following two Sewer Funds: 700001 (Metro Sewer Utility), 700009 (Metro Sewer CIP).

Parson- Black & Veatch JV

1. An Ordinance authorizing a Second Amendment to the agreement with Parsons-Black & Veatch Joint Venture For As-Needed Construction Management Services – Treatment Plant Facilities (H176935) for an additional amount not to exceed \$35,000,000 and for a contract extension of 36 months.
2. Authorizing the Chief Financial Officer to expend an amount not to exceed \$35,000,000.00 in total from the following two Water Funds: 700011 (Water Utility Operating), 700010 (Water Utility CIP); and the following two Sewer Funds: 700001 (Metro Sewer Utility), 700009 (Metro Sewer CIP).

Actions, Cont'd



Pure Water Facility Construction Progress Photo

Parson- Black & Veatch JV

3. Declaring that the construction management services for the Peñasquitos Pump Station Oxygenation System project is categorically exempt from the California Environmental Quality Act (CEQA);
4. Declaring that the construction management services for the Central Area Small Scale Facility (CASSF) at Point Loma (Phase 2 Demonstration Facility) is categorically exempt from CEQA; and
5. Declaring that the Council of the City of San Diego has determined that an exception to the exemptions as set forth in CEQA Guidelines Section 15300.2 would not apply in that no cumulative impacts were identified

Original Agreement Terms

Jacobs-CH2M Hill

- Awarded: 4/30/2018
- Durations: 5 years (Expires 4/30/2023)
- Contract Amount: \$45,000,000.00
- Scope of Services:
 - Consultant Team Management
 - Constructability Reviews
 - Development of CM Plan
 - Field Office Admin Setup
 - Field Inspection & Special Inspection
 - Project Controls
 - Contract Compliance/Admin
 - Environmental Compliance
 - Field Safety
 - Testing Start-up/Commissioning
 - Contract Closeout

Parson- Black & Veatch JV

- Awarded: 7/25/2018
- Durations: 5 years (Expires 7/25/2023)
- Contract Amount: \$75,000,000
- Scope of Services:
 - Consultant Team Management
 - Constructability Reviews
 - Development of CM Plan
 - Field Office Admin Setup
 - Field Inspection & Special Inspection
 - Project Controls
 - Contract Compliance/Admin
 - Environmental Compliance
 - Field Safety
 - Testing Start-up/Commissioning
 - Contract Closeout

SD BACKGROUND: PLANNED VS ACTUAL CONSTRUCTION COST

Pure Water Phase 1 Projects Managed by Jacobs-CH2M Hill Construction Cost Estimates versus Actuals

Contract Name	Estimate at RFP	Actual Cost	Δ
Morena Pump Station	\$50,900,000.00	\$110,386,350.00	\$59,486,350.00
Morena Conveyance*	\$126,100,000.00		\$98,902,540.12
Morena Conveyance Northern*		\$95,243,645.12	
Morena Conveyance South & Middle*		\$129,758,895.00	
North City Pure Water PL & Subaqueous PL	\$ 68,100,000.00	\$123,456,027.23	\$55,356,027.23
Morena PL**	UKN	\$40,000,000.00	\$40,000,000.00
Total	\$245,100,000.00	\$498,844,917.35	\$253,744,917.35



North City Water
Reclamation Plant
Flow Eq Basin
Construction
Progress Photo

Pure Water Phase 1 Projects Managed by Parsons B&V Construction Cost Estimates versus Actuals

Contract Name	Estimate at RFP	Actual Cost	Δ
Early Site works	\$17,200,000.00	\$16,403,300.00	\$(796,700.00)
NCWRP Expansion & PS	\$138,600,000.00	\$255,138,000.00	\$116,538,000.00
NCWRP Eq Basin	\$7,300,000.00	\$11,886,000.00	\$4,586,000.00
NCPWF & PS	\$402,400,000.00	\$356,681,930.00	\$(45,718,070.00)
MBC Improvements	\$36,500,000.00	\$40,086,690.00	\$3,586,690.00
Miramar DWTP Imp*	TBD	UKN	
Renewable Energy	TBD	UKN	
Miramar PS*	UKN	\$12,692,000.00	\$12,692,000.00
Peñasquitos PS*	UKN	\$4,391,767.00	\$4,391,767.00
CASSF*	UKN	\$38,000,000.00	\$38,000,000.00
Total	\$ 602,000,000.00	\$735,279,687.00	\$133,279,687.00

