



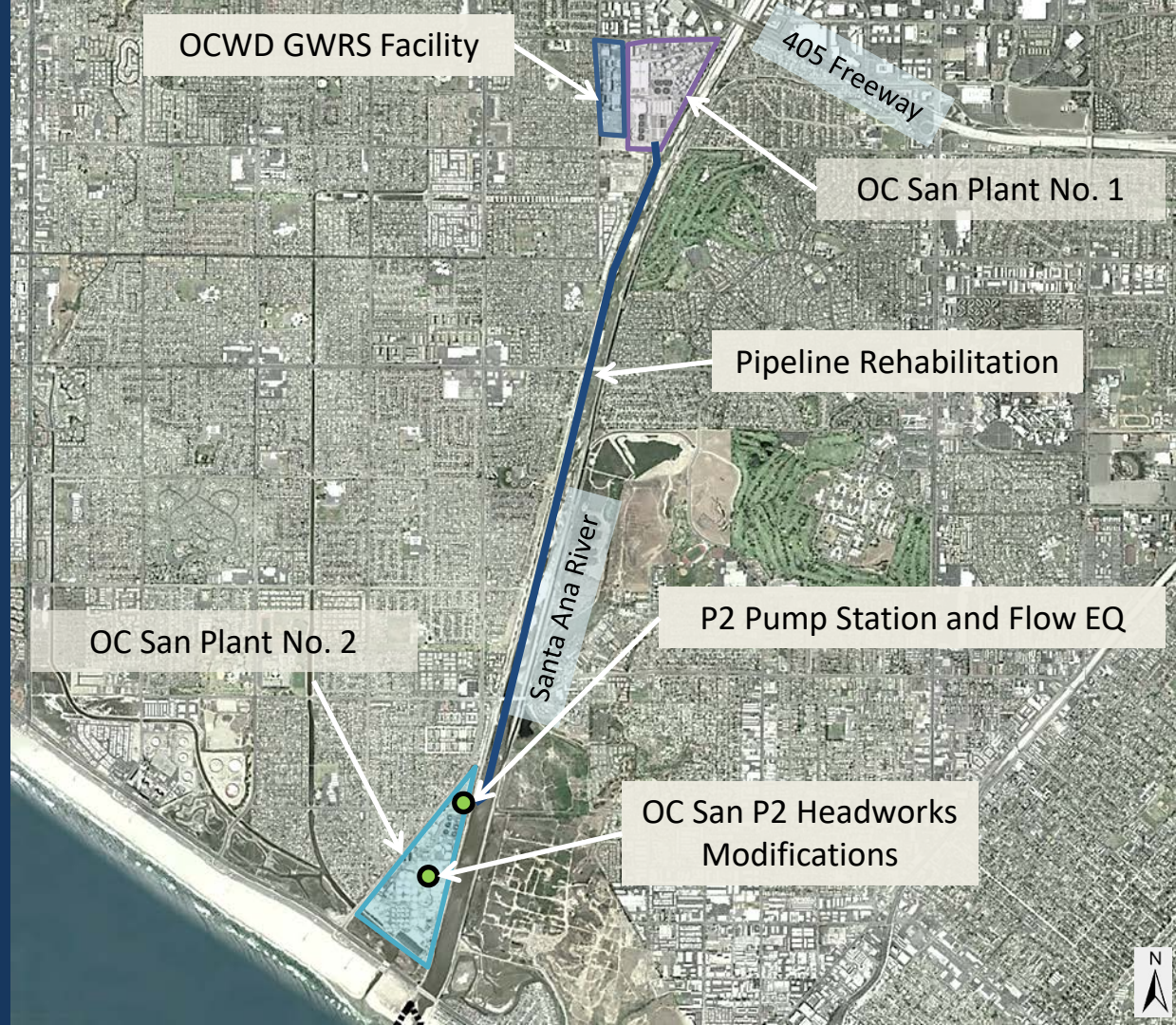
GWRS Final Expansion Project Construction Update

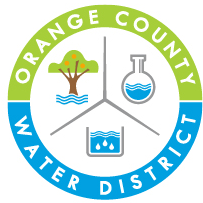
OC San Board of Directors Meeting
January 27, 2021



