

# **Central Reservoir Replacement Project**

## **Draft Environmental Impact Report**

### **Public Meeting #2**



**January 7, 2020**

# Agenda



- Project team
- EIR process overview
- Overview of hazardous material removal
- EBMUD's experience & processes for handling hazardous materials
- Next steps

# Project Team

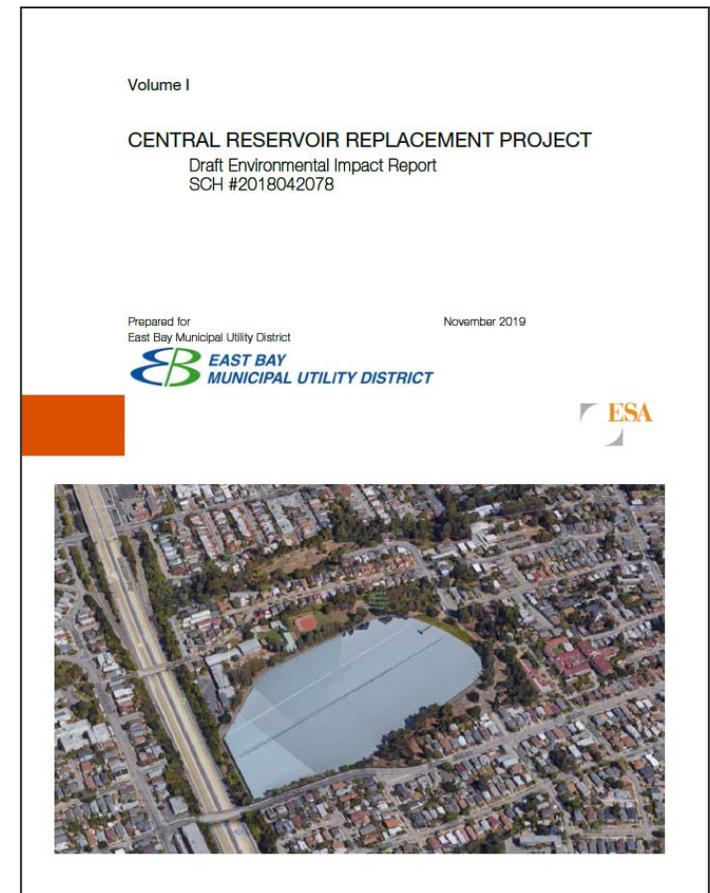


- EBMUD
  - Aaron Hope, P.E., Project Manager
  - David Rehnstrom, P.E., Division Manager
  - Bill Maggiore, P.E., Senior Engineer
  - Laura Luong, Community Affairs
  - Mona Favorite-Hill, Community Affairs
  - Javier Prospero, Senior Civil Engineer
- Environmental Science Associates
  - Mike Manka, Project Manager
  - Heidi Rous, Risk Assessor, Director
  - Michael Burns, Hazardous Materials Specialist
  - Jyothi Iyer, Air Quality Specialist

