



Regional Recycled Water Program Quarterly Update: Overview of FORCO Site for Advanced Water Treatment Facilities

Engineering & Operations Committee

Item 6a

March 8, 2021

Agenda for Today

- Program Update
- Advanced Water Treatment Plant Site Selection
 - CEQA Evaluation of Alternative Sites
 - Examples of Successful Site Remediation
 - FORCO Site Development
- Program Next Steps

RRWP Program Management

- Environmental Planning Phase and LACSD Amendment No. 1
 - Approved 11/20
- SNWA Agreement
 - Approved 12/20
- Consultant RFPs/RFQ received
 - Three Conveyance Proposals
 - Sixteen Public Outreach SOQs
- Coordination with other agencies
 - WBMWD LOI approved this month

FIRST AMENDMENT TO REGIONAL RECYCLED WATER PROGRAM AGREEMENT

This FIRST AMENDMENT TO REGIONAL RECYCLED WATER PROGRAM AGREEMENT (the "First Amendment") is between THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA ("Metropolitan") and COUNTY SANITATION DISTRICT NO. 2 OF LOS ANGELES COUNTY ("Sanitation District"), who may be referred to individually as "Party" or collectively as "Parties."

RECITALS

A. Metropolitan and the Sanitation District have been in partnership to develop the Regional Recycled Water Program (the "Program"), with the goal of producing up to 150 million gallons per day (168,000 acre-feet per year) of purified water. The overall Program would involve construction of an Advanced Water Treatment ("AWT") facility to treat effluent from the Sanitation District's Joint Water Pollution Control Plant ("JWPCP") located in the City of Carson, California, as well as a new regional conveyance system and associated infrastructure to

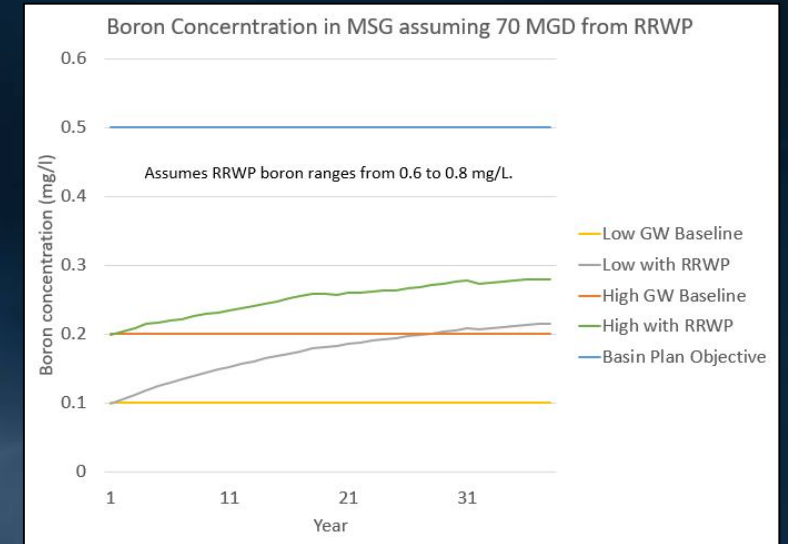


The Metropolitan Water District of Southern California
ENVIRONMENTAL PLANNING PHASE ENGINEERING SERVICES FOR CONVEYANCE &
RECHARGE FACILITIES FOR THE REGIONAL RECYCLED WATER PROGRAM
Pre-proposal Conference for RFP-DH-1263