Groundwater Replenishment System (GWRs) Project Overview

- Original 1997 Joint Agreement
- Use Secondary Effluent for Groundwater Replenishment
- Current Facility treats 100 million gallons per day (MGD)
- Final Expansion will treat all reclaimable secondary effluent from OC San – 130 MGD





SINCE 1933

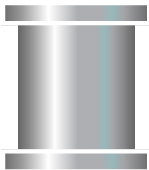
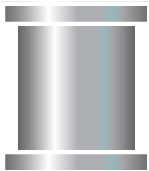


G | W | R | S

GROUNDWATER REPLENISHMENT SYSTEM



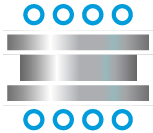
Seawater
Barrier
(36 well sites)



Recharge
Basins in
Anaheim

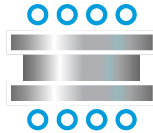
Microfiltration (MF)

Highly
Treated
Wastewater



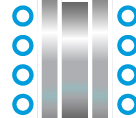
Backwash
Sent to OC San

Reverse Osmosis (RO)



Brine Sent
to OC San

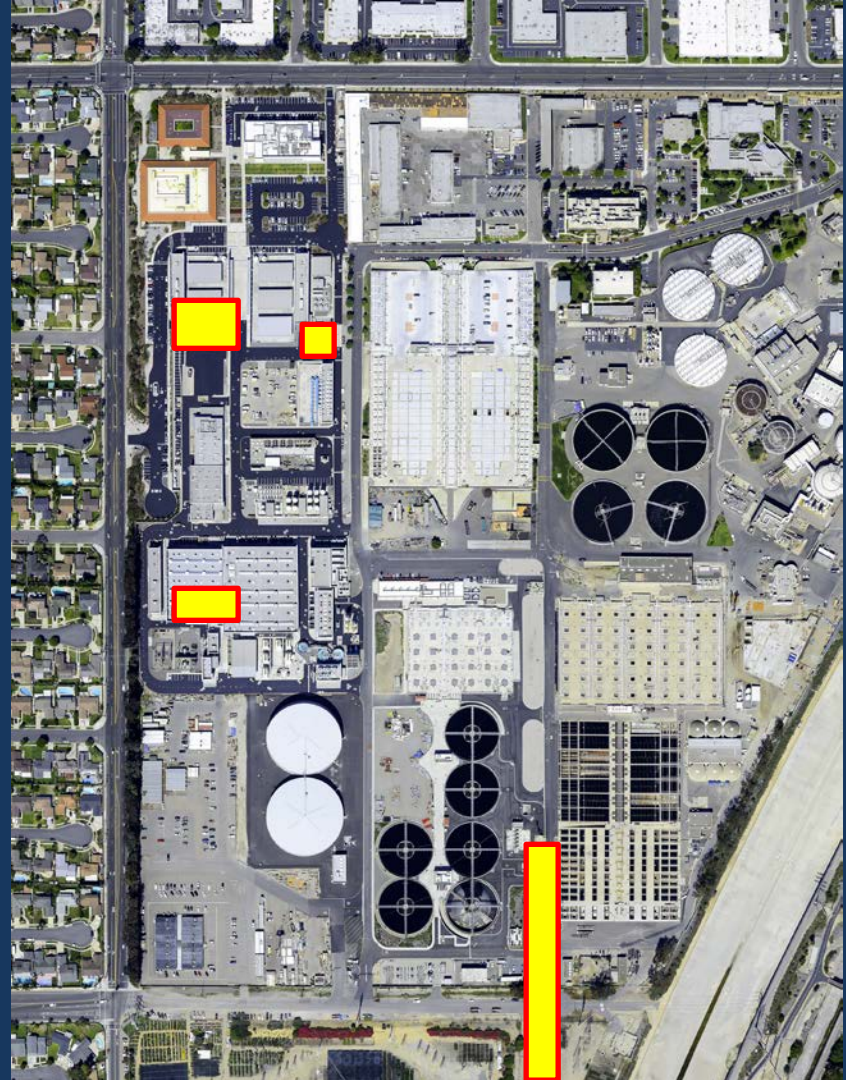
Ultraviolet Light (UV)
with Hydrogen Peroxide





