Alamitos Bay Water Quality Enhancement Project

Council District 3 Community Update – September 13, 2023

Agenda

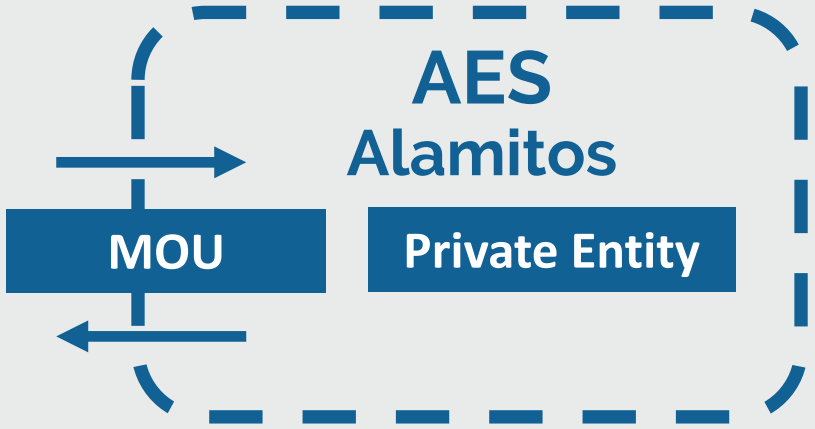
- Introduction
- Summary
- Project updates
- Schedule
- Costs
- FAQ

Introduction

Alamitos Bay Water Quality Enhancement (ABWQE)

City Project

- **Public Works**
  - **Project Manager** Colin Averill, PE
    - **Engineer** Moffatt & Nichol
      - **Hydraulic Engineer** Hazen
      - **Physical Model** CEH
      - **Other Subs** Survey, Geo, Env
- **Development Services**
  - Environmental Document
  - City Permits



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Alamitos Bay Water Circulation Summary

Existing Alamitos Bay water circulation

- Circulation from tides and powerplant cooling pumps (AES & HGS) for over 55 years
- Supports water quality and public uses

Phase out of Once Through Cooling (OTC)

- State Water Board Policy

No Pumping

- Immediate effect on circulation
- Secondary effects on water quality:
  - bacteria concentrations harmful for human contact
  - Increase in temperatures and nutrients harmful for marine life
  - trash accumulation throughout bay

Alamitos Bay Water Quality Enhancement (ABWQE) Project

- Maintains existing water quality through circulation
- New fish-friendly pump house

Historic Context - Alamitos Bay and the San Gabriel River

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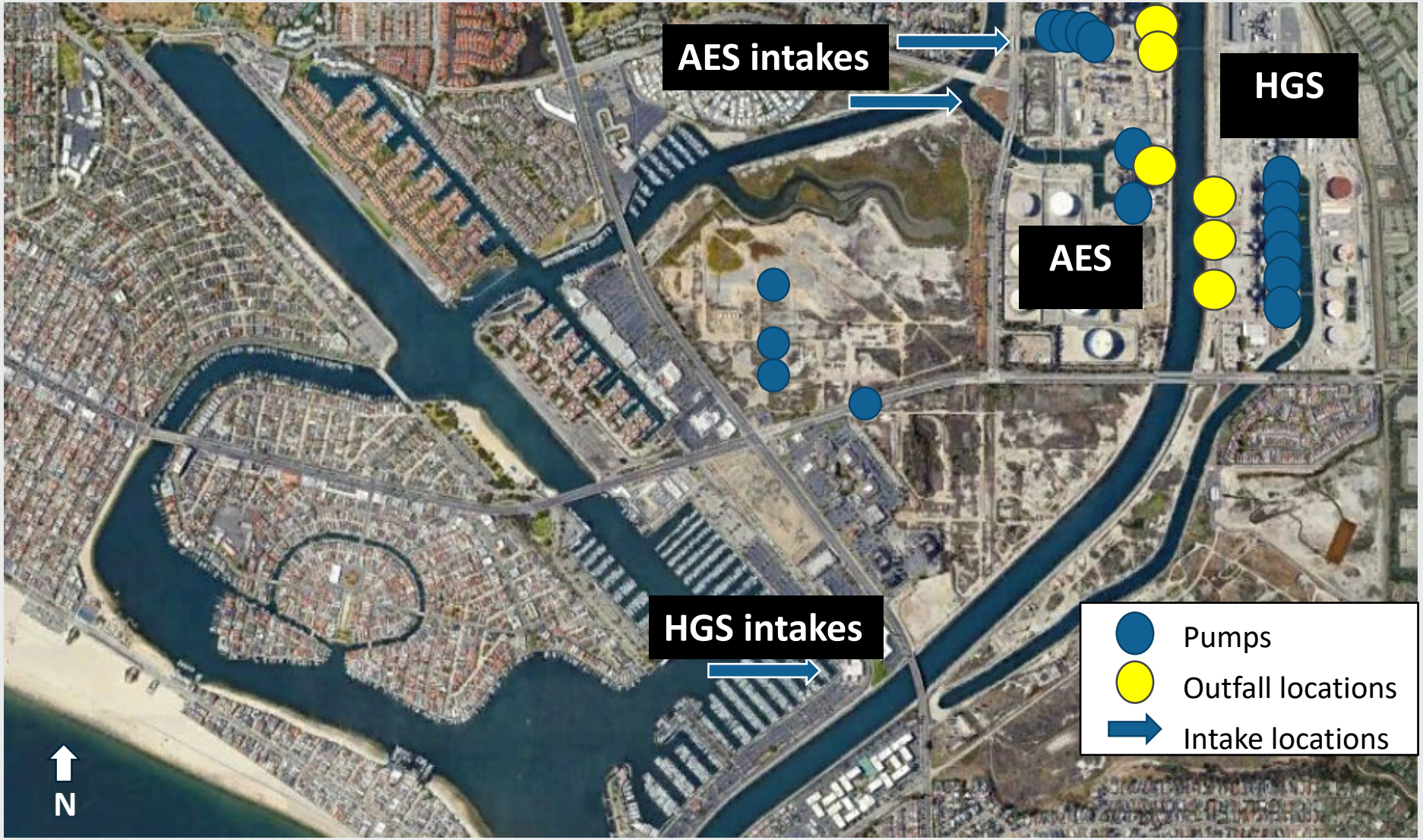
Location of Intakes and Outfalls for Once Through Cooling Pumps



