



Special Meeting of the Metro Commission and Metro Wastewater JPA

AGENDA

Thursday, July 11, 2019 - 12:00 p.m.

9192 Topaz Way (PUD MOC II) Auditorium , San Diego, California

"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 Commission/Metro Wastewater JPA on any Agenda Item. Please complete a Speaker Slip and submit it to the Administrative Assistant or Chairperson 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 Commission/ Metro Wastewater JPA on any subject matter within the jurisdiction of the Metro Commission and/or Metro Wastewater JPA that is not listed as an agenda item. Comments are limited to three (3) minutes. Please complete a Speaker Slip and submit it prior to the start of the meeting.
- X 4. **ACTION:** CONSIDERATION AND POSSIBLE ACTION TO APPROVE A CONTRACT FOR SBWRP UV SYSTEM REPLACEMENT (Manny da Rosa) (**Attachment**)
5. PURE WATER PROGRAM UPDATE (Standing Item) (PUD Staff)
6. IROC UPDATE (Standing Item) (Jerry Jones)
7. REPORT OF GENERAL COUNSEL (Standing Item) (Nicholaus Norvell)
8. PROPOSED AGENDA ITEMS FOR THE NEXT METRO COMMISSION/METRO WASTEWATER JPA MEETING **August 1, 2019**
9. METRO COMMISSIONERS' AND JPA BOARD MEMBERS' COMMENTS
10. ADJOURNMENT OF METRO COMMISSION AND METRO WASTEWATER JPA

July 11, 2019

Metro Commission/Metro
Wastewater JPA Special
Meeting Agenda

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

Materials provided to the Metro Commission and/or Metro Wastewater JPA related to any open-session item on this agenda are available for public review by contacting L. Peoples at (619) 548-2934 during normal business hours.

***In compliance with the
AMERICANS WITH DISABILITIES ACT***

The Metro Commission/Metro Wastewater JPA requests individuals who require alternative agenda format or special accommodations to access, attend, and/or participate in the Metro Commission/ Metro Wastewater JPA meetings, contact E. Patino at (858) 292.6321, at least forty-eight hours in advance of the meetings.

Metro JPA 2019 Meeting Schedule

January 3, 2019	February 7, 2019	March 7, 2019
April 4, 2019	May 2, 2019	June 6, 2019
July 4, 2019	August 1, 2019	September 5, 2019
October 3, 2019	November 7, 2019	December 5, 2019

Attachment 4

SBWRP UV System Replacement

METRO JPA/TAC
Staff Report
Date: July 11, 2019

Project Title:

SBWRP Ultraviolet Disinfection (UV) System Replacement

Requested Action:

Recommendation to the Metro Commission to award the construction contract

Recommendations:

Approve the construction award contract and forward the recommendation to the Metro Commission

Metro TAC:

To be submitted for consideration

IROC:

N/A- This project is included in the approved Metro CIP budget and does not require IROC review.

Prior Actions:
(Committee/Commission,
Date, Result)

None

Fiscal Impact:

Is this projected budgeted? Yes x No

Cost breakdown between
Metro & Muni: 100% Metro

Fiscal impact to the Metro
JPA: 33.5% of \$4,600,000.00 = \$1,541,000.00

Capital Improvement Program:

New Project? Yes X No N/A

Existing Project? Yes No X Upgrade/addition Change

Previous TAC/JPA Action:

5/15/19 – TAC recommended approval for JPA approval

6/6/19 – JPA requested additional information

6/19/19 - TAC recommended approval for JPA approval

Additional/Future Action:

Per approval of this Technical Advisory Committee present it to the Metropolitan Wastewater Joint Powers Authority (JPA) Commission to approve the construction award contract to J.R. Filanc Construction Company.