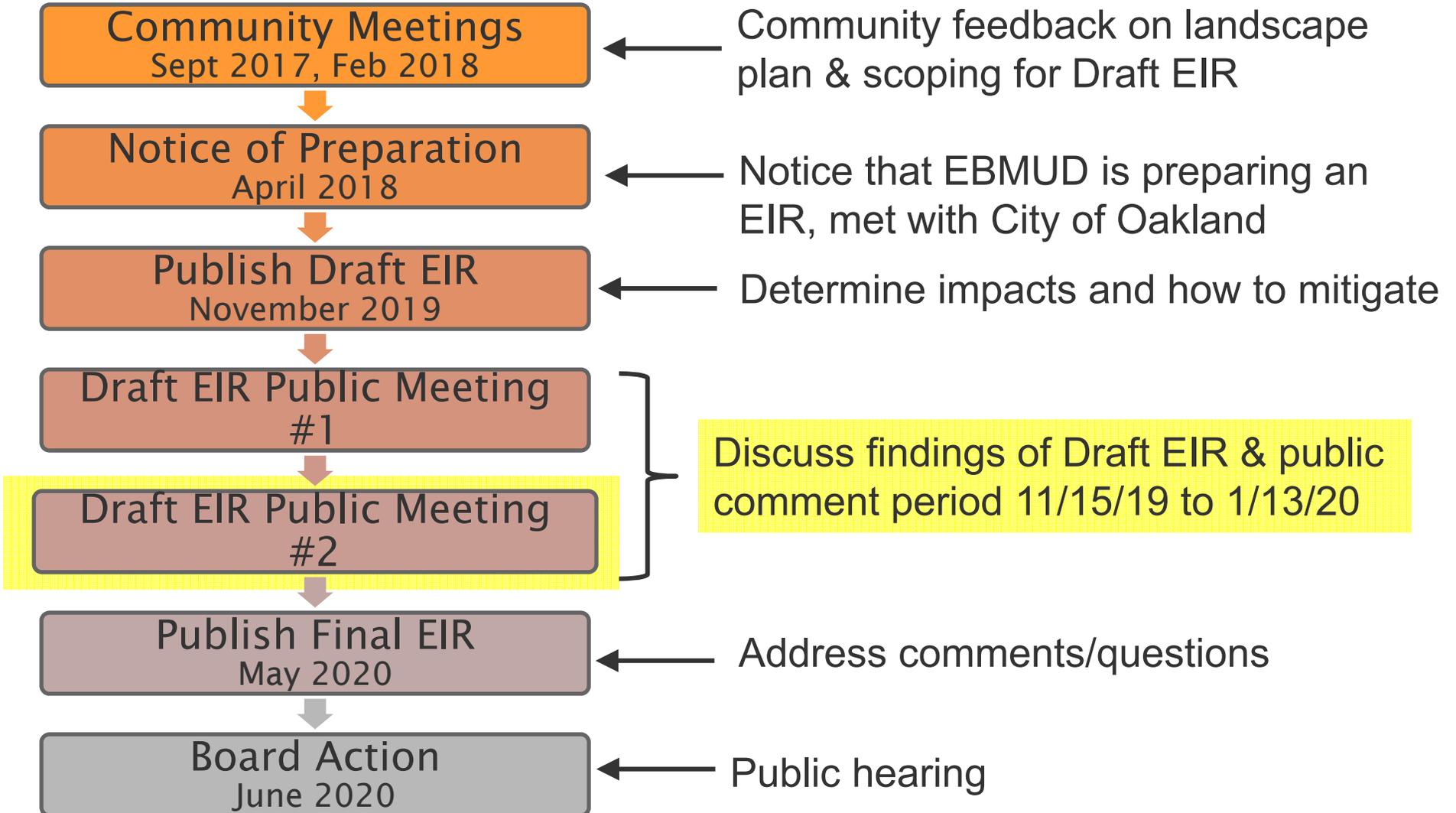
# What is an EIR?



- EIR
  - Environmental Impact Report
- Purpose:
  - To inform the public & other agencies of the environmental consequences of a project



# EIR Process



# Community Concerns Regarding Hazardous Materials



- Concerns about the health effects of polychlorinated biphenyls (PCBs) and asbestos
  - What is being done during removal of hazardous materials
  - Concern for children in neighborhood, long-term impacts on community
- Provide information on projects with similar hazardous materials
- Request for follow up meeting

# Hazardous Materials At Reservoir



- PCBs in the liner material
- Lead-based paint on Materials Storage Building
- Asbestos in roof material
- Pentachlorophenol (treated wood) in roof beams
- EBMUD will remove hazardous materials as part of the project



# PCBs



- Man-made chemicals
- Resistant to extreme temperature and pressure
- Widely used in electrical equipment (capacitors, transformers), hydraulic fluids, heat transfer fluids, lubricants, and plasticizers
- The use of PCBs was banned in 1979
- Very low solubility