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AES Facilities

AES Pump locations

Currently planned shutdown dates determined by State Water Board:
AES Unit 1, 2, 6 = Retired
AES Unit 3, 4, 5 = Operations extended through December 2026 for extreme events

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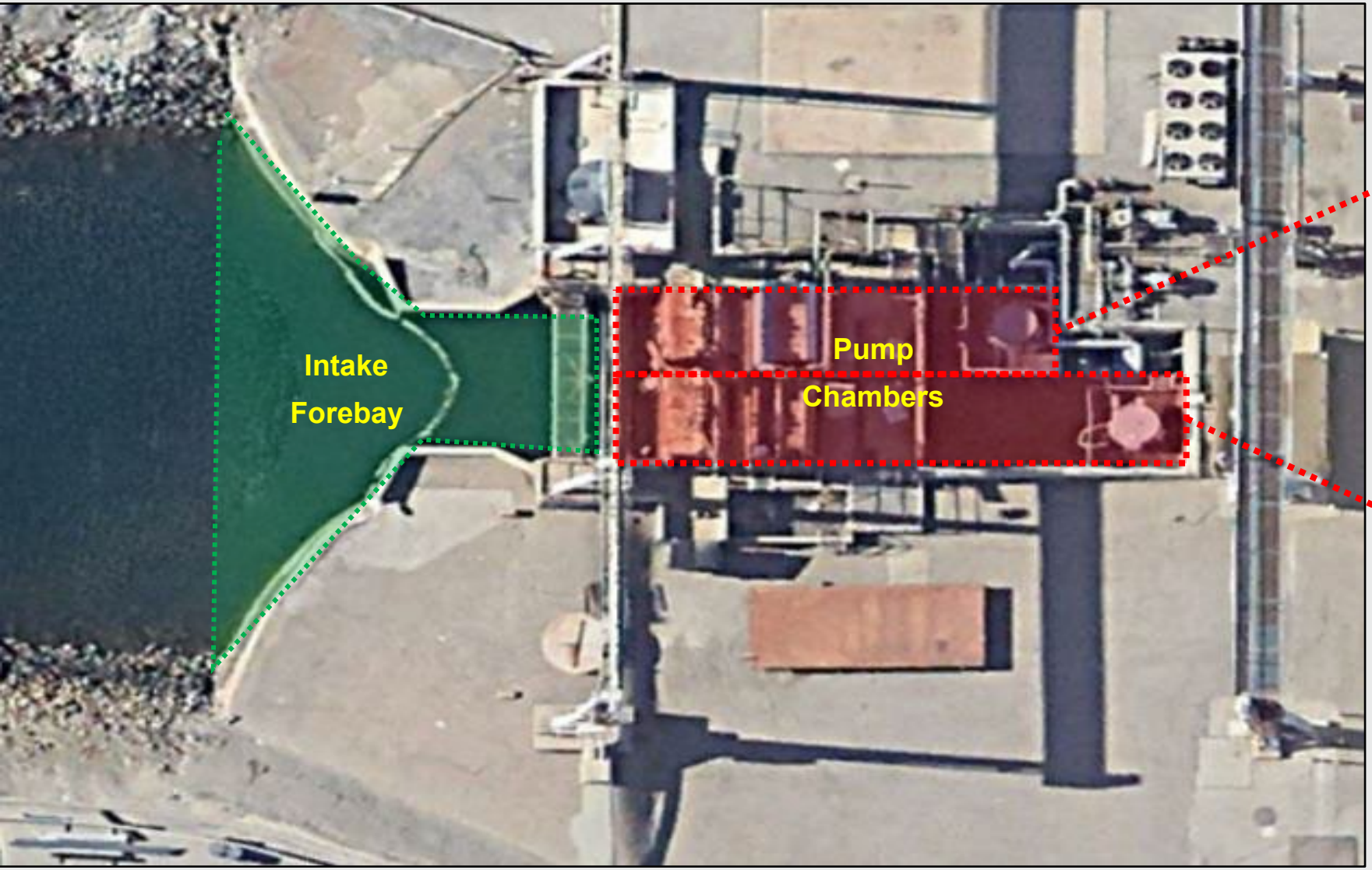
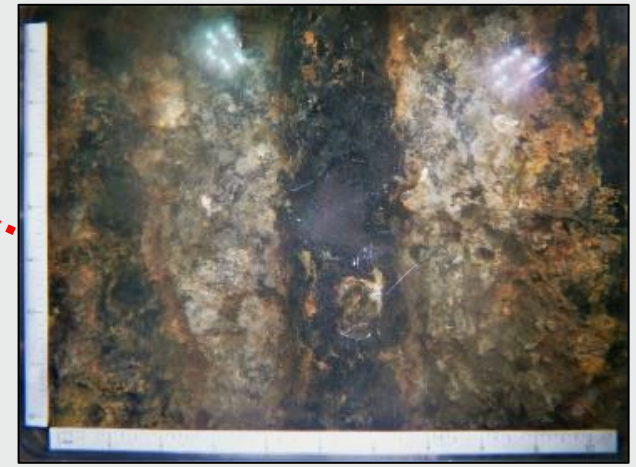
Project Update