January 13, 2021

RRWP Technical Efforts

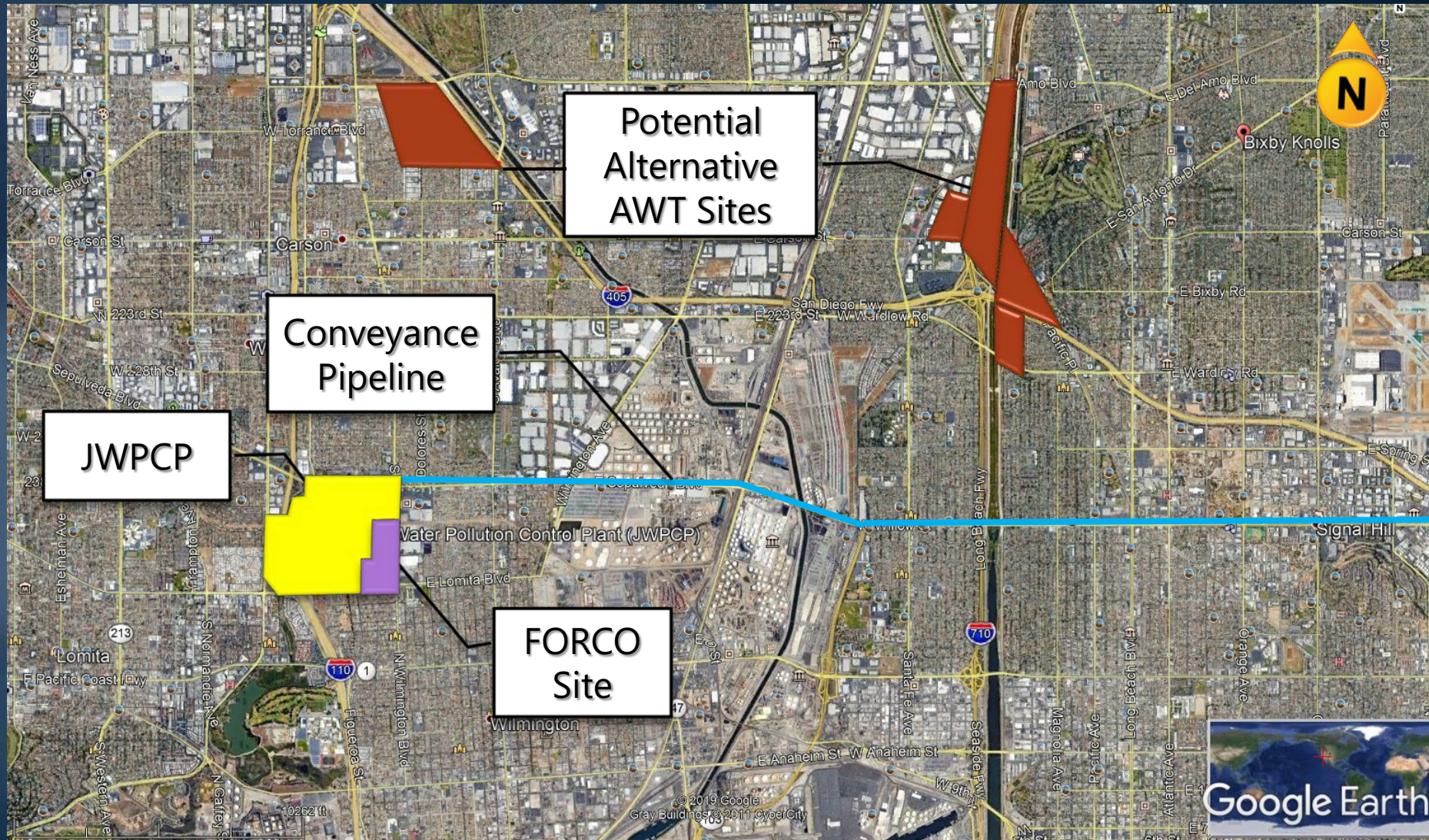
- LACSD coordination
 - JWPCP nitrogen removal study
 - CEQA and Public Outreach
- Boron impacts in the San Gabriel Basin
- Demo Plant
 - Continued tMBR operation/testing
 - Planning for sMBR testing for late 2021
 - Demo Plant Testing update in April
- Start CEQA analyses



