# Morro Bay Water Reclamation Facility Project Update

## Public Works Advisory Board
## January 15, 2020

CITY OF MORRO BAY
WATER RECLAMATION FACILITY PROJECT

# An Investment in Our Community's Future

CITY OF MORRO BAY WATER RECLAMATION FACILITY PROJECT

- Relocating inland to avoid coastal hazards/sea level rise
- 50 public meetings since 2017
- Sustainable water supply for future generations
- New Water/Sewer rates comparable to nearby communities
- Improved water quality to the ocean
- Supported by the community, elected officials, and state and federal agencies


# Project Overview

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# Major Project Components

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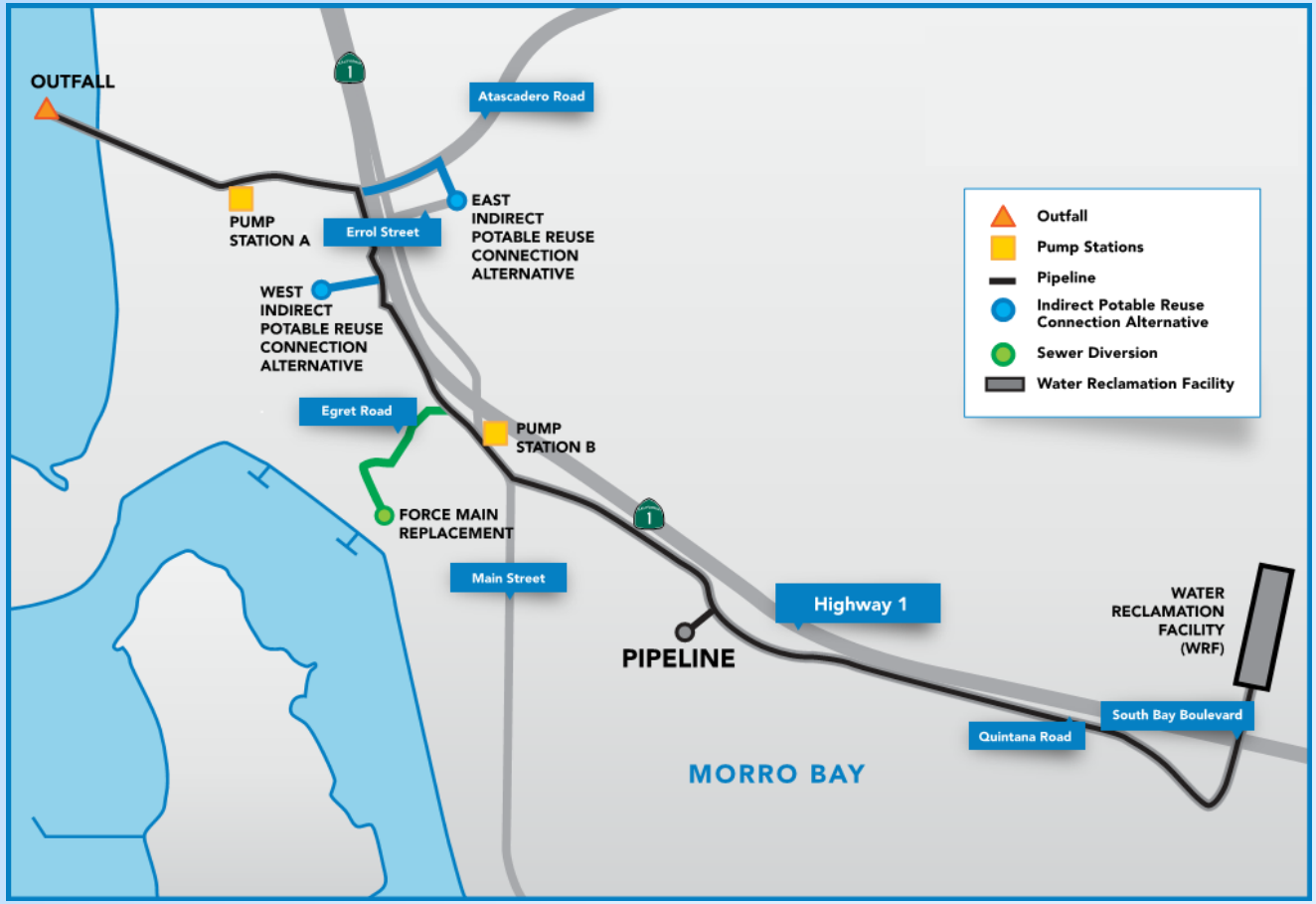
- WRF
  - New 1 mgd WRF
- Conveyance Facilities
  - Raw wastewater pump stations
  - Raw wastewater pipelines
  - Pipelines to injection wells
  - Brine pipeline to outfall
- Recycled Water Facilities
  - Injection wells (825 AFY)