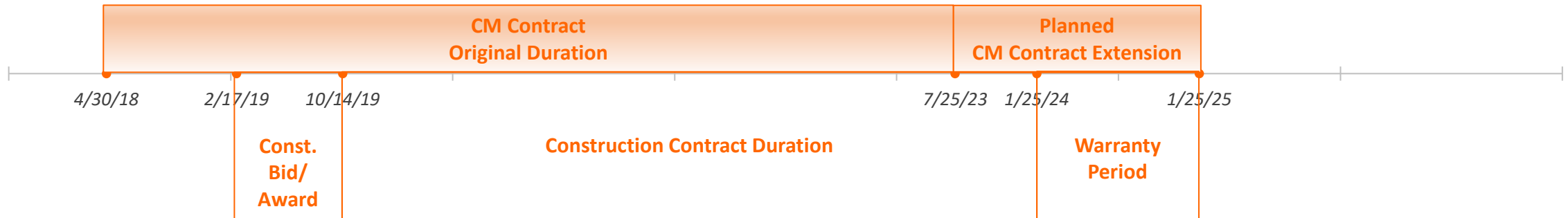


North City Water
Reclamation Plant
Construction
Progress Photo



BACKGROUND: PLANNED VS ACTUAL CONSTRUCTION SCHEDULE

Phase 1 Schedule at time of RFP (Dec 2018)



Phase 1 Current Schedule (as of Dec 2022)



*Construction Contract Duration is based off the longest Pure Water Phase 1 project contractual duration.



Projects & Tasks Order

Jacobs-CH2M Hill

1. Task Order 1 - Early/Core Construction Management
2. Task Order 2 - Constructability Review
3. Task Order 3 - Morena Conveyance Northern
4. Task Order 4 - Morena Pump Station & Pipelines
5. Task Order 5 - North City Pure Water Pipeline & AC1038
6. Task Order 6 – Subaqueous Pipeline
7. Task Order 7 - PWP Morena Conveyance South Middle & Morena Conveyance Bike Lane Project

Parson- Black & Veatch JV

1. Task Order 1 – Pre-Construction Management
2. Task Order 2 - Constructability Review
3. Task Order 3 - Early Site Work
4. Task Order 4 – Project Labor Agreement Admin
5. Task Order 5 – North City Pure Water Facility/North City Pure Water Pump Station
6. Task Order 6 – North City Pure Water Facility Expansion
7. Task Order 7 – North City Metro Biosolids Center Improvements
8. Task Order 8 – North City Water Reclamation Plant Flow Equalization Basin
9. Task Order 9 - Miramar Reservoir Pump Station & Generator
10. Task Order 10 - Peñasquitos Pump Station Oxygenation System

Additional Services

Jacobs-CH2M Hill

- Providing preconstruction services during delays due to AGC Lawsuit
- Additional Constructability review of plans
- PM Web scheduling software support
- Coordinating SDG&E design conflicts
- Material Sampling & Testing
- Field Surveying
- Aerial/Drone Photography
- Develop Monument Plan Sheets
- Risk Mitigation Advisor
- Project requiring Night Work for traffic control
- Repackaging of projects

Parson- Black & Veatch JV

- Providing preconstruction services during delays due to AGC Lawsuit
- CM services for additional projects
 - Peñasquitos Pump Station Oxygenation System project
 - Central Area Small Scale Facility (CASSF) at Pt Loma (Phase 2 Demonstration Plant)
 - Miramar Water Treatment Plant caustic pumping system and interim solids management.
- Additional Phase 1 Commissioning Services
- Review of Change Orders to identify potential specification issues for improvement of Pure Water Phase 2 bid documents.
- Claims management services