- 2020 – Draft Conceptual Design Unit 6 Existing Intake
- 2021 – Unit 6 Existing Intake Inspection/Evaluation
- 2022 – “Pump House” Alternative Conceptual Design
  - Geotechnical Investigation and Survey
  - AES MOU Amendment 1
- 2023 – Preliminary Engineering
  - Water Quality Monitoring
  - 2/9 MAC Project Update, 8/29 CECP Project Update
  - Preliminary Engineering Design submittal (in review)
  - Grant Applications (ongoing)
  - Environmental Document (scope planning)

“Unit 6 Existing Intake” – Plan View of Inspection Areas





Condition:
Not recommended for reuse

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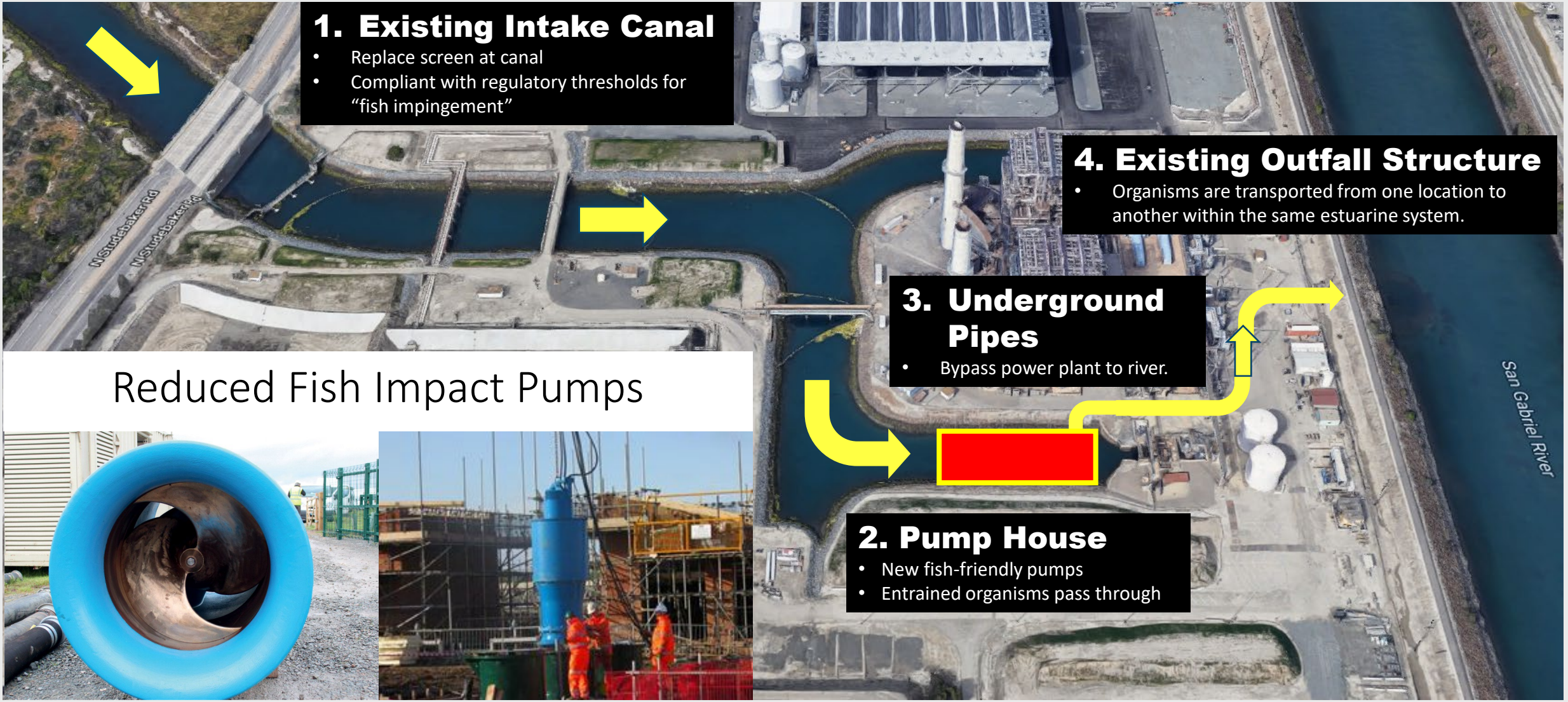
Water Circulation at AES Facility using a "Pump House"



Reduced Fish Impact Pumps

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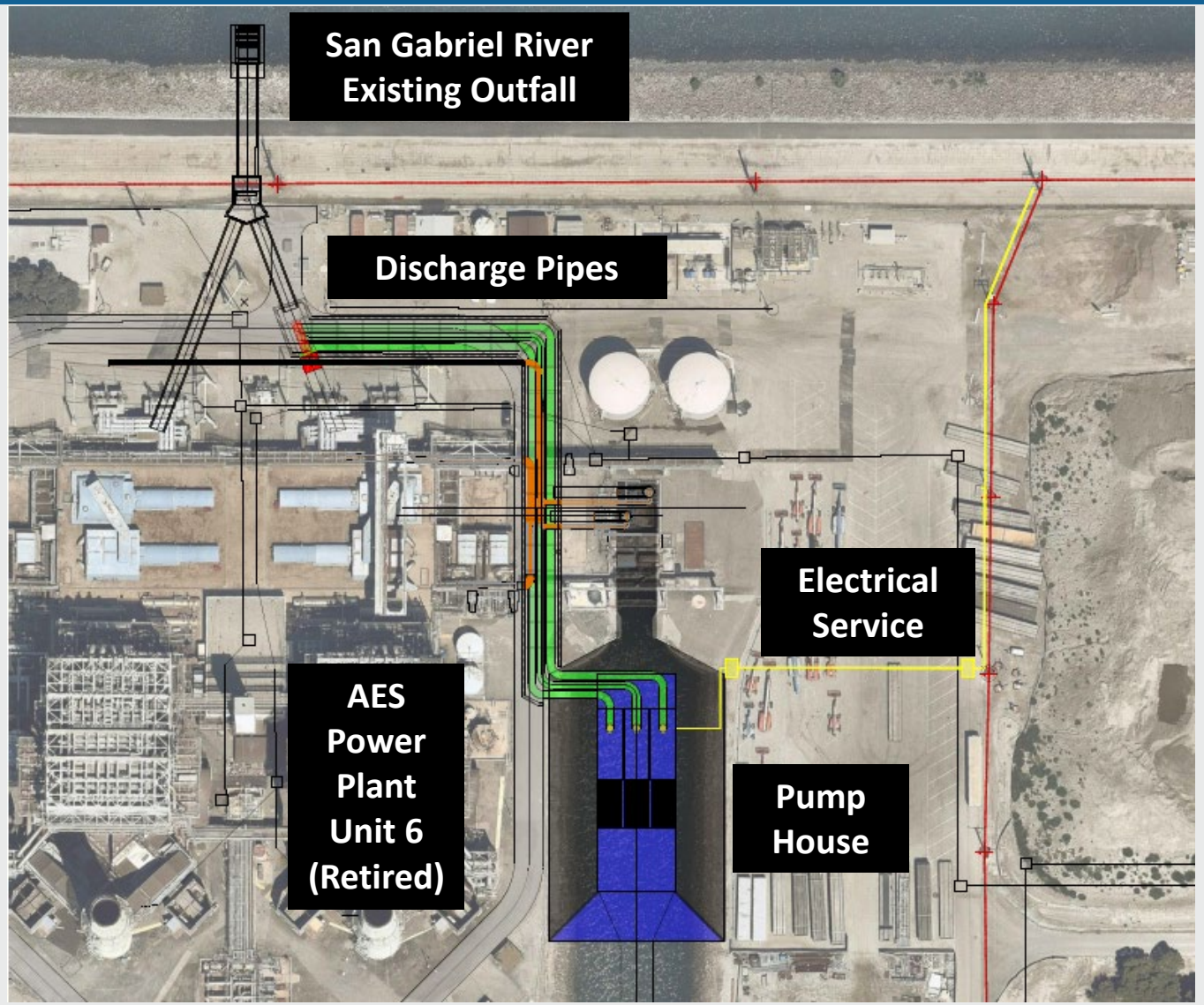
“Pump House” Concept Design – similar to existing large pump stations