# WRF site

- 17 sites evaluated
- South Bay Boulevard site selected by City Council in 2017
- Outside area of coastal hazards
- Minimal aesthetic impacts

# WRF layout

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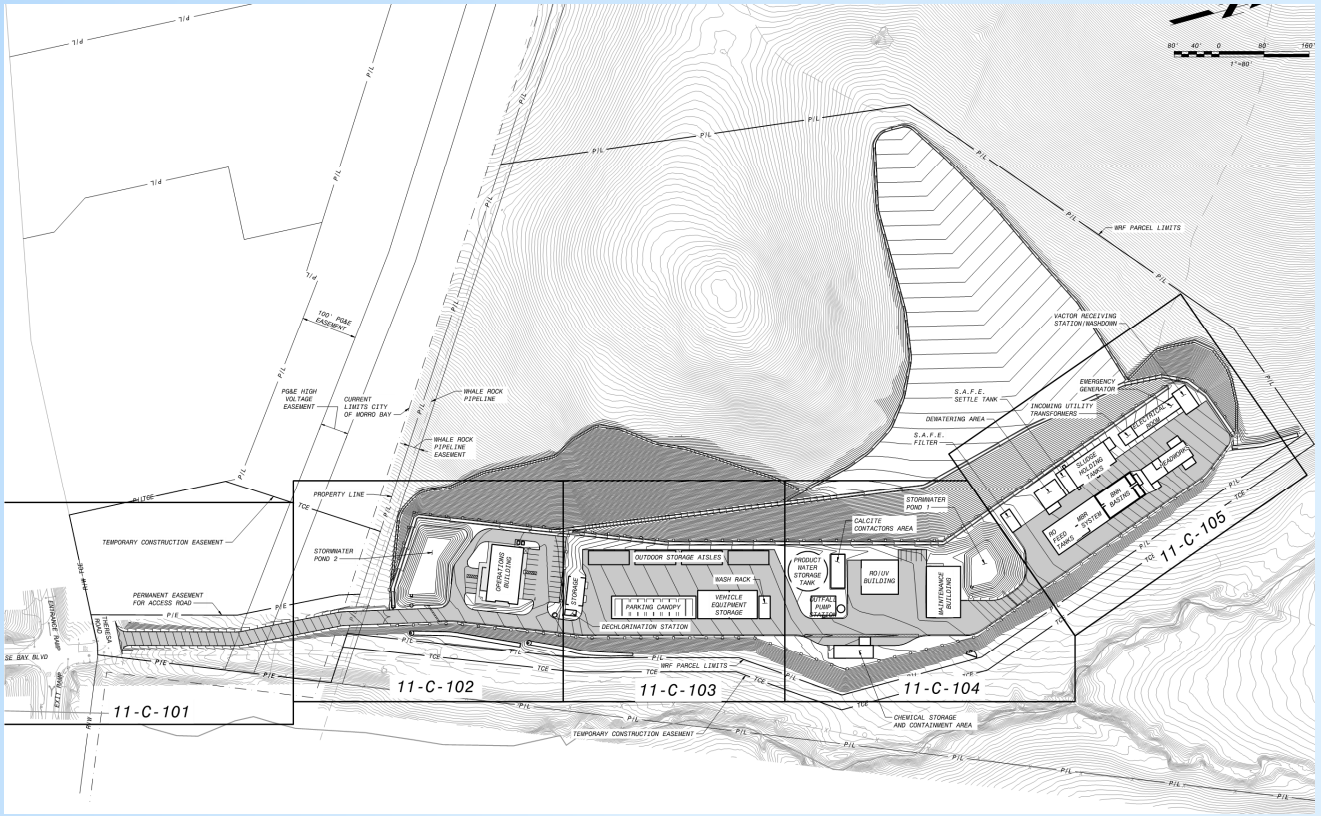
- Draft Facility Master Plan (2016)
- Master Reclamation Plan (2017/2019)
- Design-build delivery (2018)