Terms Amendment is Seeking

Jacobs-CH2M Hill

- Contract extension of 3 years and 3 months
 - Revised Contract Duration:
 - 8 Years 3 months (expires 7/30/2026)
- Additional amount not to exceed:
 - \$40,000,000.00
 - Revised Contract Total: \$85,000,000.00

Parson- Black & Veatch JV

- Contract Extension of 36 months
 - Revised Contract Duration:
 - 8 years (expires 7/25/2026)
- Additional Amount not to exceed:
 - \$35,000,000.00
 - Revised Contract Total: \$110,000,000.00

EOC Goals

Subcontractor Participation

Jacobs-CH2M Hill

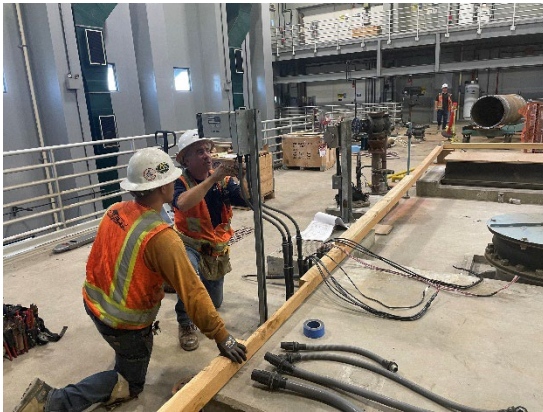
	This Amendment		Cumulative	
Total Certified M/WBE Participation	\$ 7,280,000.00	18.2%	\$ 11,555,000.00	13.6%
Total Certified Participation	\$ 13,280,000.00	33.2%	\$ 23,180,000.00	27.3%
Total Non-Certified Participation	\$ 7,040,000.00	17.6%	\$ 17,390,000.00	20.5%
Total Subcontractor Participation	\$ 20,360,000.00	50.9%	\$ 40,610,000.00	47.8%

Parsons Black & Veatch

	This Amendment		Cumulative	
Total Certified M/WBE Participation	\$ 525,000.00	1.50%	\$ 6,150,000.00	5.59%
Total Certified Participation	\$ 770,000.00	2.20%	\$ 9,395,000.00	8.54%
Total Non-Certified Participation	\$ 1,330,000.00	3.80%	\$ 14,415,000.00	13.10%
Total Subcontractor Participation	\$ 2,100,000.00	6.00%	\$ 23,025,000.00	20.93%

Job Safety (OCIP):

- Claims rate of 2.3 /100 full-time workers/year
 - industry standard is 3.9 claims; 60% of the standard



Metro Biosolids Center Construction Progress Photo

Metro Wastewater JPA TAC

**Amendment No. 2 to the Agreement with Parsons-Black & Veatch
Joint Venture for As-Needed Construction Manager - Treatment
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&

**Amendment No. 3 to the Agreement with Jacobs-CH2M Hill
Engineers, Inc. for As-Needed Construction Management Services –
Conveyance Projects - Contract Number H176955**



Strategic Capital Projects Department



ATTACHMENT 9

Second Amendment to as-needed Agr. with Parsons-Black & Veatch Professional Construction Mgt. Services for Pure Water Phase 1 Treatment Plant and Facilities

METRO JPA/TAC

Staff Report

Date:

Project Title: Pure Water Program Extension to Parsons-Black & Veatch Joint Venture Contract

Presenter(s) Name:

Abi Palaseyed

Presenter(s) Title:

Assistant Deputy Director

Requested Action:

Consideration and Possible Action to Recommend to the Metro Comm/Metro Wastewater JPA Approval of Second Amendment to the as-needed Agreement with Parsons-Black & Veatch professional construction management services for Pure Water Phase 1 Treatment Plant and Facilities

Recommendations:

Approve amendment

Metro TAC:

Approve the subject item and forward to Metro JPA/ Metro Commission for approval

IROC:

N/A

Prior Actions:

N/A

(Committee/Commission, Date, Result)

Fiscal Impact:

Is this projected budgeted?