Application of asphalt liner, 1961

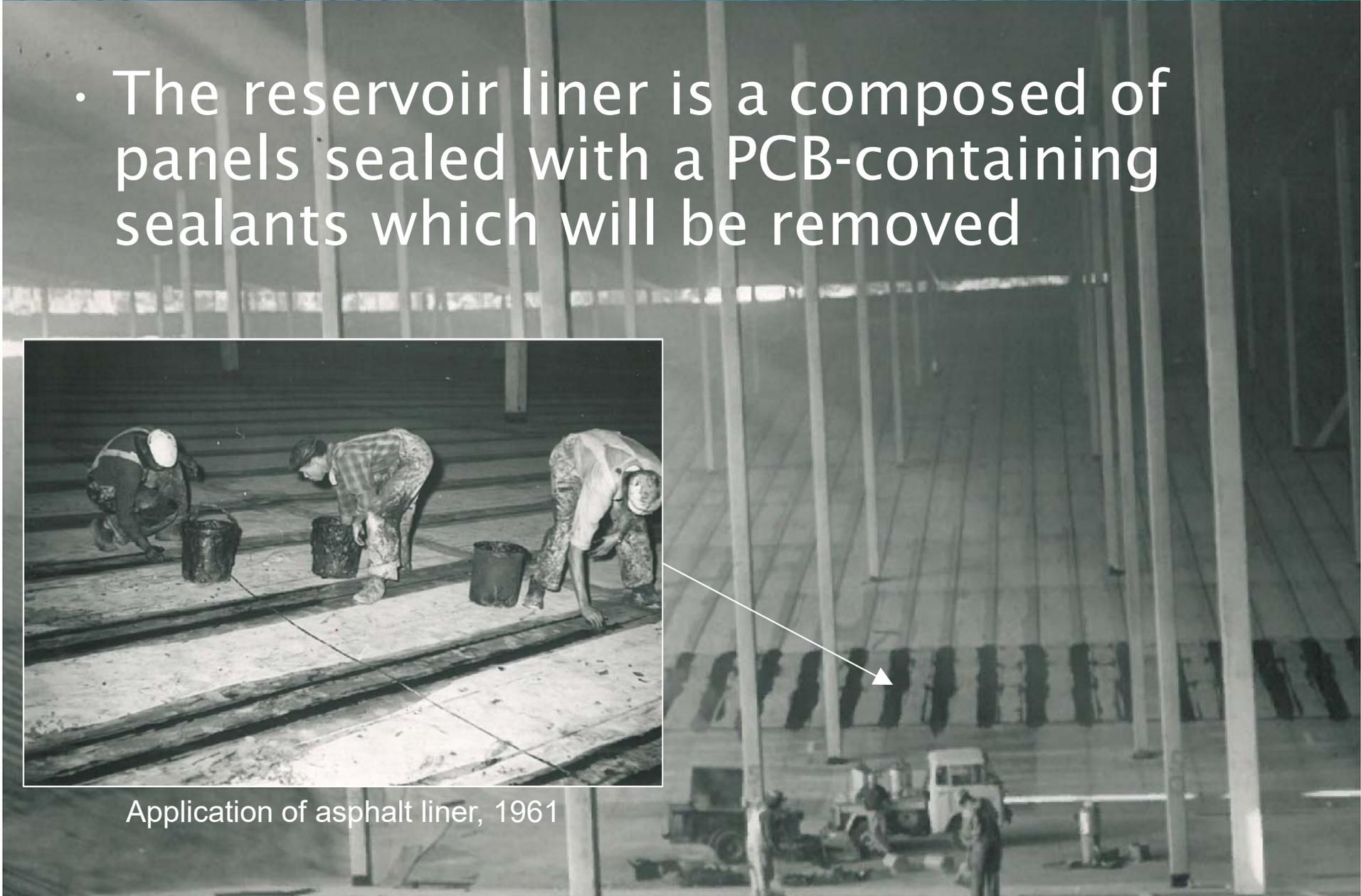
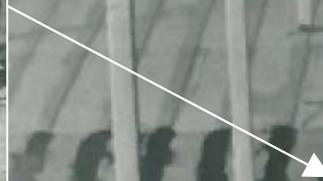
# PCBs