# WRF process flow diagram

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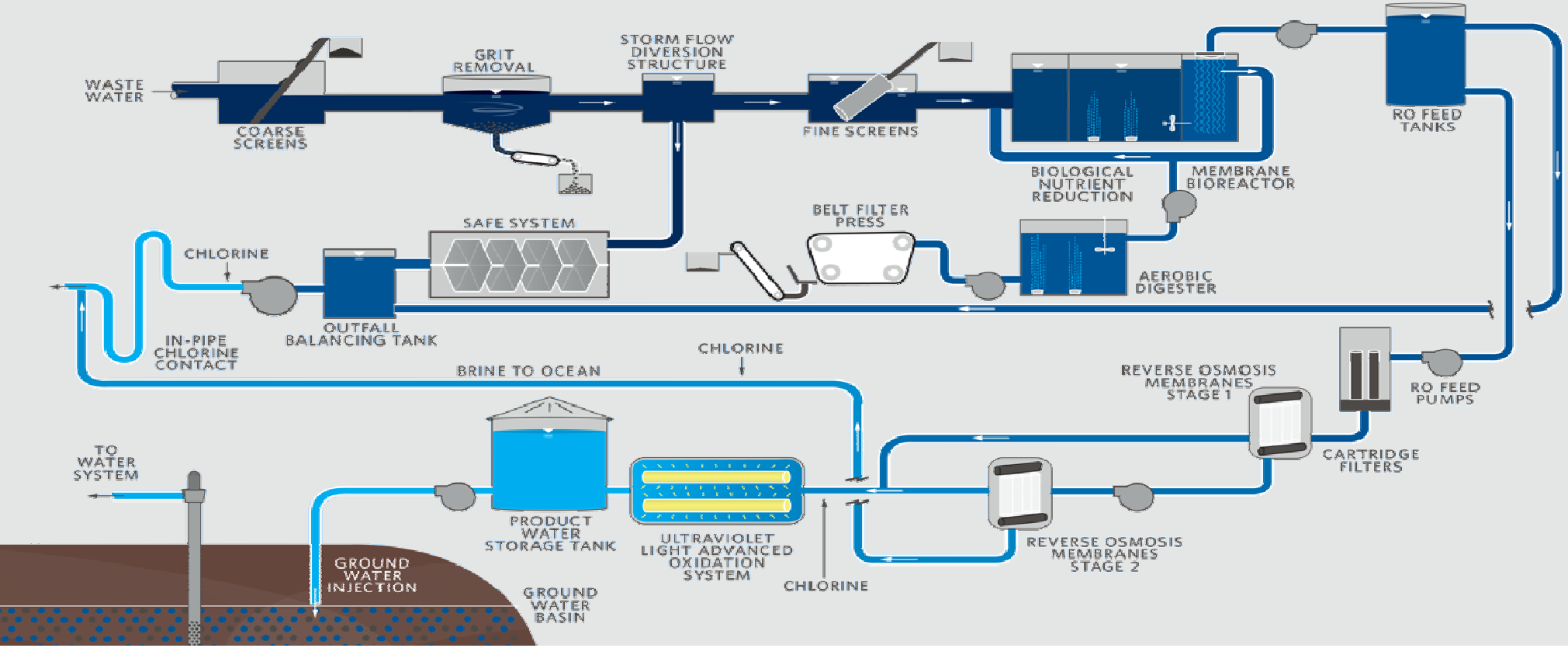
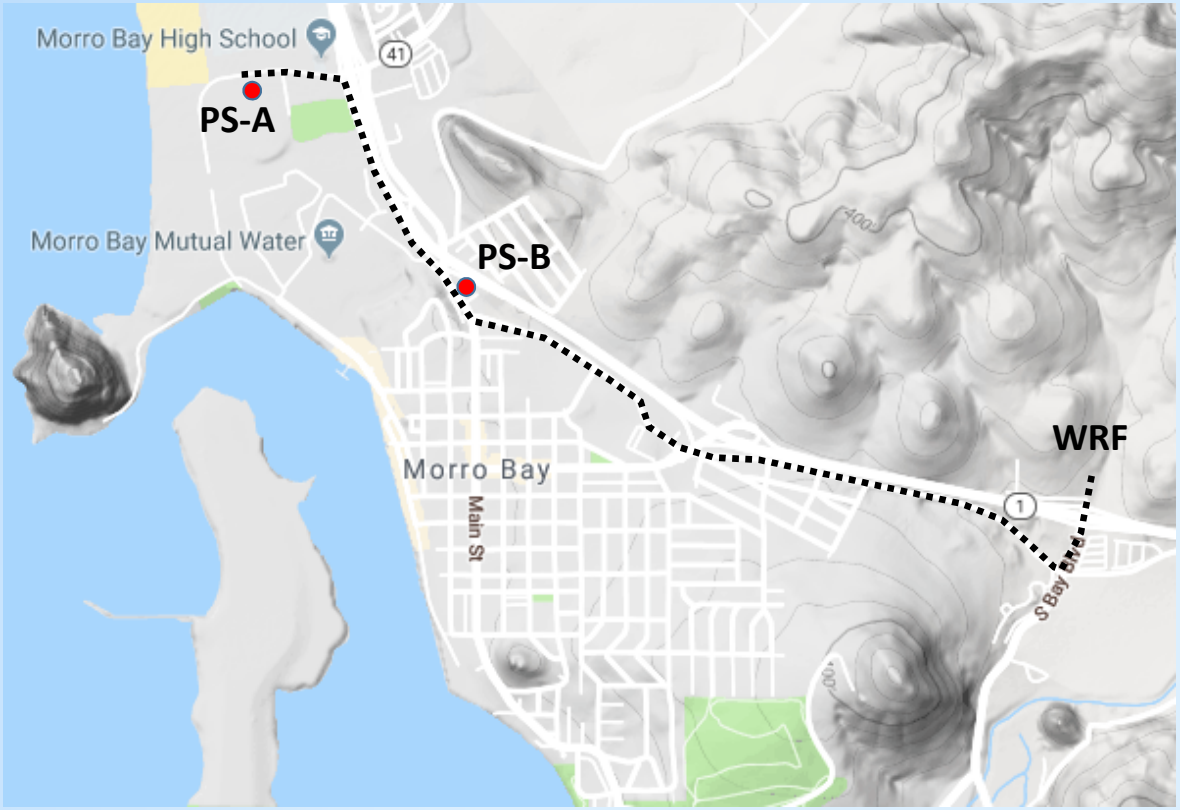