Yes ☒ No ☐

Cost breakdown between Metro & Muni:

These as-needed services will be issued in dedicated task orders for each capital project or non-capital expenses. Non-capital expenses will use the default 38% 62% cost allocation for Pure Water expenses, which will be adjusted based on final cost allocation for the project. Capital expenses are allocated based on the capital work covered under the task order based on the utility system benefiting from the work.

Fiscal impact to the Metro JPA:

Capital costs are allocated to member agencies under their percentages under Exhibit G allocation, listed in the ARA as the Pure Water capital cost rate. All pure water O&M costs are tracked and will be cost allocated in the year in which they occur and a final allocation will be done after the completion of the capital project.

Capital Improvement Program:

New Project?

Yes ☐

No ☒

N/A ☐

Existing Project?

Yes ☒

No ☐

Upgrade/addition ☐

Change ☒

Previous TAC/JPA Action:

None

Additional/Future Action:

Present item to Metro JPA/ Metro Commission in February 2023.

City Council Action:

City Council approval expected in March 2023.

Discussion: *Provide information on decisions made to advance the project*

The City entered into agreement with Parsons-Black & Veatch (Parsons-B&V) on July 25, 2018 for five years and \$75,000,000.00. The contract is for professional construction management services for Pure Water Phase 1 Treatment Plant and Facilities projects on an as-needed, hourly fee basis. Task Order scope and fees are negotiated by the City with Parson-B&V and their subconsultant and are based on the necessary resources and support services needed to hold contractors accountable for their construction work on Pure Water Phase 1. The Original fee total of \$75,000,000 was estimated using the information that was known at the time of the

Request for Proposal (RFP) in October 2017. Design of Pure Water Phase 1 treatment plant and facility projects had not been completed and design for some of the projects had not started. The RFP estimated the total construction cost for the Pure Water Phase 1 treatment plant and facilities to be approximately \$602,000,000, however, to date approximately \$735,000,000 has been awarded or is projected to be awarded. It was expected that Parsons B&V costs will rise as construction costs rise.

Additional scope items not included in the original contract but are included in this amendment are Phase 1 Commissioning Services in addition to what is provided in the current task orders, review of Change Orders to identify potential specification issues for improvement of Pure Water Phase 2 bid documents, claims management services, and construction management services for the additional projects for the Peñasquitos Pump Station Oxygenation System project, Central Area Small Scale Facility (CASSF) at Pt Loma (also called Phase 2 Demonstration Plant) and Miramar Water Treatment Plant caustic pumping system and interim solids management. To date, a total of ten tasks have been issued to Parsons B&V and six additional tasks are anticipated.

This is a planned amendment as it was known at the time of procurement that the overall schedule for Pure Water Phase 1, including construction contract durations, start-up and integration period, acceptance, mitigation and monitoring and warranty would exceed 5 years. Additionally, due to a lawsuit filed by the Associated General Contractors (AGC), the construction contracts delayed advertising as originally scheduled in the RFP by approximately one year and six months. The Projects originally began advertising in February of 2019. AGC filed an injunction against the City in June of 2019 and subsequently filed a lawsuit in October 2019 challenging the Pure water Construction Contracts. The City was not allowed to resume advertisement of the construction contracts until August 2020.

This amendment is requesting an additional three years for a total contract duration of eight years which covers the remaining construction contract durations, Pure Water Phase 1 start-up and integration period, acceptance, mitigation and monitoring, warranty period as well as the delays associated with the AGC lawsuit. This amendment is also requesting an additional \$35,000,000.00 for a total contract amount of \$110,000,000.00.

Bid Results: *If bidding was done provide bidding format and results*
N/A

ATTACHMENT 11C

Wastewater 101



WASTEWATER 101



WASTEWATER

HOW TO CHARACTERIZE IT

TSS

- Point Loma Influent = 377 mg/L

COD/BOD

- Point Loma Influent
 - COD = 692 mg/L = 0.069%
 - BOD (approx.) = 461 mg/L = 0.046% (2/3 of COD)

99.9% Water!