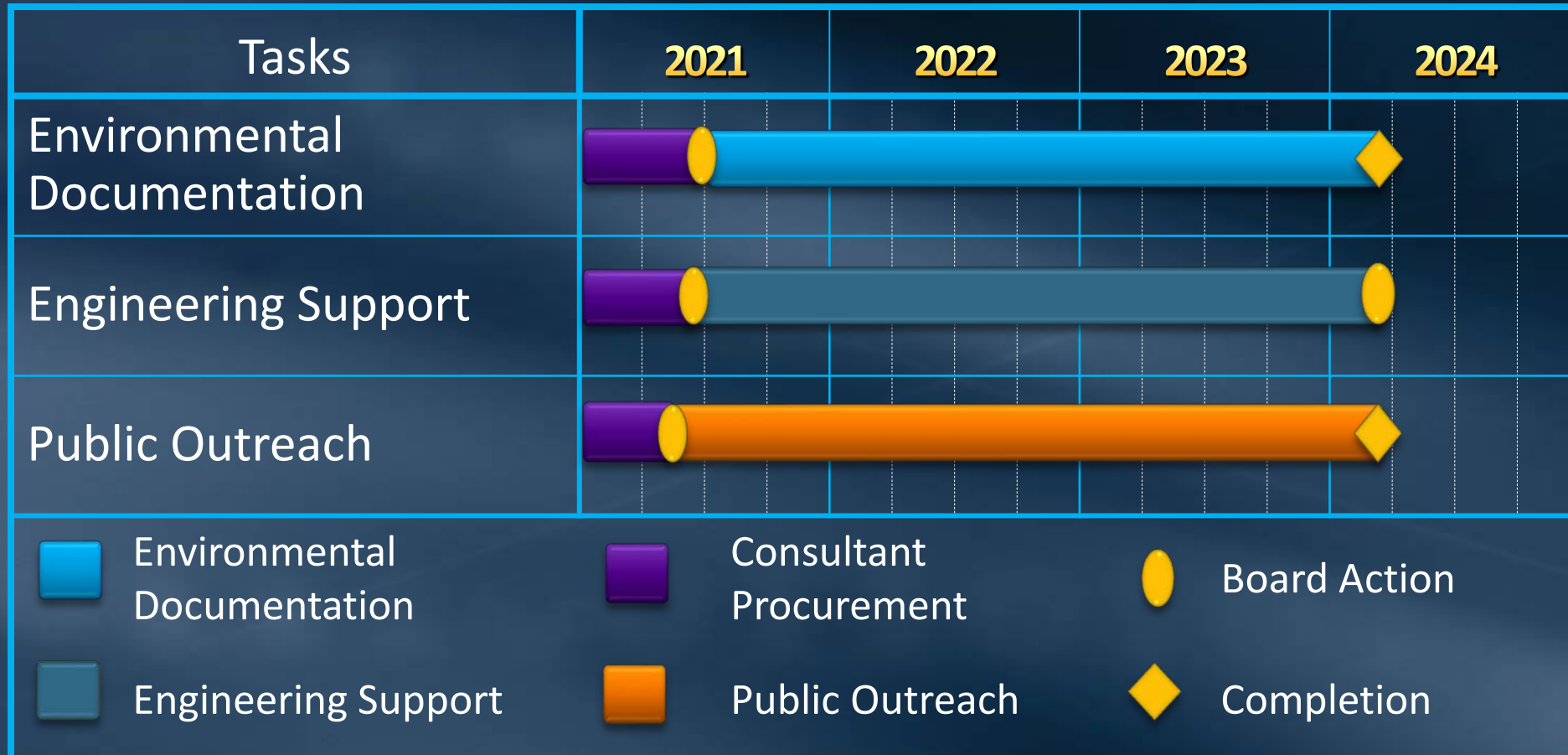
Site Selection Process for CEQA

- Identify potential alternative sites
- Assessment of sites for suitability
 - Compatibility with surrounding uses
 - Sufficient available space
 - Zoning acceptable for treatment plant installation
 - Available for purchase and acquisition cost
 - Additional facility and pipeline costs
 - Potential contamination and costs for site remediation
- Evaluate and recommend site as part of the CEQA analysis

AWT Facility Site Alternatives



Planning Phase: Project Schedule

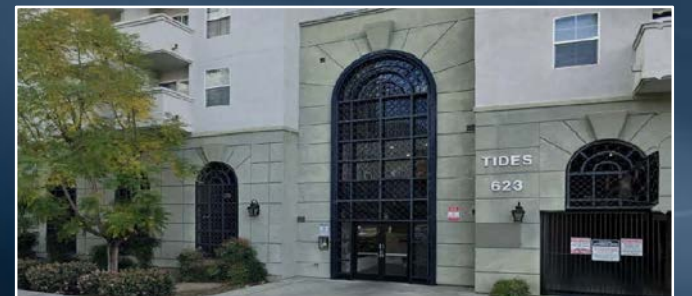


Multi-step Pathway to Successful Remediation Planning & Implementation



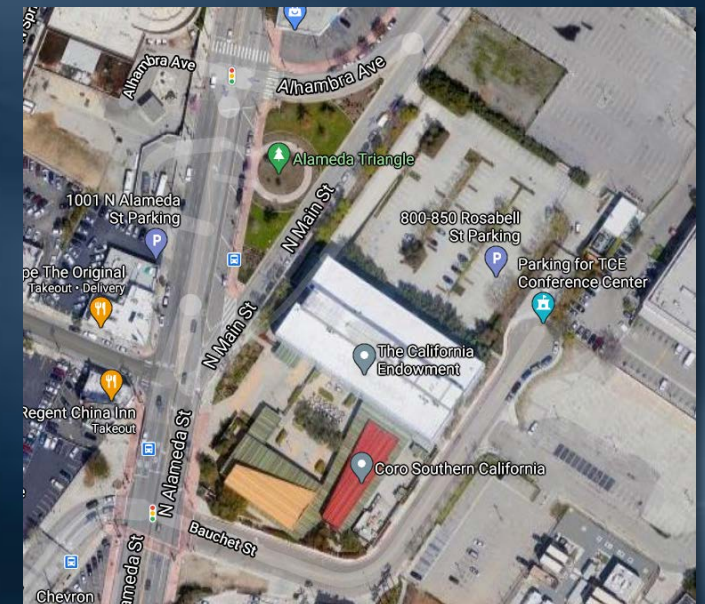
Examples of Successful Remediations

- Warehouses (Long Beach, Santa Fe Springs)
- Senior Apartments (Los Angeles)
- Commercial/residential/schools (Los Angeles)
- Condominiums (Costa Mesa)



The California Endowment

- Former USPS fleet fueling facility
 - Redevelop a contaminated site
 - Maintain full protection of human health
- Approach
 - Bifurcated soil/groundwater remedies
 - Installed a vapor management system to mitigate methane and contaminant exposures
- Site remediated, redeveloped and occupied for nearly 15 years



Playa Vista Multi-use Development



- Former Hughes Aircraft Company Site
 - Planned 1,000-acre development with homes, schools & commercial centers
 - Shallow groundwater (15-20 feet bgs)
 - Methane, hydrogen sulfide, & VOCs in soil vapor
- Remediation Systems Utilized
 - Building – sub slab membrane, air sweep system, enhanced ventilation system
 - Hardscape – passive venting
 - Landscape – no mitigation required
- Long-term Mitigation for Central Region Elementary School #2
 - Vapor Management System (VMS)
 - Startup in 2012
 - Continued operation

FORCO Site Located Next to JWPCP



FORCO Site History

- FORCO – Fletcher Oil Refinery Company
- Operated as a refinery from 1939 to 1992 producing gasoline, diesel fuel, heavy fuel oils, and asphalt
- Miscellaneous spills & 1969 fire during life of refinery
- Regional Water Quality Control Board investigation(s)
 - began in 1985
- LACSD purchased in 2000 for \$14 million
 - Remediation started in 2004 by third party
- Sanitation Districts assumed responsibility for the remediation in 2009



1994 Aerial

Bifurcated Closure Plan



Phase 1

Obtain closure for surface and subsurface soils down to 30 feet below ground surface



Phase 2

Obtain closure for deep soils and groundwater deeper than 30 feet below ground surface