# Conveyance Facilities overview

- Pipelines
  - Dual wastewater forcemains
  - Brine to existing ocean outfall
  - Potable reuse line to injection field (east/west)
- Pump stations
  - Bifurcation of the City's sewer shed
  - Dual operation during average flows



# Typical pipeline trench detail

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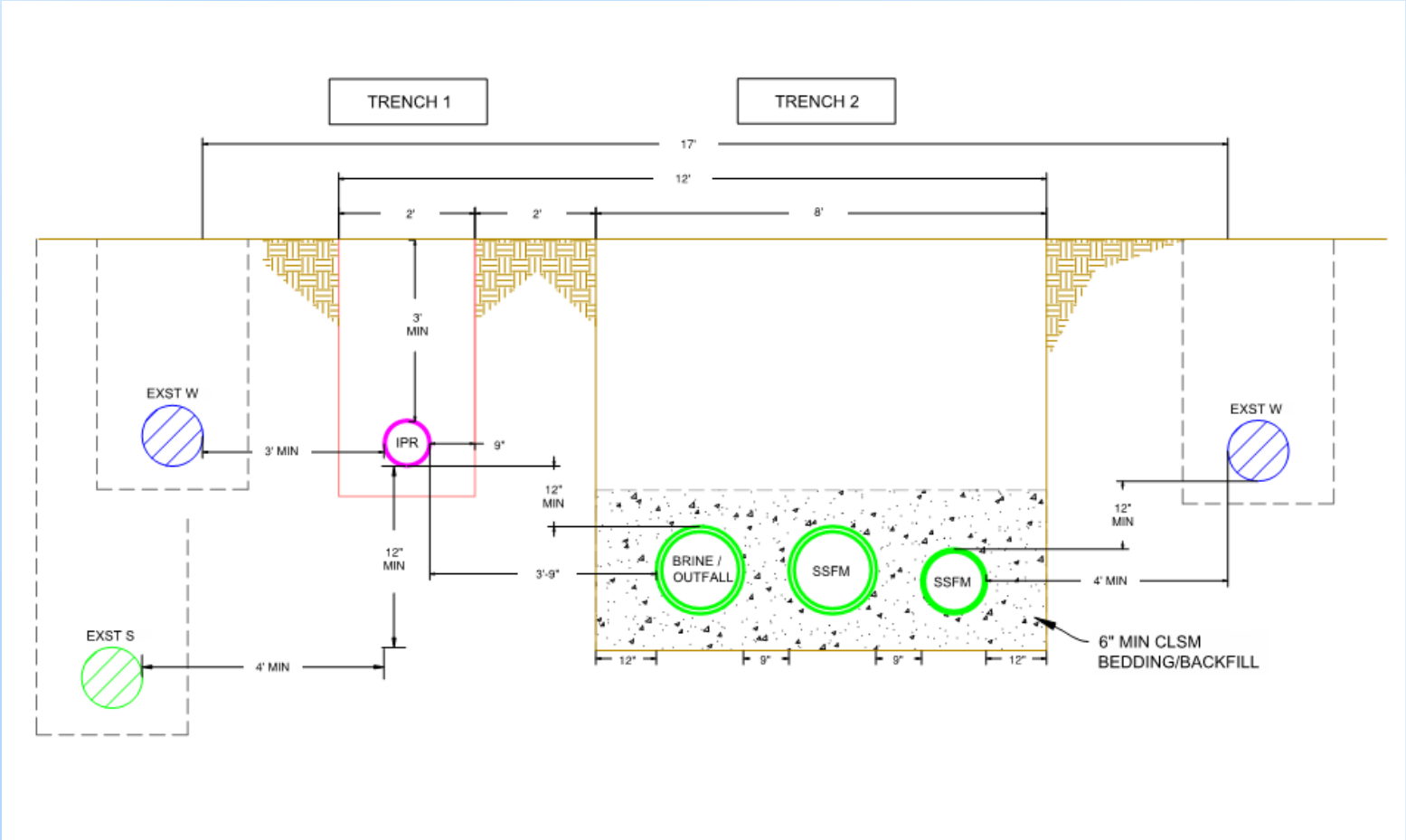