TSS – TOTAL SUSPENDED SOLIDS

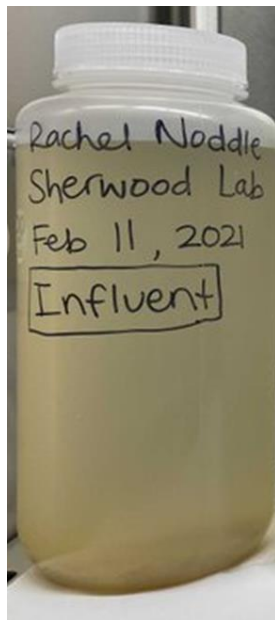
Removed by Primary Treatment (Sedimentation)

You can see it

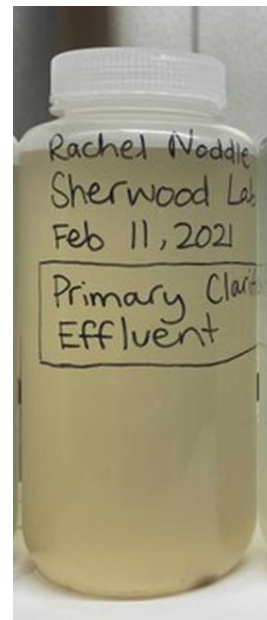
Sometimes it is conventional to convert to a yearly weight

- For example, if you wanted to show the Mass Emissions of TSS to the ocean over a year if TSS was 45 mg/L and flow was 140 MGD it would be 8,699 metric tons per year

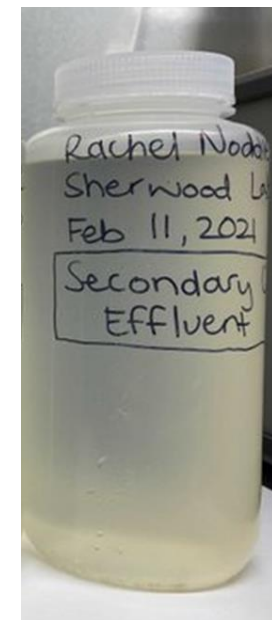
SEWAGE



PRIMARY EFFLUENT



SECONDARY EFFLUENT



COD = CHEMICAL OXYGEN DEMAND

BOD = BIOLOGICAL OXYGEN DEMAND

Measure of Oxygen needed for bacteria to digest sewage

What causes it

- TSS and Dissolved Organics (Like Sugar)

Generally, you cannot see it

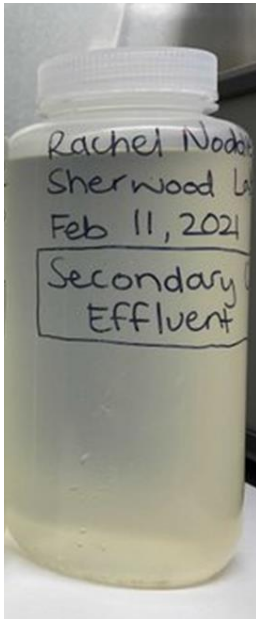
Why is it bad?

- Depletes oxygen in receiving water causing odors and killing fish

Sewage has a COD of 692 mg/L and water holds only 7 mg/L of oxygen

Dissolved BOD is removed through secondary treatment

SECONDARY EFFLUENT VS FLAT 7-UP VS TAP WATER



DEFINITIONS

MGD

- Million gallons per day – Measurement of flow

PF or PWWF

- Peak Flow or Peak Wet Weather Flow

Wastewater

- Sewage

Residuals

- Discharge to sewer system from other treatment plants (i.e. brine from RO and centrate from solids dewatering)