Components of Phase 1 On-site Remediation



Phase 1 On-site Remediation Efforts

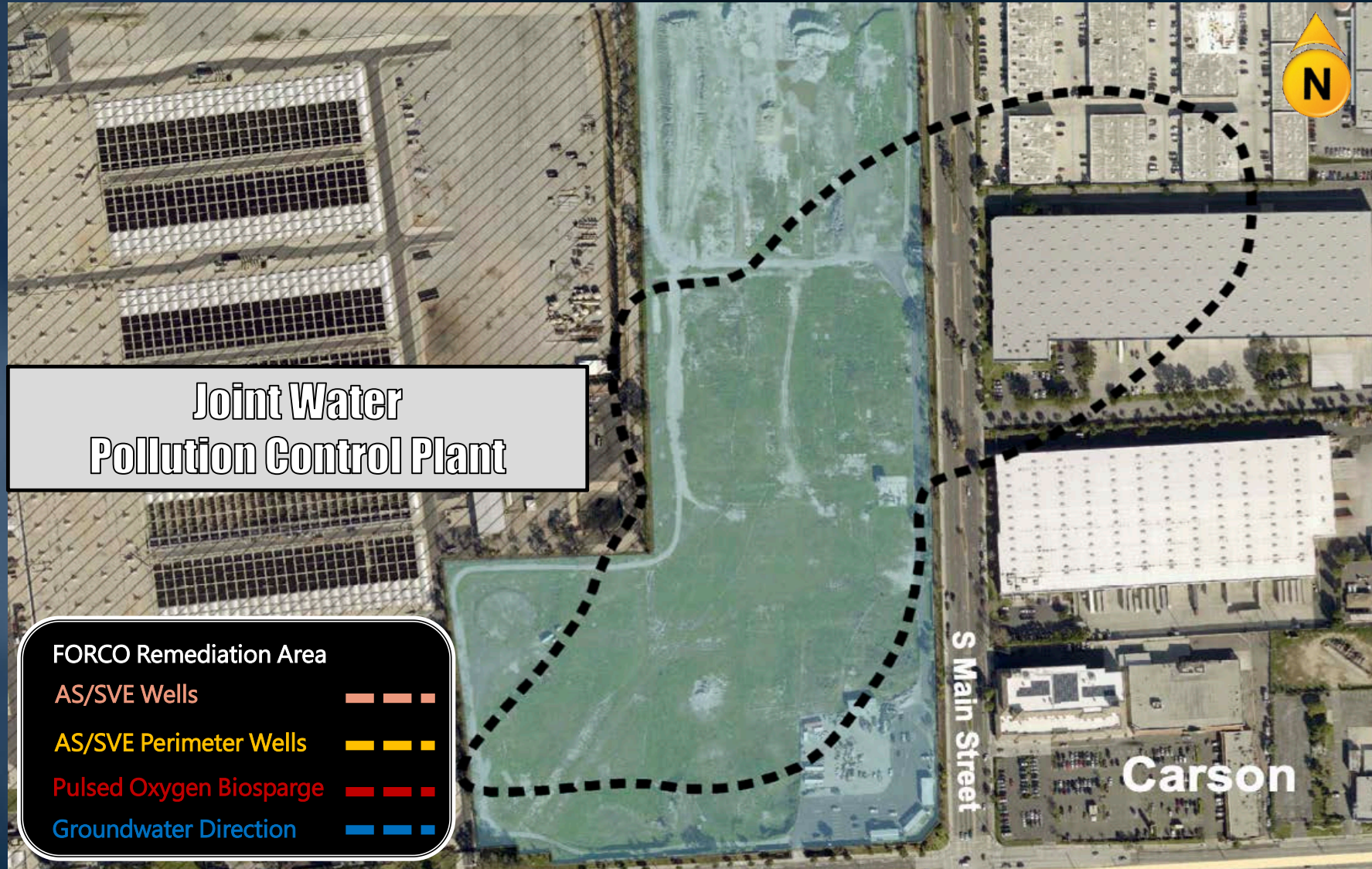
- Implemented Air Sparging/Soil Vapor Extraction (AS/SVE) System
- 1.67 Million pounds of Hydrocarbons extracted/destroyed
- 11,000 cubic yards of contaminated soil excavated and treated or disposed off-site
- Awaiting final RWQCB approval letter for Phase 1 closure
- LACSD retains responsibility for site remediation