# Pump station layouts

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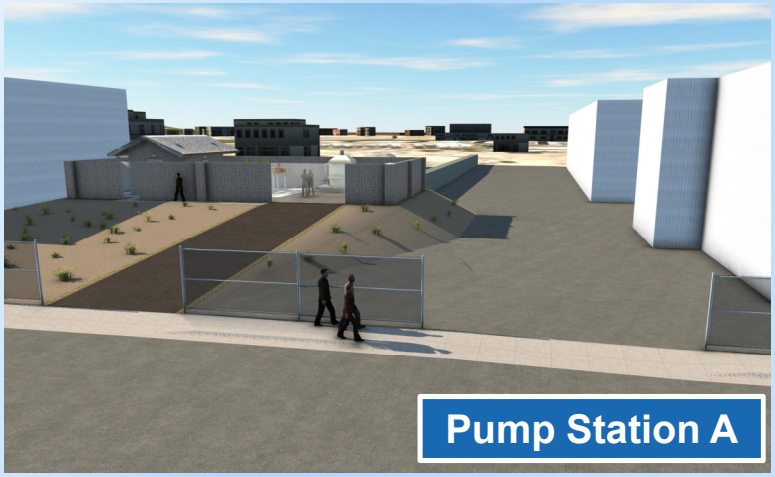