DEFINITIONS

TSS

- Total Suspended Solids

COD

- Chemical Oxygen Demand

BOD

- Biochemical Oxygen Demand

TDS

- Total Dissolved Solids both organic and inorganic

Mass Emissions

- Conversion of concentrations (mg/L) to pounds or tons

DEFINITIONS

Primary Treatment

- Removes TSS (60%) and BOD (40%) – Sedimentation

Advanced Primary

- Removes more TSS (88%) and BOD (58%) by adding chemicals to enhance sedimentation

Secondary Treatment

- Removes BOD (85%) – Biological

Tertiary Treatment

- Treatment after secondary to remove a specific contaminate
- Examples:
 - For purple pipe recycled water – Pathogens
 - Reverse Osmosis – TDS
 - Pure Water – Goal to remove everything and leave distilled water

DEFINITIONS

IPR

- Indirect Potable Reuse includes Reservoir Augmentation (60-day detention minimum) with subsequent water filtration or groundwater replenishment (2-year detention)

DPR

- Direct Potable Reuse – Now includes only Reservoir Augmentation with less than 60-day detention and subsequent water filtration
- Future? Could include direct to water treatment plant

Pure Water

- Name of Program to convert wastewater to a drinking water source

DEFINITIONS

Metro System

- Wastewater system governed by the ARA
- Includes all or some flow from Participating Agencies

Muni System

- City of San Diego wastewater system that is not Metro System
- May include flow from Participating Agencies, but costs are addressed through separate transportation agreements