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Preliminary Engineering Design – Physical Hydraulic Model

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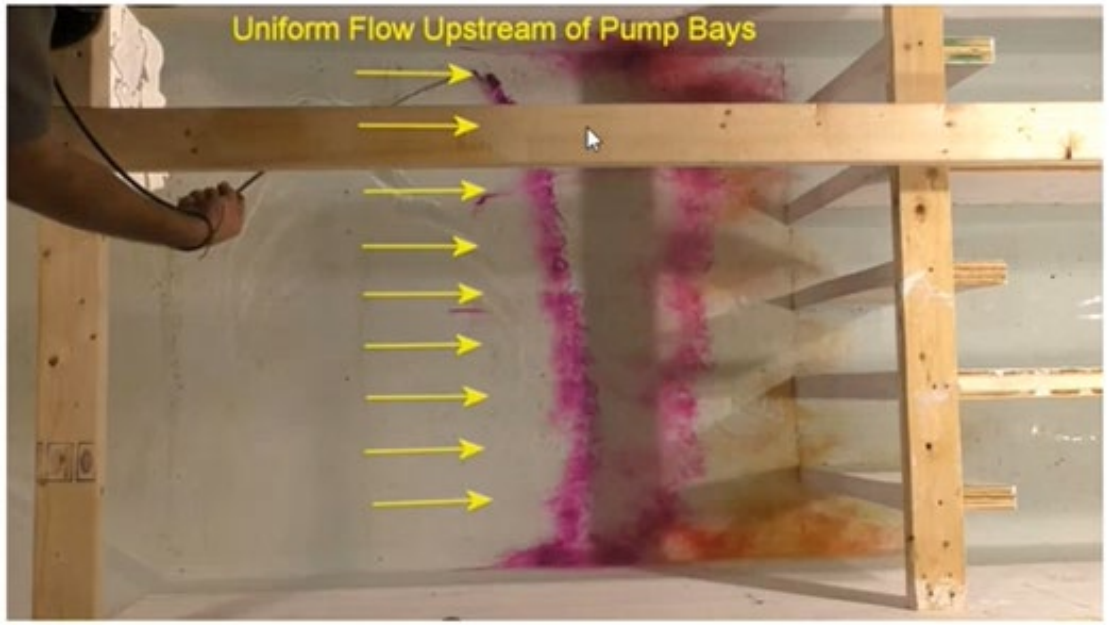
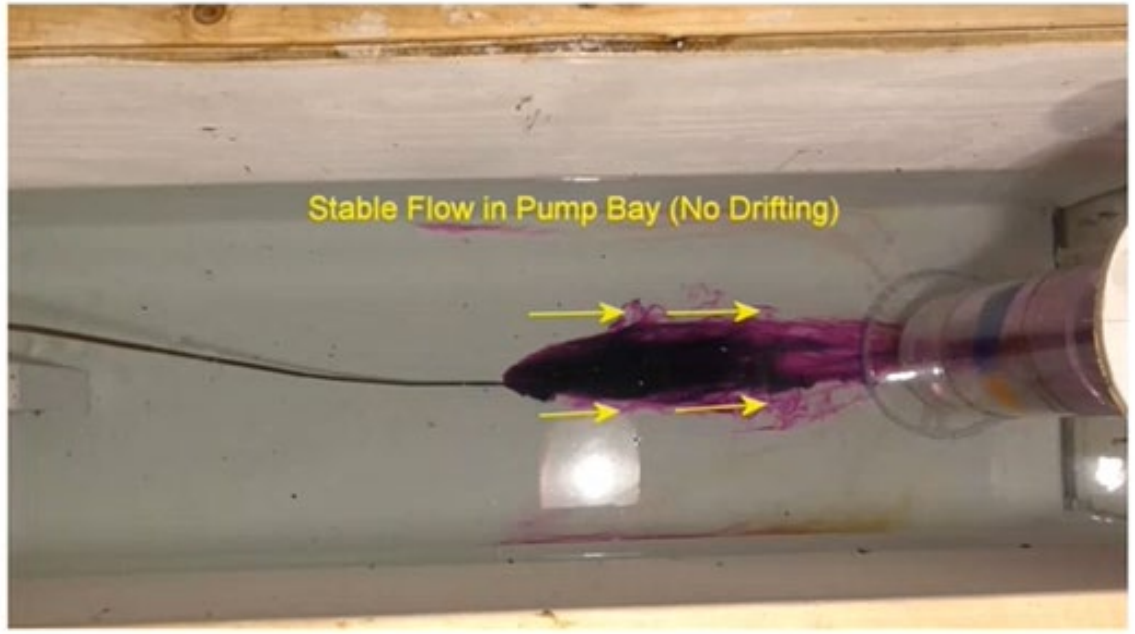