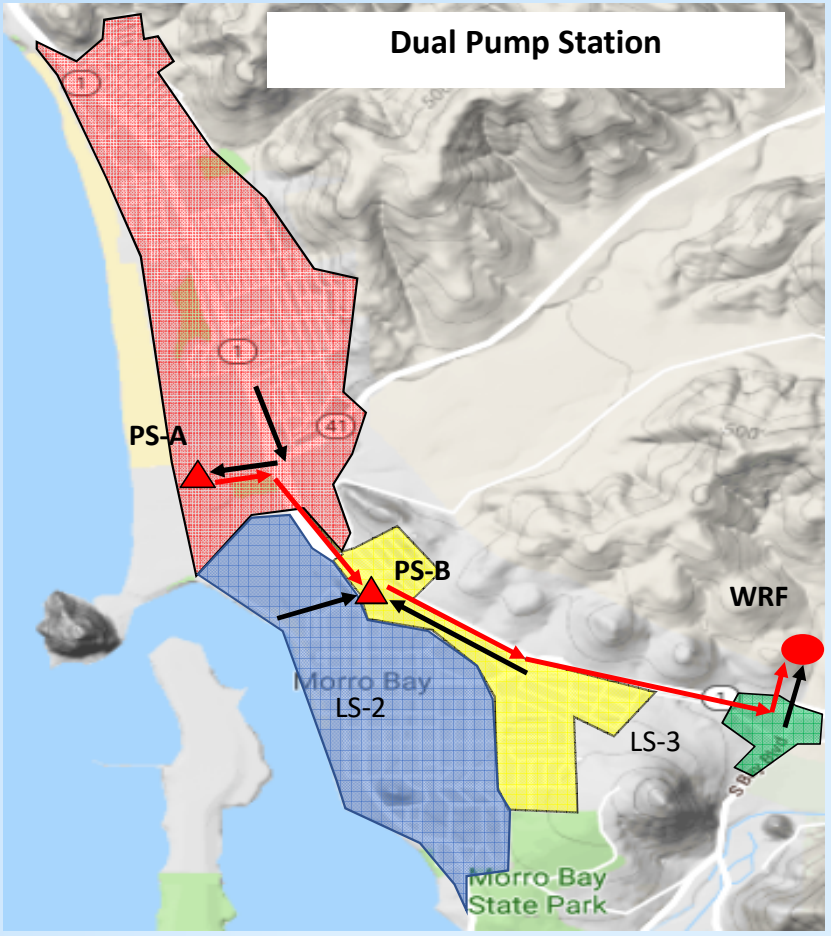
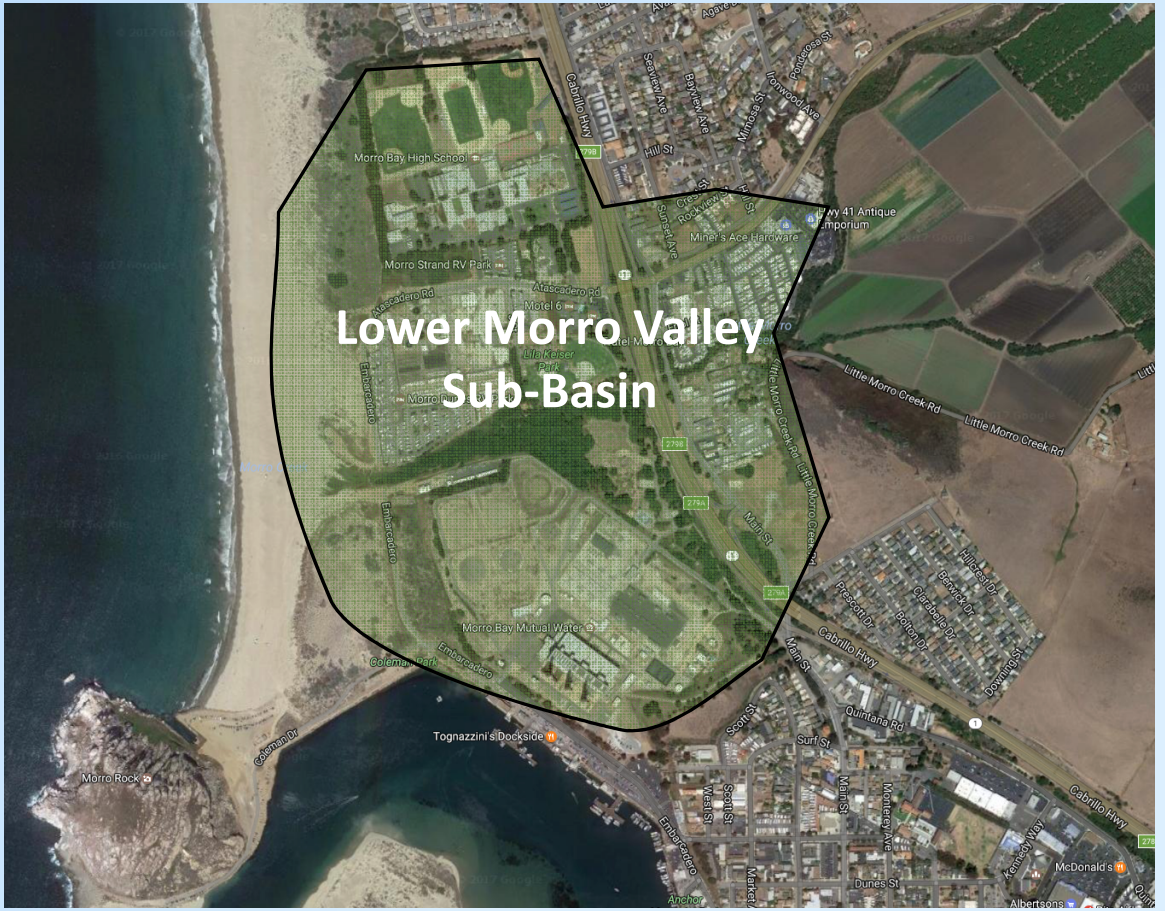