GWRS Expansion Construction Activities in Fountain Valley

- Microfiltration (MF) West Expansion for new MF membranes
- New SHC Chemical Storage Area
- New Reverse Osmosis (RO) Units
- New UV Units
- New Pipeline Connection to Screenings





MF West
Electrical Bldg

MF West
Basement

New Sodium
Hypochlorite Area



MF Basement
October 2019



MF Basement
December 2019







Piles for the new RO MCC Enclosure for the Interstage Pumps





RO Conduit Bridge for Interstage Pumps





New UV Units Start Up Work on 1/12/2021





Plant 2 Construction Activities



- P2 Pump Station
- Flow EQ Tanks
- Headworks Modifications
- Associated Piping
- Weir Boxes

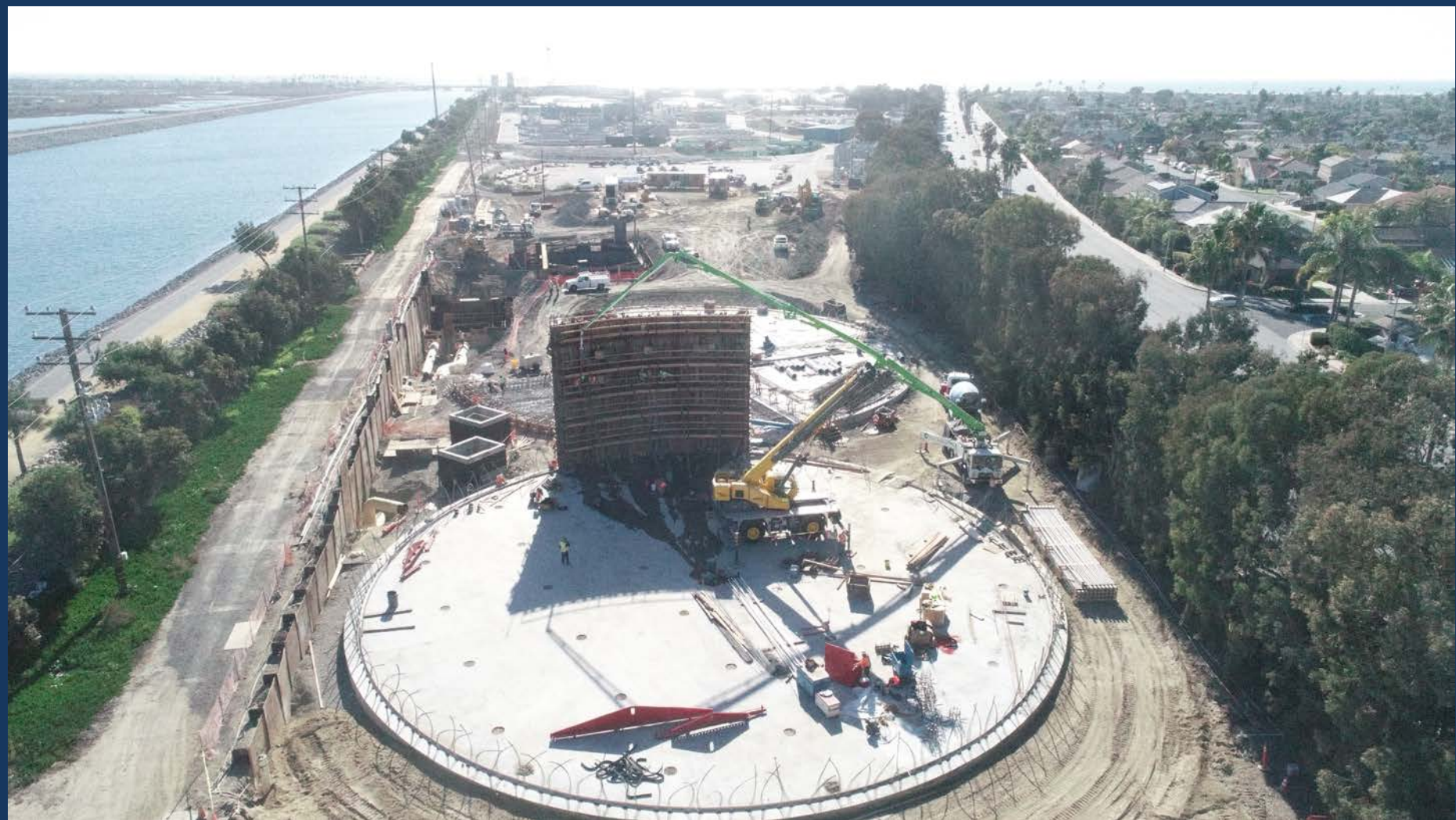


PROJECT TITLE:
OCWD Groundwater Replenishment
System Final Expansion
Contract #: GWRS-201901
Photographer: BUILDINGFACTS, LLC
99 Comet Ave, Buffalo NY 14216
(716) 568-4033
DJI_0161.JPG Aug 21 2020 11:39 AM
**DESCRIPTION - AERIAL VIEW, PLANT 2
P2 EFFLUENT PUMP STATION & FLOW
EQ TANKS**