Uniform flow in the supply channel upstream of the pump bays



Approach flow in pump bays is stable with no side-to-side drifting

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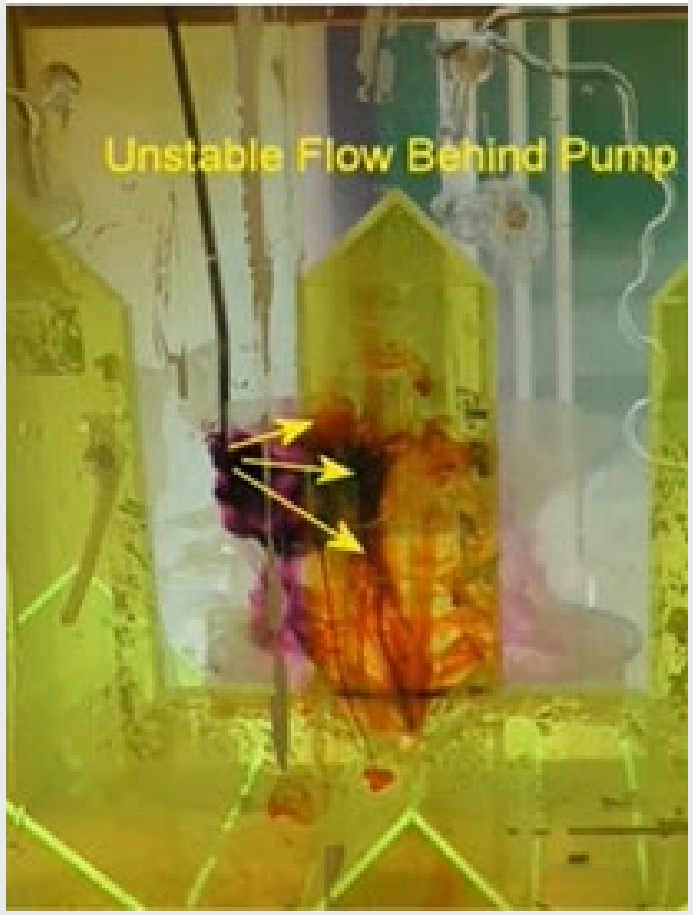
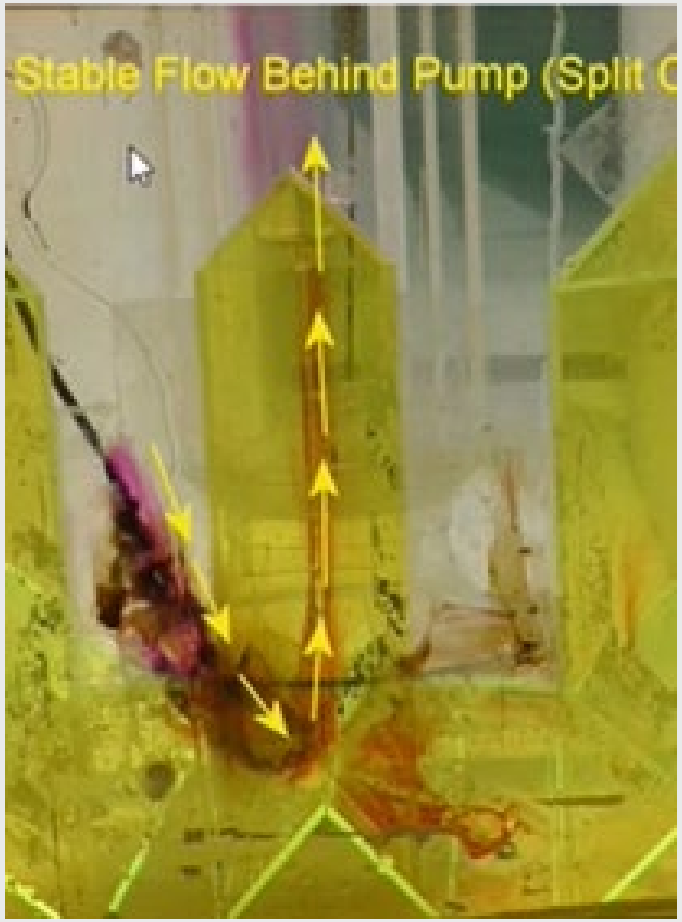
Preliminary Engineering Design – Physical Hydraulic Model