# Why potable reuse?

- Master Reclamation Plan evaluated multiple potable/non-potable reuse options
- Potable reuse ranked highest
- Potential to offset approximately 80 percent of City's current water demand
- Initial hydrogeology studies completed
- Additional hydrogeology studies ongoing



# Hydrogeology studies ongoing

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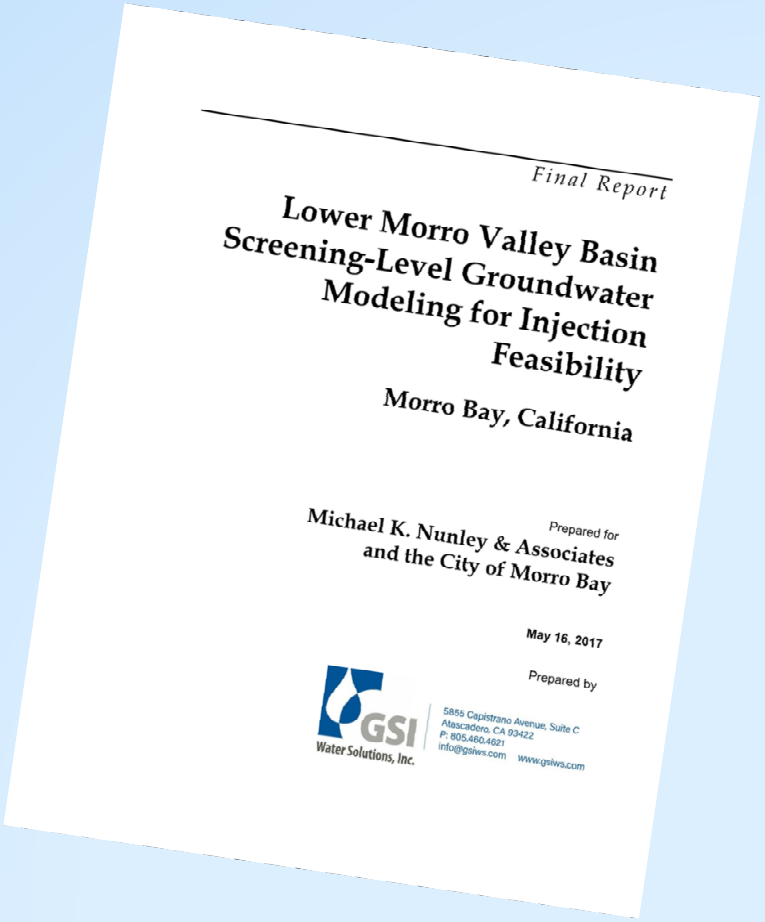
- Feasibility Study – 2017
- Phase 1: Modeling Update (TDS/Nitrate) – 2019
- Phase 2: Characterization of East and West Injection Sites – Ongoing
- Phase 3: Injection Well Design Criteria (2020)

# Feasibility Study findings

- Feasible for aquifer to accept injection
- A minimum of four injection wells needed
- Approximately 1,200 acre-feet-per year (AFY) of groundwater could potentially be produced using IPR
- Minimum 2-month subsurface retention time