Phase 2 Remediation Efforts

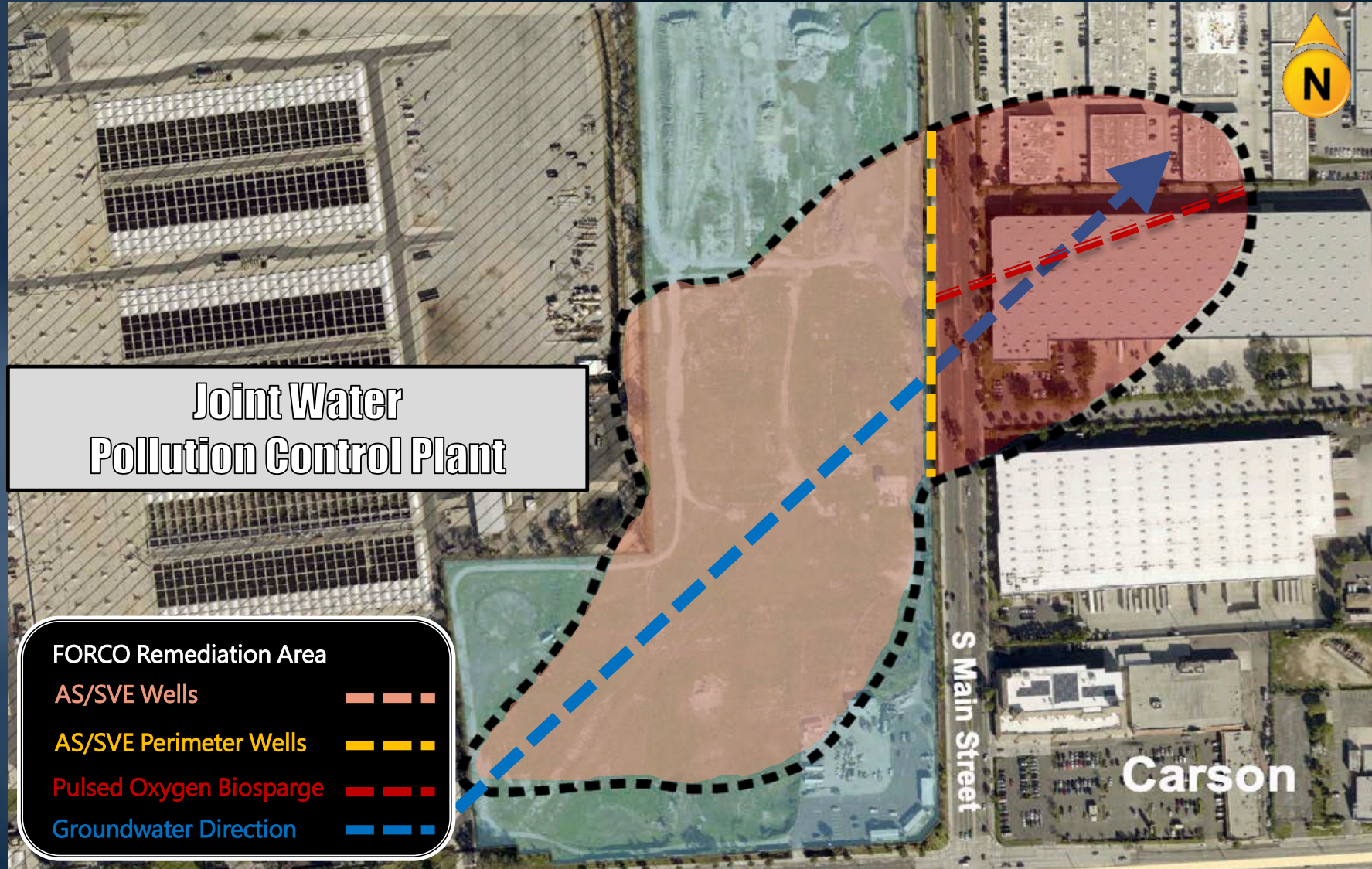
- The RWQCB has approved the RAP for deep soils and groundwater below 30 feet
- Remedial Action Plan Objectives
 - Remove product & prevent migration
 - Optimize treatment
- Remedial Action Plan Activities
 - Adaptive Site Management
 - Expand AS/SVE system
 - Prevent migration and remediate the off-property plume
- Phase 2 remediation currently being implemented



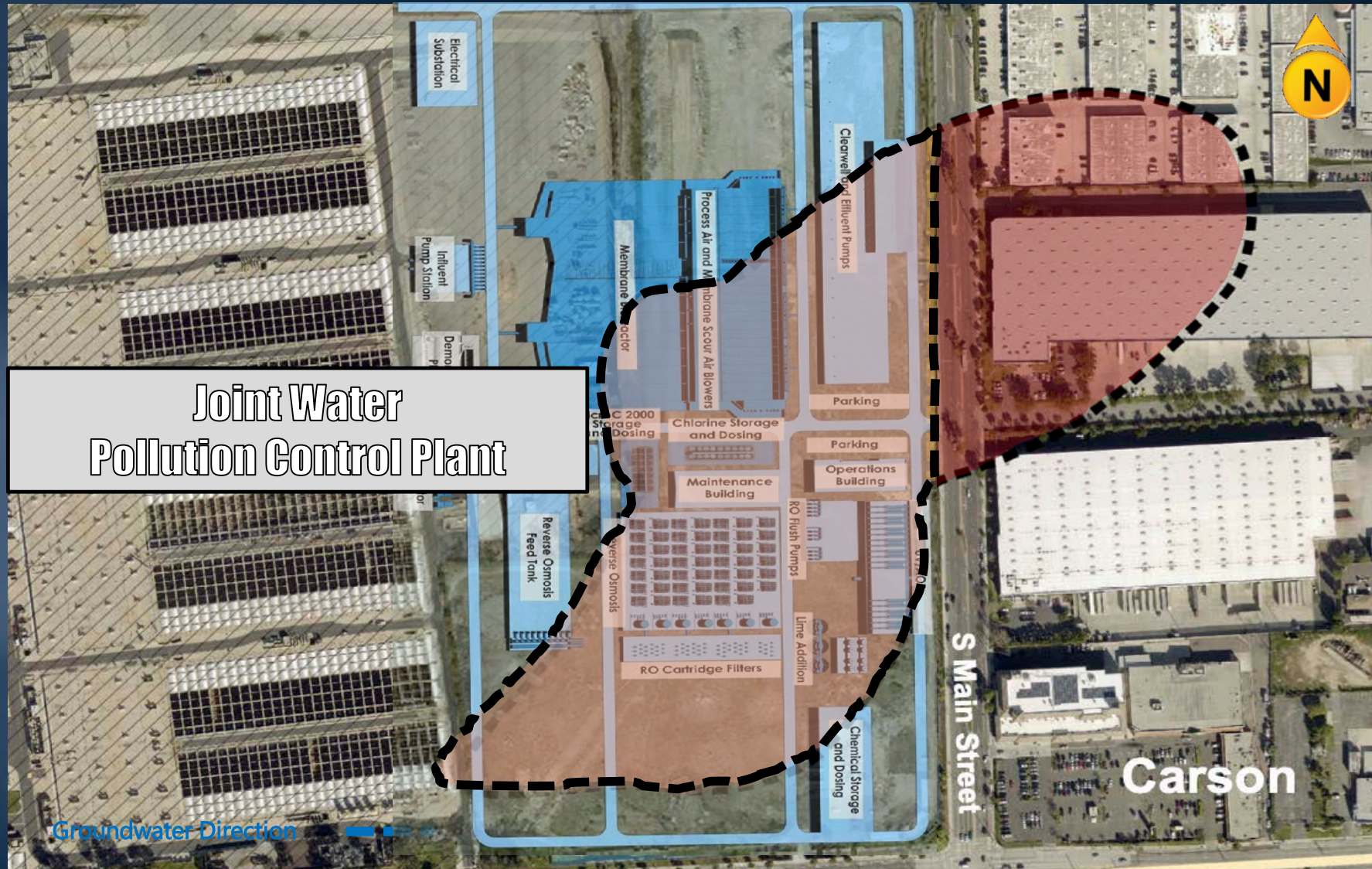
LACSD is Committed to Fully Remediating the Site