- The reservoir liner is composed of panels sealed with a PCB-containing sealants which will be removed



Application of asphalt liner, 1961



# PCBs Regulations



- Environmental Protection Agency, Toxic Substances Control Act, PCBs Manufacturing, Processing, Distributing, and Use Prohibitions
- California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, Characteristics of Hazardous Waste

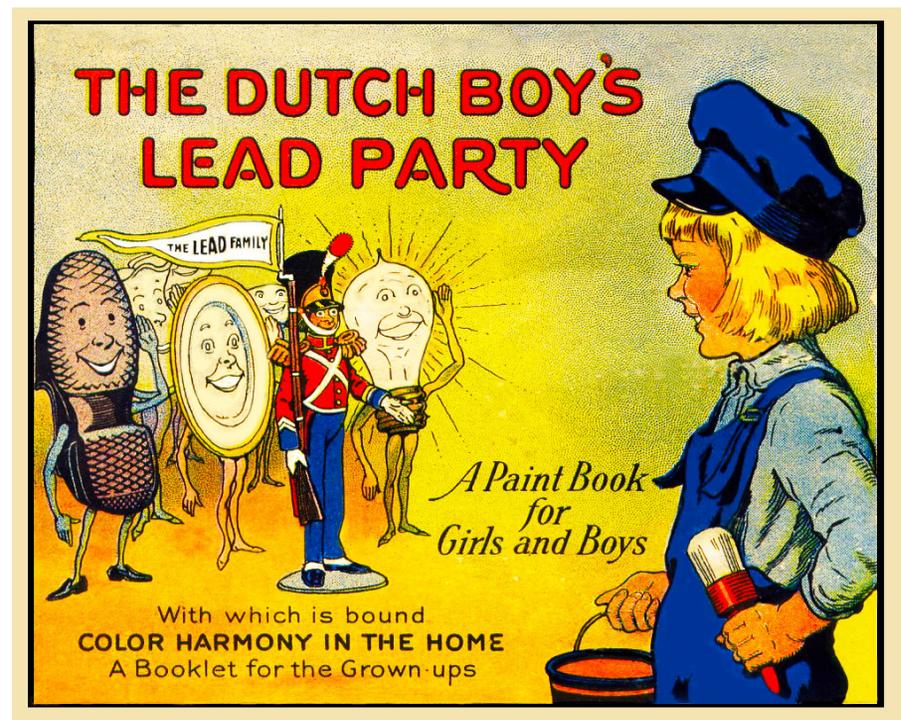
# Lead-Based Paint



Lead paint banned in 1978

Lead is a naturally-occurring metal previously added to paint to:

- Accelerate drying
- Increase durability
- Maintain fresh appearance
- Resist moisture that causes corrosion



1923 lead paint book, before the dangers of lead paint was known

# Lead-Based Paint



- The paint on the Materials Storage Building may contain lead-based paint
- If present, lead paint will be removed as part of the Project



Central Reservoir Materials Storage Building

# Lead-Based Paint Regulations



- California Code of Regulations, Title 8, Division 1, Chapter 4, Article 4, Section 1532.1: Lead
- Bay Area Air Quality Management District Regulation 11, Rule 1: Lead

# Asbestos



- The corrugated roof contains asbestos materials
- Roof will be removed as part of the project



Central Reservoir Roof

# Asbestos



- Naturally-occurring fibrous mineral
- Widely used in strengthening cement and plastics, as well as for insulation, fireproofing, and sound absorption
- Banned in California in 1977