Existing OCSD 66-inch RCP

Pipe Rehab South
Connection Access Pit











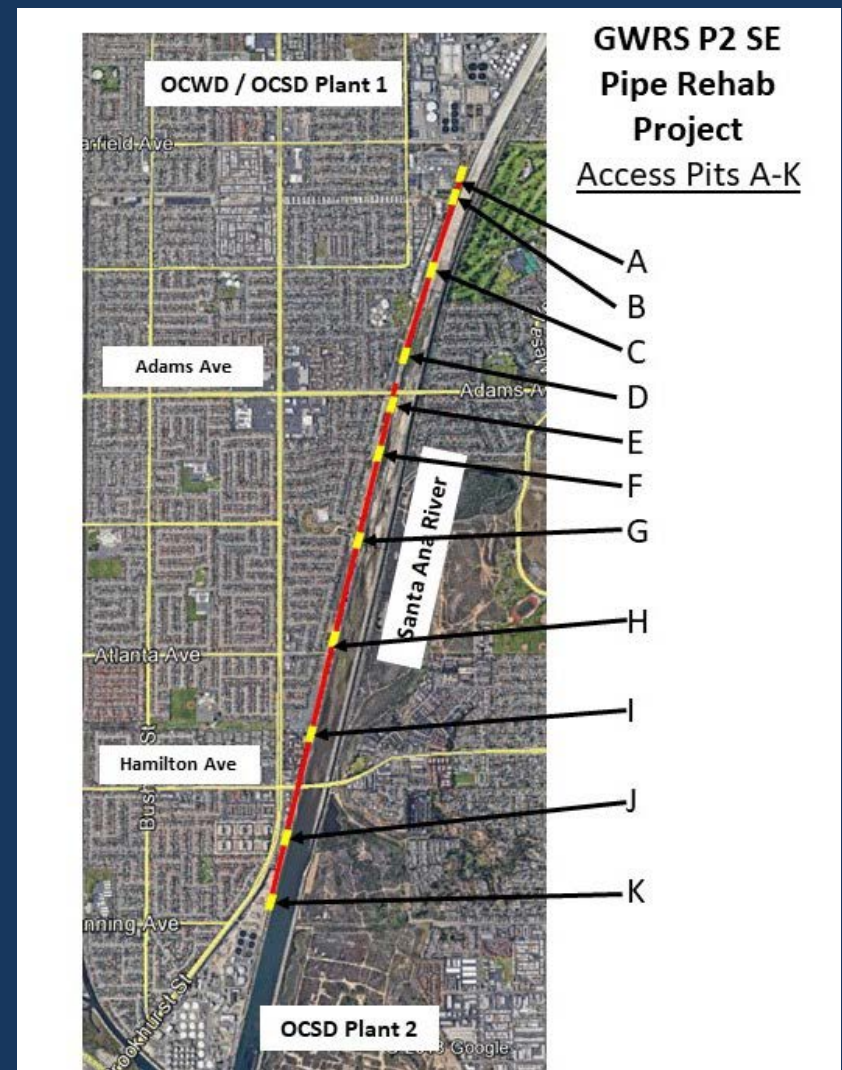
P2 SE Pipe Rehab Project



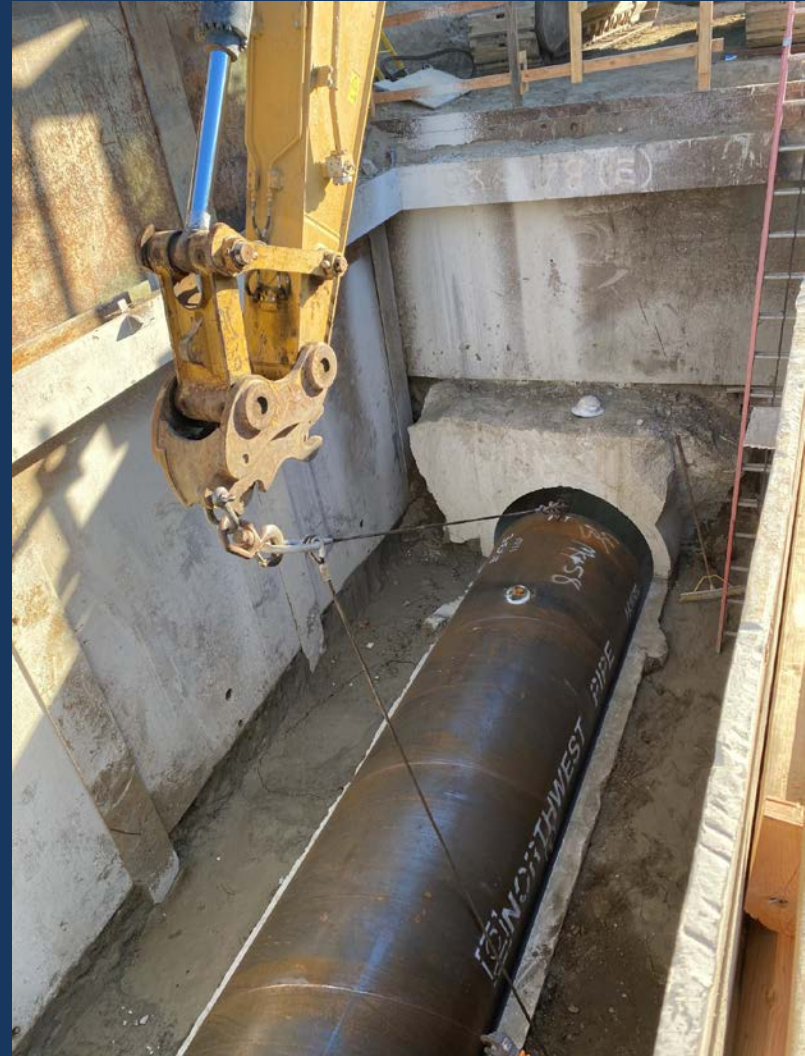


P2 SE Pipe Rehab Project

- Access Pit Designation Map
- All pipe install work to date has been in Pits D & E
- This portion has been lined with steel pipe
- Remaining stretch will be FRP pipe



**GWRs P2 SE
Pipe Rehab
Project**
Access Pits A-K





P2-122 Headworks Modification



GWRSFE Project Budget



Description	Approved Project Budget	Expected Project Budget
Pre-Design		
Feasibility Study/CEQA	\$1,000,000	\$890,000
Design		
Design Phase Engineering Services	\$13,701,750	\$13,701,750
Construction Management/Inspection		
Construction Management	\$8,500,000	\$8,500,000
Construction Inspection	\$1,500,000	\$1,900,000
Construction		
AWTF Expansion Construction	\$123,776,159	\$116,776,159
P2 Effluent Pump Station Construction	\$54,611,819	\$54,611,819
P2 Flow Equalization Tank Construction	\$21,554,022	\$21,554,022
P2 Pipeline Rehabilitation Construction	\$18,000,000	\$11,600,000
Engineering, Legal & Administration		
Administration & Project Support Costs	\$3,377,000	\$3,592,817
Contingency		
GWRSFE Construction Contingency	\$20,721,100	\$12,073,433
OCSD Project		
OC San Headworks Modification Project	\$50,000,000	\$48,000,000
TOTAL	\$310,304,000	\$293,200,000*

*This amount does not include the projected ~\$10 million in grants

GWRS Final Expansion Project Construction Schedules

(as of December 2020)