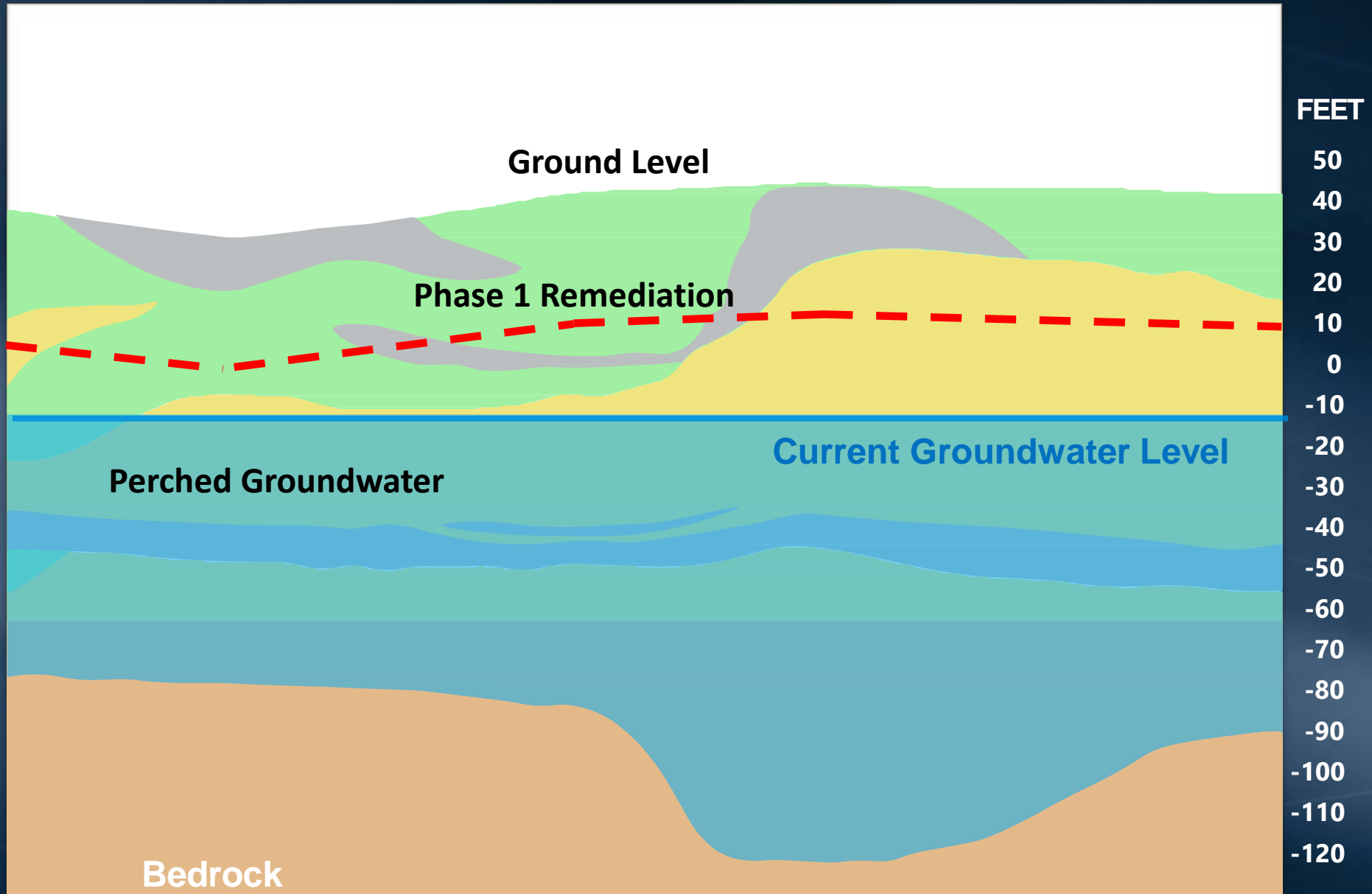
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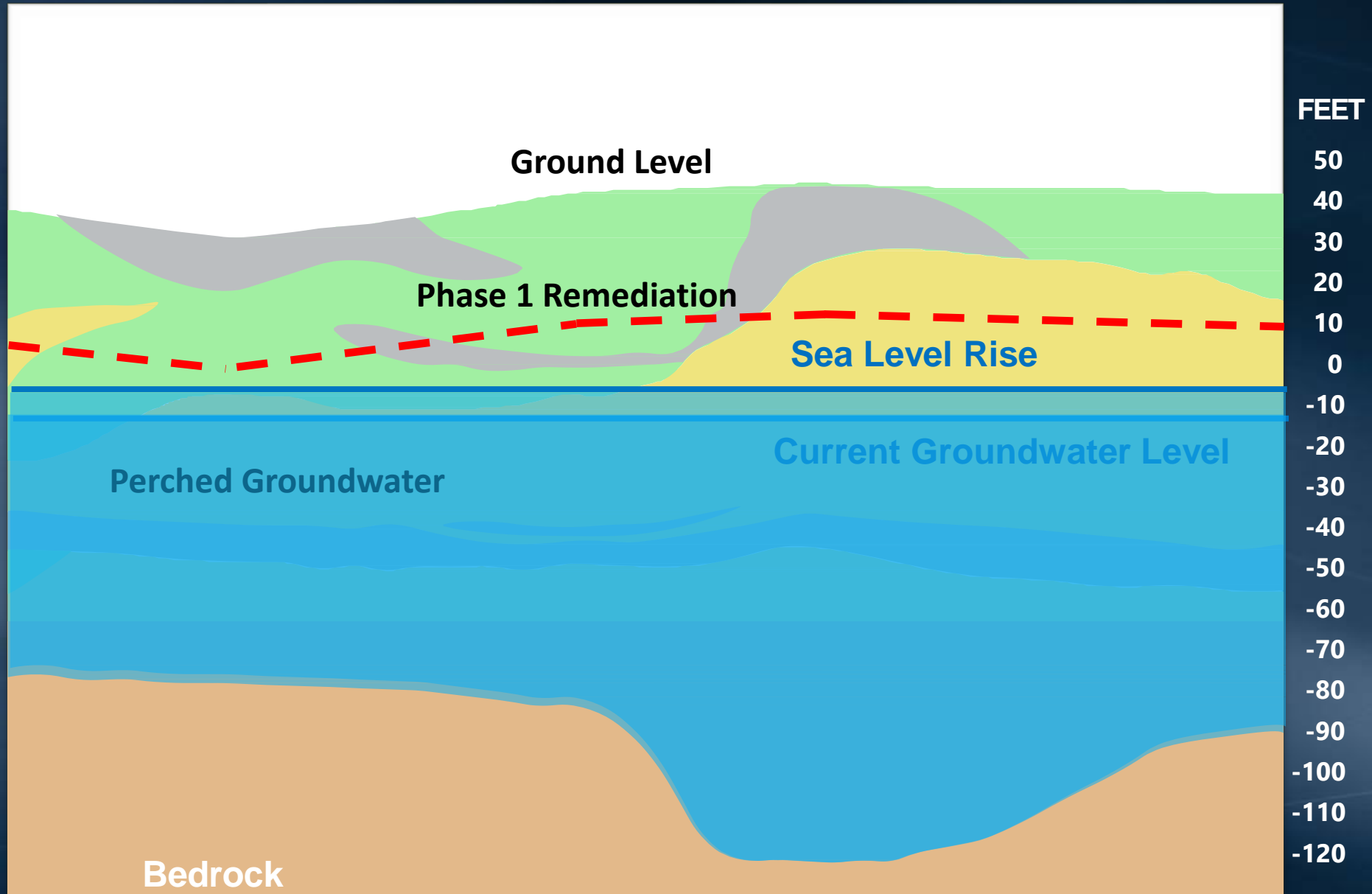
AWT to be Designed to Ensure Safety