Asbestos material



Asbestos material as fireproofing

# Asbestos Regulations

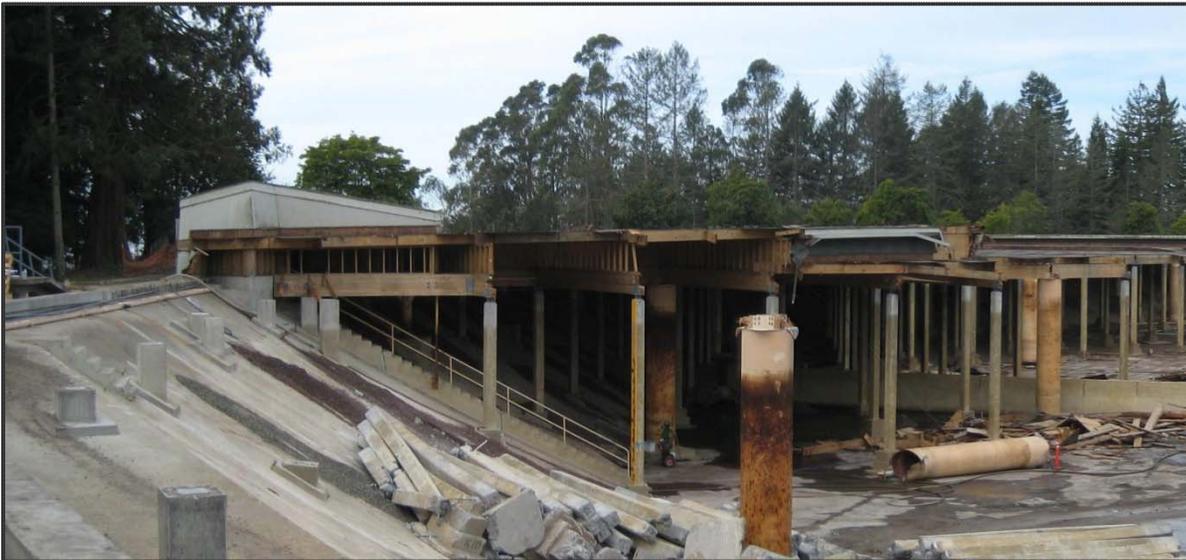


- California Code of Regulations, Title 8, Division 1, Chapter 4, Article 4, Sections 1529 and 5208: Asbestos
- Bay Area Air Quality Management District Regulation 11, Rule 2: Asbestos Demolition and Renovation

# Treated Wood



- Man-made pesticide resistant to decay and insects
- Widely used as wood preservative for power line poles, cross arms, fence posts, etc.
- Wood timbers will be removed as part of the project
- Restricted to telephone poles and railroad ties in 1980s



Summit Reservoir during demolition with treated wood beams



Treated wood telephone pole

# Treated Wood Regulations

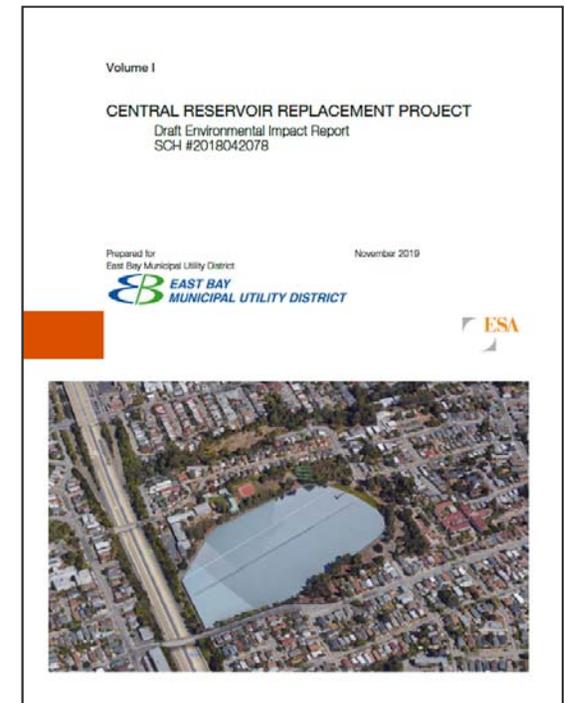


- Federal Resource Conservation and Recovery Act, Subtitle C – Hazardous Waste Management
- Federal Insecticide, Fungicide and Rodenticide Act
- California Code of Regulations, Title 22, Division 4.5, Chapter 34, Section 67386.1 et seq, Alternative Management Standards for Treated Wood Waste
- California Department of Toxic Substances Control, treated-wood waste regulations and procedures per AB 1353 (2004)