City Council Action:

Not required

Background:

The South Bay Water Reclamation Plant (SBWRP) is located on Dairy Mart Road and Monument Road in the eastern portion of the Tijuana River Valley. The plant is designed to treat up to 15 MGD of raw wastewater to secondary and/or tertiary reclaimed water standards. The existing UV System, which has been in service since 2004, provides disinfection before reclaimed water is put into distribution. It has been determined by the City the existing system has exceeded its useful life and does not meet current energy standards.

Discussion:

This project proposes to replace the existing UV disinfection system with a more technologically advanced system. The concrete channel will be modified to accommodate the new UV system. Trenching will be performed for new electrical and controls conduits serving the UV system. The treatment plant's control system will be programmed to interface with the new UV system. Validation tests will be performed for state permits. The new system will reduce maintenance and operational costs by meeting current energy efficiency standards.

Bid Results: (7)

J.R. Filanc Construction Company \$3,391,636.00, HPS Mechanical \$3,413,135.55, Tharsos Inc. \$3,430,000.00, SCW Contracting Company \$3,614,000.00, Wier Construction Company \$ 4,144,998.00, Houalla Enterprise Ltd.\$4,148,488.00, and Ahrens Mechanical \$4,396, 000.00

SBWRP Ultraviolet Disinfection (UV) System Replacement

Budget

Actual Costs (5/9/19)

Planning and Administration	\$ 181,512.15
Consultant (LEE & RO, Inc.)	<u>\$ 268,905.87</u>
Total Actual Projected Costs	\$450,418.02

Projected Costs

Construction	\$3,391,636.00
Consultant Support and Closeout	\$ 107,822.13
Construction Administration & Contingency	<u>\$ 650,123.85</u>
Total Projected Costs	\$4,149,581.98

Total Actual and Projected Costs	\$4,600,000.00
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Schedule

Construction

NTP for Construction	Summer 2019
NOC	Summer 2020

Project Closeout

Closeout	Winter 2020/21
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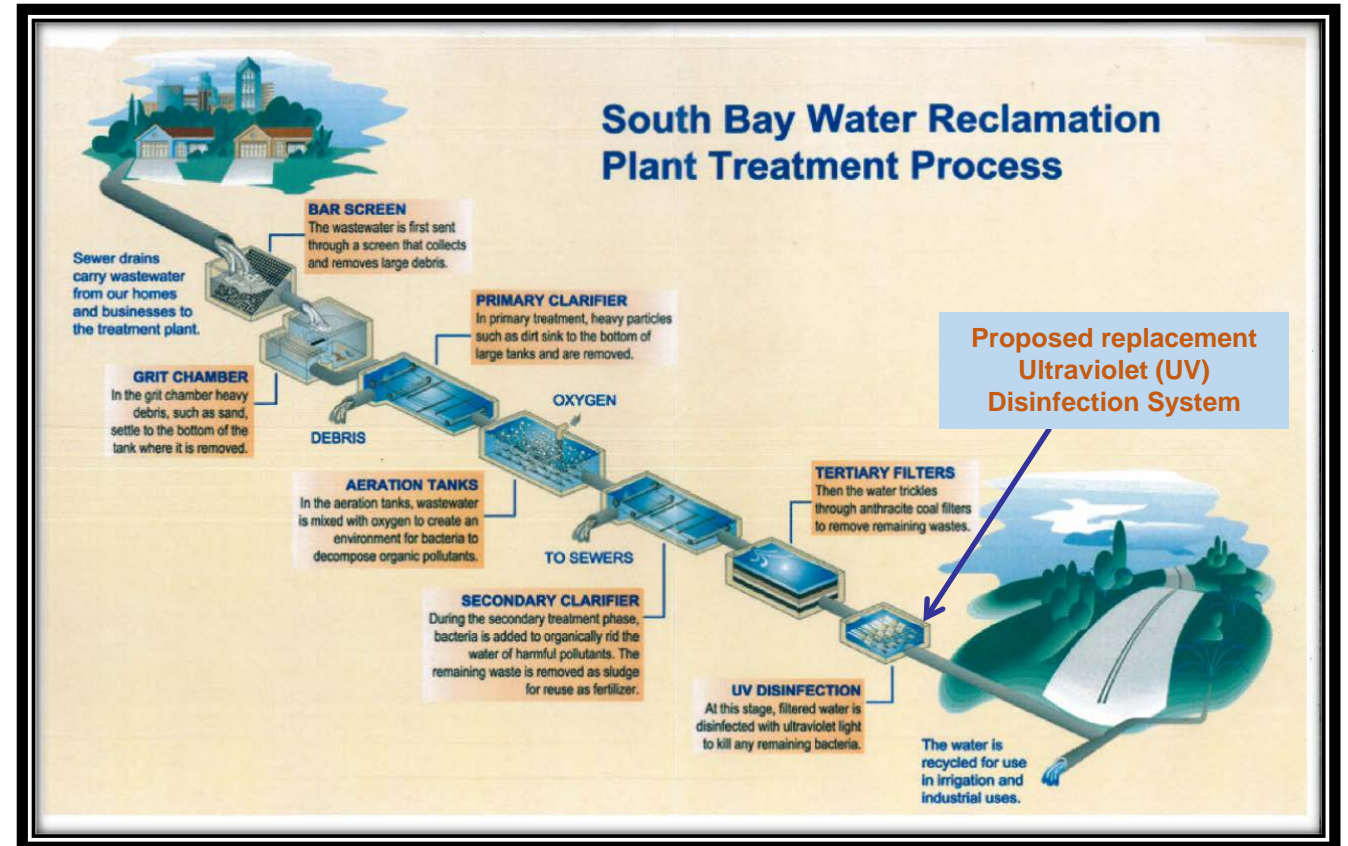
Public Works