Participating Agencies

- Agencies other than City of San Diego that have signed the ARA

ARA

- Amended and Restated Agreement

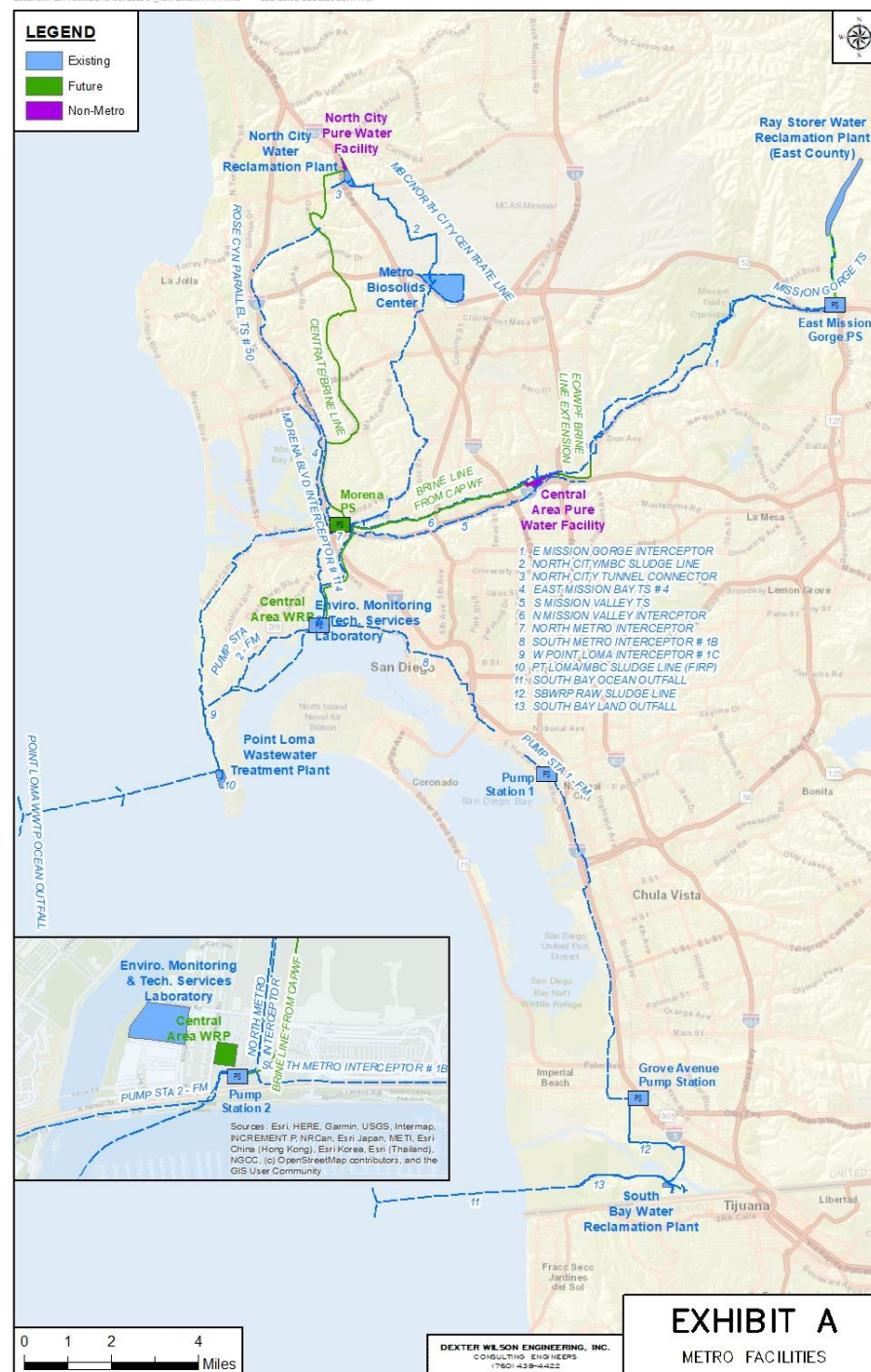
ATTACHMENT 11D

Metro Facilities



METRO FACILITIES





METRO SYSTEM – MAIN FACILITIES

CURRENT ANNUAL AVERAGE FAILSAFE DISCHARGE CAPACITY = 255 MGD

Point Loma Treatment Plant

- 240 MGD Average
- 432 MGD Peak

North City WRP

- 30 MGD Average
- 60 MGD Peak

South Bay WRP

- 15 MGD Average
- 30 MGD Peak

Point Loma Ocean Outfall

- Length = 4.5 miles and Depth = 310 feet

Pump Station 1

- 155 MGD

Pump Station 2

- 432 MGD

Metro Biosolids Center

- All solids produced

South Bay Land/Ocean Outfall

- Length = 3.5 miles and Depth = 100 feet

METRO SYSTEM – OTHER FACILITIES

- South Metro Interceptor
- North Metro Interceptor
- Metro Force Mains 1 & 2
- Digested Sludge Pipeline
- North City Tunnel Connector
- North City Raw Sludge Pipeline
- Centrate Pipeline
- Rose Canyon Trunk Sewer
- Second Rose Canyon Trunk Sewer
- East Mission Bay Trunk Sewer
- Morena Blvd. Interceptor
- Dairy Mart Road & Bridge Rehab
- Grove Avenue Pump Station
- Grove Avenue Pump Station Sewer Pipeline
- South Bay Raw Sludge Pipeline
- Environmental Monitoring & Technical Services Laboratory
- Centrate Treatment Facility at Metropolitan Biosolids Center
- Metro Operations Center (MOC) Complex

ATTACHMENT 11E

Metro Wastewater System History



METRO WASTEWATER SYSTEM HISTORY

POINT LOMA WASTEWATER TREATMENT PLANT (PLWTP)

Initial Construction Complete in 1963

- Present Capacity: 240 mgd Average Flow and 432 mgd Peak Flow
- Treatment Level: Primary
 - TSS 50-60% Removal and BOD 50-60% Removal

Converted to Advanced Primary Treatment 1986

- TSS 85-90% Removal and BOD 55-60% Removal

Point Loma Ocean Outfall (PLOO)

- Original: Length 2 ½ miles and Depth 220 feet
- Lengthened in 1993: Length 4 ½ miles and Depth 310 feet

CLEAN WATER ACT

Adopted by Congress 1972

- Required Secondary Treatment
 - TSS Removal 85%, 30 mg/L max
 - BOD Removal 85%, 30 mg/L max