Schedule

Tentative Project Schedule

- 2023 – complete Preliminary Engineering
  - Initiate environmental document and regulatory permitting
  - Financial and operational planning

Future Project Milestones: TBD

- Complete environmental/permitting tasks
- Fund final design, construction, operation
- Complete final design and bid for construction
- Construction
- Operation, Maintenance and Monitoring

Estimated Project Costs

Preliminary Engineering Cost Estimate

- In review

Estimated Project Costs

- Conceptual construction costs $30-45M
- Operations, Maintenance & Monitoring $2M/year

Current Funding – Preliminary Engineering / Environmental Permitting

- $2.85M
  - Measure A ($1.2 million in Five Year Infrastructure Plan)
  - Tidelands ($1.5 million, includes $500K in FY 24 CIP)
  - AES Contribution ($150K)

Frequently Asked Questions

Are there current impacts to water quality in Alamitos Bay?

What are the bacteria levels in Alamitos Bay?

Is Alamitos Bay safe for recreation?

- Refer to LB Health & Human Services Recreational Water Monitoring for current water quality conditions.
- Water samples are collected three times a week and tested routinely for indicator bacteria.
- longbeach.gov/health/inspections-and-reporting/inspections/water-quality/ocean-water-monitoring/

Frequently Asked Questions

Are there current impacts to water quality in Alamitos Bay?

What are the bacteria levels in Alamitos Bay?

Is Alamitos Bay safe for recreation?

- Long Beach received A and B summer dry grades for 2022-2023 from Heal the Bay
- Additional information from Heal the Bay
- healthebay.org/beachreportcard2022-2023/

Frequently Asked Questions

What are the schedules and rates of pumping?

What impacts are seen from decreased pumping?

- Power plant operations are not subject to a set schedule and vary with electricity demand and regulations.
- Pumping rates are reported quarterly to the State Water Board by permittees.
- The City is analyzing several data sets and data collection is not yet complete.