Construction Contract for South Bay Water Reclamation Plant Ultraviolet Disinfection (UV) System Replacement

Metro Commission/Metro Wastewater JPA
June 19, 2019

Background

- ✦ SBWRP is designed to treat up to 15 MGD of raw wastewater to reclaimed water standards.
- ✦ Existing UV System was installed in 2002 and permit amended in 2004. The unit has exceeded its useful life.
- ✦ Current modified NPDES permit requires 45 MGD of reclaimed water:
 - ✦ 30 MGD at North City WRP
 - ✦ 15 MGD at SBWRP



Scope of Work

- ✦ Replace the existing UV system with a more technologically advanced system in controls and energy efficiency
- ✦ Modify the concrete channel to accommodate the new UV system
- ✦ Install new electrical and control systems
- ✦ Equipment validation tests and update of required permits



Estimated Project Cost

✦ Expenditures as of May 9, 2019 (Planning, Admin, and Design Engineering):	\$ 450,418.02
✦ Projected Expenditures:	
✦ Construction (Filanc Const.):	\$ 3,391,636.00
✦ Construction Support (Lee & RO Inc.):	\$ 107,822.13
✦ Construction Management & Contingency:	<u>\$ 650,123.85</u>
✦ Estimated Total Project Cost:	\$ 4,600,000.00