Amended 1977

- Allowed for Modified Permits (Waivers) for Ocean Dischargers
- Application Deadline 1988

NPDES PERMITS

Required Every 5 Years

Takes up to a couple of years to approve

Regulatory Agencies

- EPA
- Regional Water Quality Control Board
- California Coastal Commission
- State Water Resources Control Board
- National Marine Fisheries Service

Ocean Monitoring Program

PLWTP Permit History

San Diego started the Modified Permit Application Process, but did not complete by time limit



DOJ/EPA sued San Diego 1988



Judge agreed converting PLWTP to secondary would not be cost effective



Judge encouraged the City to find a means to obtain modified permit

OCEAN POLLUTION REDUCTION ACT (OPRA) 1994

Environmental Reps agreed on OPRA

Environmental Reps wanted reclaimed water

San Diego agreed to provide 45 mgd of reclaimed water capacity (Clean Water Program, \$1.2 Billion)

- North City Water Reclamation Plant (NCWRP) 30 mgd 1997
- South Bay Water Reclamation Plant (SBWRP) 15 mgd 2002

OPRA allowed San Diego to apply for a modified permit

San Diego received first modified permit in 1995

SUBSEQUENT MODIFIED PERMIT APPLICATIONS

Environmental Reps objected to each subsequent application

San Diego agreed to Environmental Reps requests to gain support

- Joint review of cost estimate to convert PLWTP to secondary (\$1.8 billion)
- Outside expert review of Ocean Monitoring Program
- Construction of Biological Aerated Filtration Pilot Program at PLWTP
- Potable Water Demonstration Project at NCWRP
- Recycled Water Study

RECYCLED WATER STUDY

Program to provide 83 mgd of potable source water production

Secondary Equivalency

- Mass emissions
- Existing permit: 13,598 metric tons annually
- If PLWTP converted to secondary: 9,942 metric tons annually
- If 83 mgd potable source water program completed: 9,942 metric tons annually
- Current Permit: 12,000 metric tons annually

PURE WATER PROGRAM

Approved by San Diego City Council 2014

- 83 mgd of potable source water production
- Pursuit of Secondary Equivalency legislation (OPRA II)

Cooperative Agreement with Environmental
Reps 2014

OPRA II

Legislation drafted by City of San Diego, Metro JPA, and Environmental Reps
2014

Key Elements

- Future permit applications would be reviewed based on unique criteria
 - TSS: Greater than or equal to 88 percent removal
 - BOD: Greater than or equal to 58 percent removal
 - Produce at least 83 mgd of potable source water taking into account production of water suitable for potable reuse occurring at all treatment processes for wastewater upstream from and at the Point Loma Plant
 - Annual mass emissions: Less than or equal to 9,942 metric tons
- Current Status

AMENDED AND RESTATED AGREEMENT (ARA)

Regional Wastewater Disposal Agreement 1998

ARA Approved 2021

Key Elements

- Established allocation of Phase I Pure Water costs and revenues
- Pure Water Program Phase I capital wastewater costs to be allocated based on agencies 2050 Exhibit G capacity
- Maximum Wastewater Pure Water Capital Costs capped at \$1.8 billion (escalated)
- Cap based on estimated cost to convert PLWTP to secondary
- Recognized that, if implemented, the East County AWP (11 mgd) would help to achieve the 83 mgd source water for potable reuse
- Modified billing structure to include fixed costs

Currently City of San Diego and Metro JPA staff are working on a second ARA

ATTACHMENT 11F

Pure Water Transition
Pt. Loma

PURE WATER TRANSITION POINT LOMA

Phase	Average Annual Daily Flow	Peak Flow (Wet Weather)
Now	150 MGD	432 MGD
After Pure Water Phase 1 (Pure Water Secondary Plants Do Not Treat Peaks)	125 MGD 10 MGD Residuals	432 MGD
After Pure Water Phase 2	49.8 MGD 22.4 MGD Residuals	432 MGD

Point Loma goes from base facility treating average and peak flows to facility that is primarily required to treat peak on demand