Frequently Asked Questions

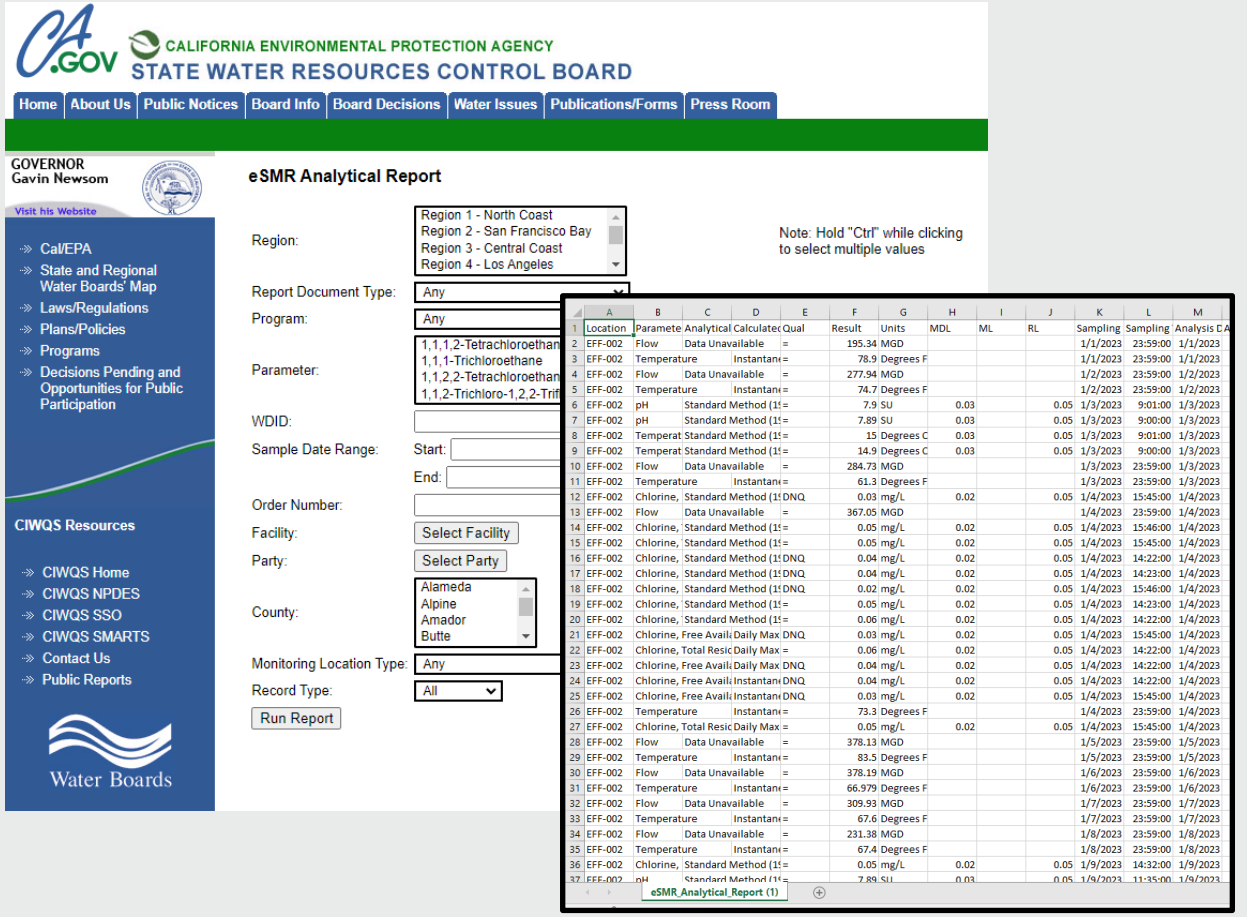
What data and information are available?

- LB Health & Human Services recreational water monitoring data
- longbeach.gov/health/inspections-and-reporting/inspections/recreational-water-samples
- Information on ABWQE website
- longbeach.gov/abwqe

Frequently Asked Questions

What data and information are available?

- Technical permit data from the State Water Board
- Example data output
- //ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=esmrAnalytical



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Frequently Asked Questions

How much will the project cost?

Preliminary Engineering Cost Estimate

- In review

Estimated Project Costs

- Conceptual construction costs $30-45M
- Operations, Maintenance & Monitoring $2M/year

Frequently Asked Questions

How is this project being funded?

- $2.85M Preliminary Engineering / Environmental Permitting
  - Measure A ($1.2 million in Five Year Infrastructure Plan)
  - Tidelands ($1.5 million, includes $500K in FY 24 CIP)
  - AES Contribution ($150K)
- Potential grant opportunities

Frequently Asked Questions

What is the schedule?

- 2023 – complete Preliminary Engineering
  - Initiate environmental document and regulatory permitting
  - Financial and operational planning
- Future schedule dependent on funding and environmental permitting process

Frequently Asked Questions

What are the next steps?

- Complete environmental/permitting tasks
- Fund final design, construction, operation
- Complete final design and bid for construction
- Construction
- Operation, Maintenance and Monitoring

Frequently Asked Questions

What is the status of Once-Through-Cooling (OTC)?

- On August 15, 2023: The State Water Board adopted the Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (OTC).
- Compliance Schedule for the Alamitos generating station revised from December 31, 2023, to December 31, 2026
- waterboards.ca.gov/water_issues/programs/ocean/cwa316/

Thank you

Colin Averill, PE
Civil Engineer
Colin.Averill@longbeach.gov

longbeach.gov/abwqe

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