*Final Report*

**Lower Morro Valley Basin Screening-Level Groundwater Modeling for Injection Feasibility**

**Morro Bay, California**

Prepared for
Michael K. Nunley & Associates
and the City of Morro Bay

May 16, 2017

Prepared by

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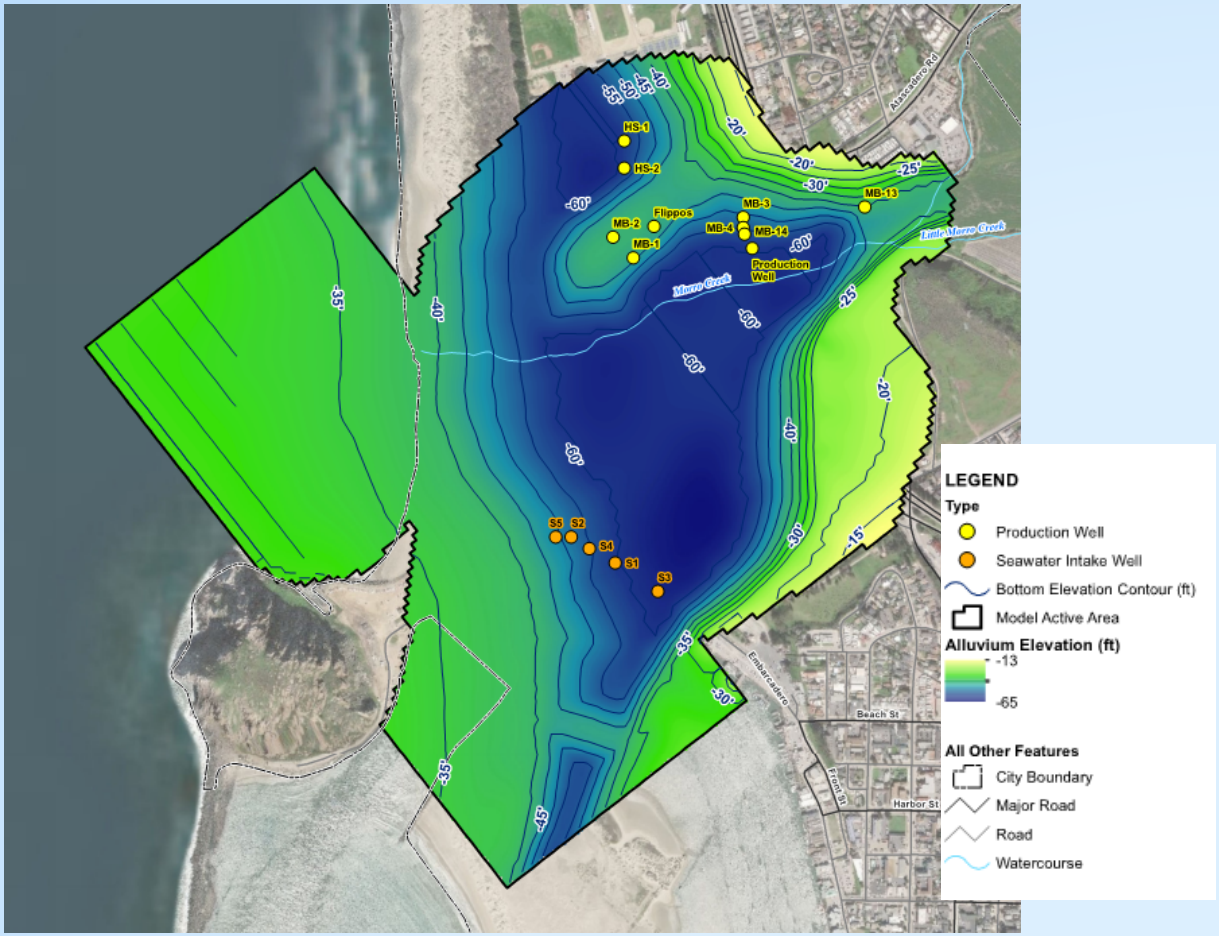
# Phase 1 results

- Increased pumping without injection will lead to seawater intrusion
- Purified water injection has beneficial impacts on TDS and nitrates in the groundwater basin



# Project Status

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# Completed milestones

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- Award of Conveyance Facilities (WWE) design contract – November 14, 2017
- Submission of EPA WIFIA application – July 13, 2018
- Certification of Final EIR – August 14, 2018
- Adoption of new water/sewer rates – September 11, 2018
- Award of WRF DB (Filanc/Black & Veatch) contract – October 23, 2018
- Placed on the fundable list for CWSRF – June 18, 2019
- Executed Coastal Development Permit received – November 08, 2019
- Executed Programmatic Agreement with SHPO – December 13, 2019
- Council and MB Public Facilities Corporation Authorized Execution of EPA WIFIA Loan Documents – January 14, 2020

# Upcoming milestones (PWAB issues)

| Milestones | Planned Completion Date |
|---|---|
| **Conveyance Facilities** | |
| Award Construction Contract | June 17, 2020 |
| **Recycled Water Facilities** | |
| Deliver 30 Percent Design | July 09, 2021 |
| Award Construction Contract | June 24, 2022 |

# Questions

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