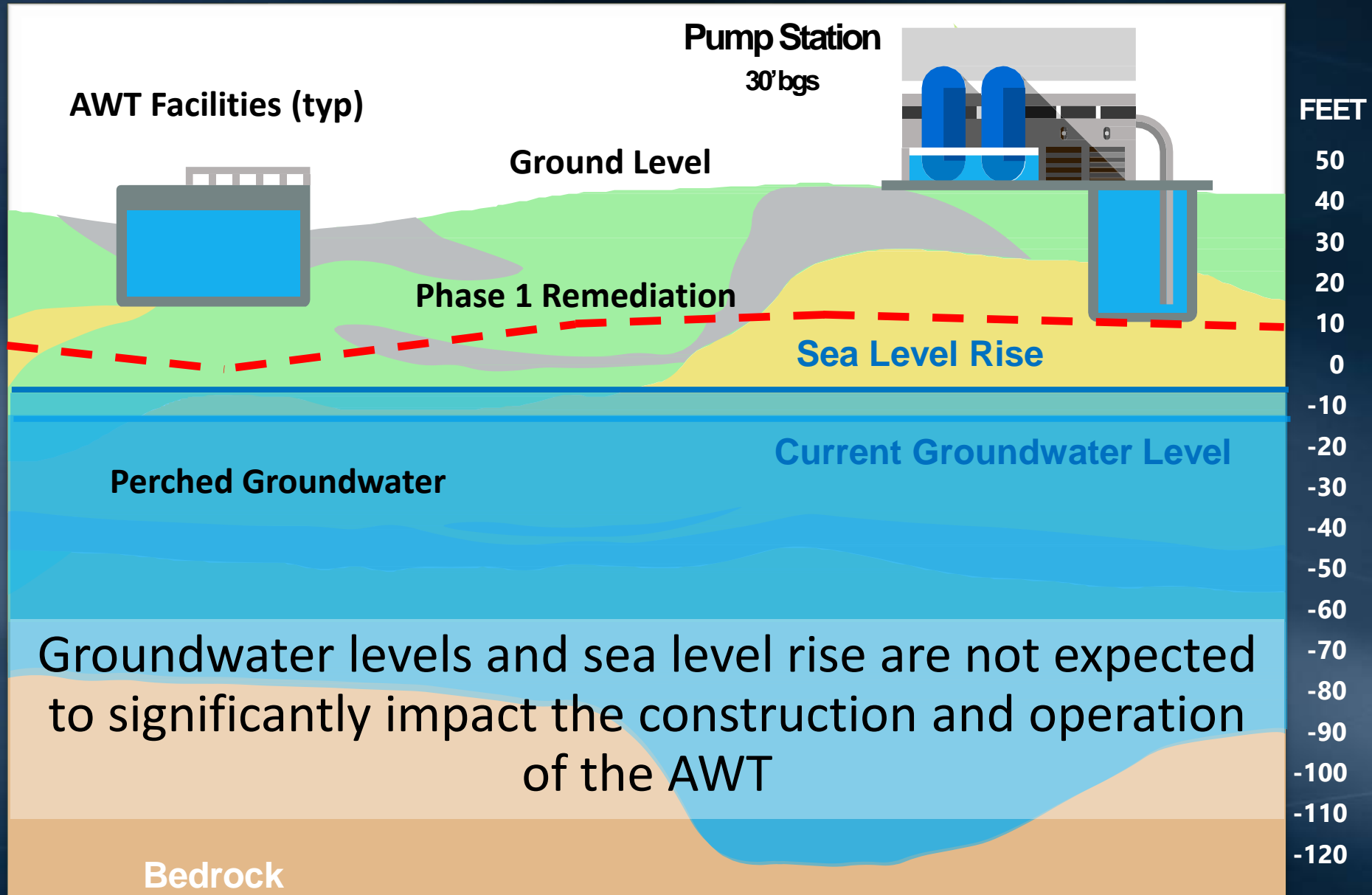
Impacts of Groundwater and Sea Level Rise