Estimated Project Schedule

- ✦ Notice To Proceed – Summer 2019
- ✦ Construction Completion – Summer 2020



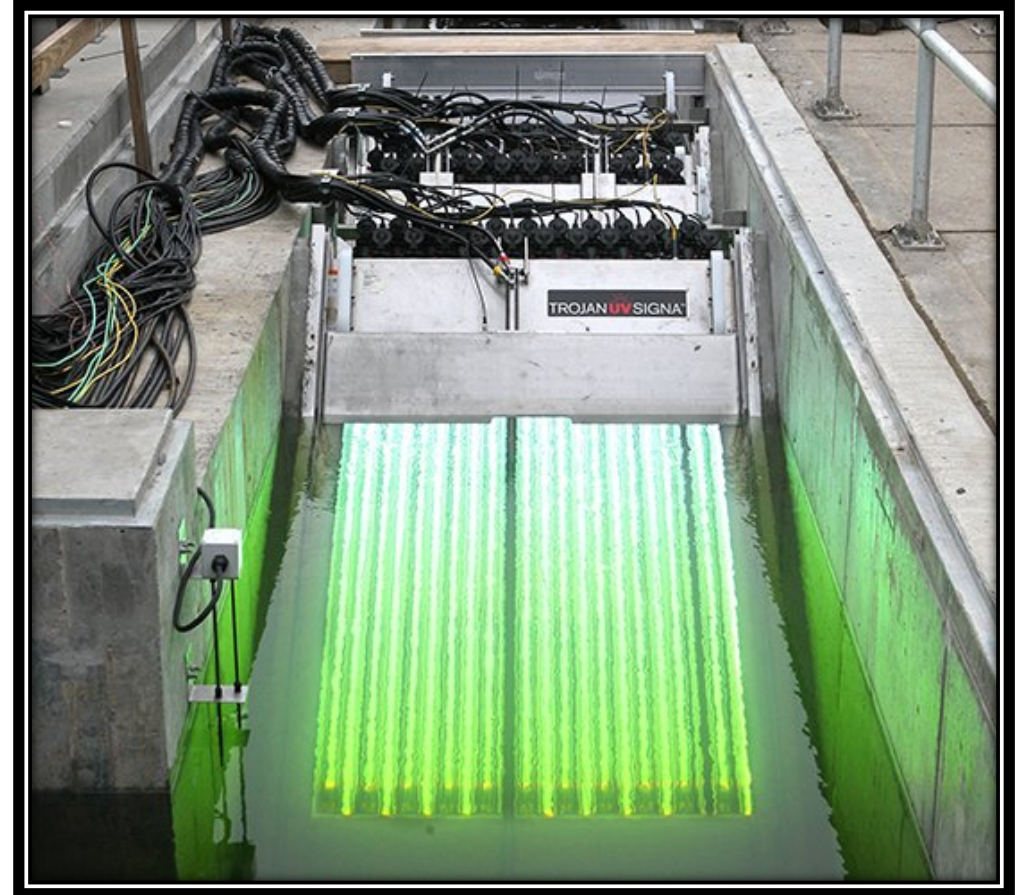
Maintenance Challenges

- ✦ Existing UV System shuts down on its own periodically, without warning, reasons unknown.
- ✦ Hydraulic fluid leakage from lamp wiping section interferes with ability for proper disinfection. New system completely redesigned this section.
- ✦ Existing UV System maintenance costs is typically \$292,000 per year.



Advantages of the New UV System

- ✦ More efficient system that consumes less electricity to provide same level of disinfection.
- ✦ Requires less frequent lamp replacement. Current lamps per the permit must be replaced every 7 months. Lamps for the new UV system to be replaced every 2.5 years, leading to lower maintenance cost.
- ✦ Better Title 22 permit compliance due to better dosage monitoring.
- ✦ Maintenance friendly design with faster response to flow changes.
- ✦ Reduction in algae growth.



Estimated Savings & Payback

- ✦ Estimated Total Project Cost: \$ 4,600,000.00
- ✦ Estimated Annual Energy Savings: \$ 674,820.00
[\(3749MWh@\\$0.18/KWh\)](#)
- ✦ Estimated Annual Maintenance Savings: \$ 292,000.00
 Lamp Replacement (7 months vs 2.5 years)
- ✦ Estimated SDG&E Incentives: \$ 520,000.00
- ✦ Simple Payback

$$(\$4,600K - \$520K) / (\$674K + \$292K) = 4.2 \text{ years}$$

UV Lamp Dimming	
Average Daily Flow (MGD)	Daily Power Consumed by Proposed UV System (KWH)
1	871.2
2	871.2
3	871.2
4	1024.8
5	1245.6
6	1524
7	1742.4
8	2011.2
9	2277.6
10	2486.4
11	2769.6
12	2983.2
13	3264
14	3542.4
15	3734.4

Questions?