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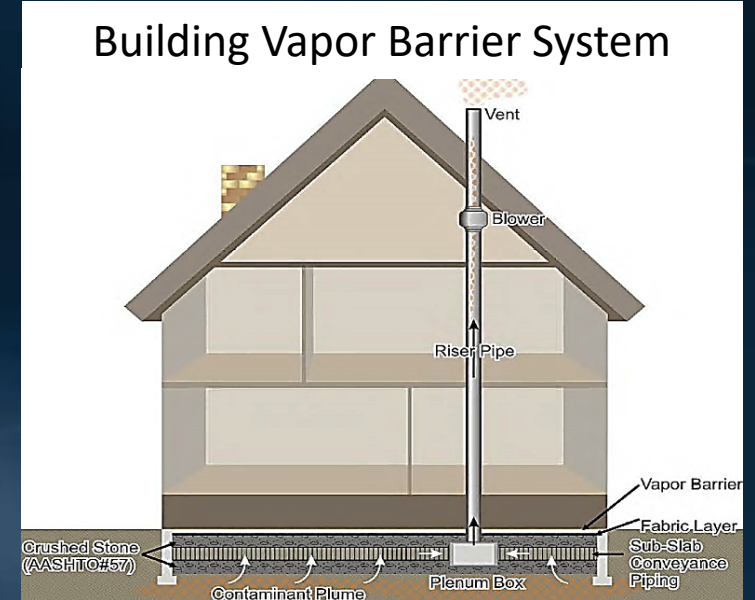
LACSD Remediation Cost Summary

- Purchase Price (2000) - \$14M
- Cleanup Spent to Date - \$5M to \$6M
- Future Phase 2 Spending to implement RAP - \$5M to \$6M
- Remediated Land Value (2018) - \$60 to \$80M



Safety Measures to Protect On-site Staff

- During construction:
 - Contract documents will specify safe construction practices
 - Excavate and dispose of residual tainted soils per the Soil Management Plan
- Long-term operations:
 - Plan and design facilities to enhance safety
 - Include active or passive vapor barriers under structures and hardscape
 - Implement air monitoring and alarms



LACSD Next Steps

- Phase 1 closure application submitted to Regional Board
 - Final approval is pending
- Prior to AWT construction;
 - All major Phase 2 cleanup expected to be completed
 - Majority of remediation infrastructure will be removed
 - Monitoring wells and some other facilities may remain
- LACSD is responsible for continued remediation of the site including any contaminated soils encountered during construction

Metropolitan RRWP Next Steps

- Continue Demonstration Plant testing
- Complete consultant procurement
 - Return to board as necessary for award of agreements
- Begin CEQA evaluations and engineering studies
 - Develop AWT site selection/process recommendation
 - Determine conveyance pipeline alignment
- Identify environmental impacts/mitigation and prepare CEQA documentation
- Implement Public Outreach plan
- Continue updates to Board