# Review of EBMUD Standard Practices & Procedures



- Hazardous materials are addressed in the Draft EIR
- ESA reviewed EBMUD's Construction Specifications and Procedures:
  - Comply with state and federal laws
  - Ensure safe handling of hazardous materials



# Overall Approach All Hazardous Materials



EBMUD standard practices & procedures, laws, and regulations will direct overall approach to removing hazardous materials including:

- Identification, testing, handling, packaging, and disposal
- Protection of workers and the public
- Certifications & licensing



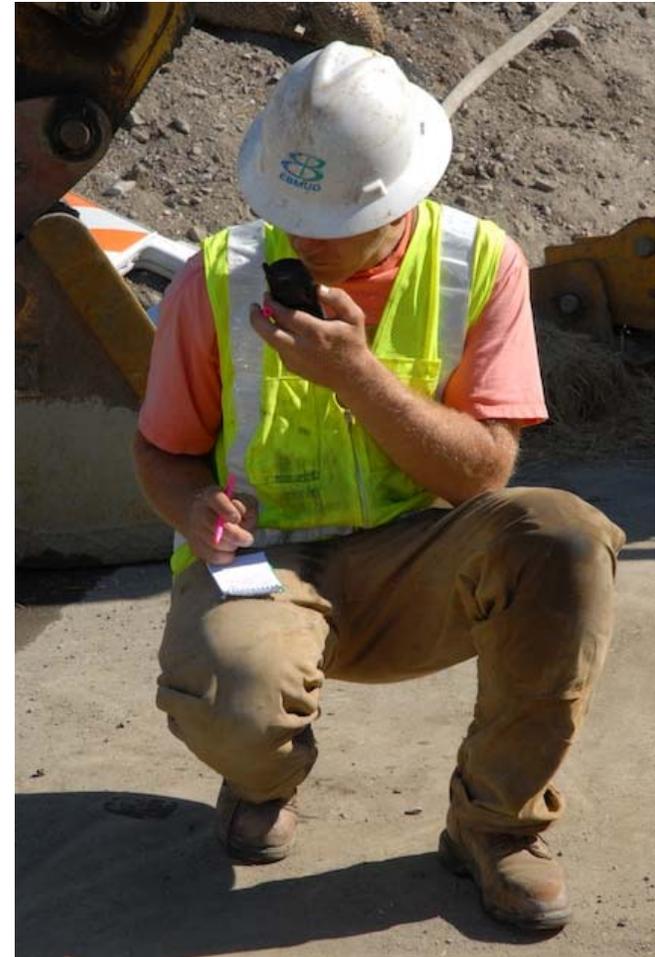
Laboratory testing of materials

# Techniques & Approaches - All Hazardous Materials



- The Goal: permanently and safely remove materials from the site
- Some techniques & approaches:
  - Establish containment
  - Remove in pieces where possible
  - Wash down and misting
  - Use negative air pressure
  - Contain, collect, and dispose
  - Air monitoring

Let's look at some examples...



EBMUD overseeing removal of  
hazards materials

# Remove in pieces where possible



Example of asbestos panel removal

# Containment & Negative Air Pressure



Example of containment and negative air pressure

# Wetting the Material



Hand wetting of demolition debris



Machine wetting of demolition debris 24

# Containment & Vacuuming



Removing lead paint from a building

# Seal the Waste



Sealing and removing waste

# Sealed Transportation



Sealed transport



Sealed transport

# Decontamination



Example of decontamination

# Disposal



Example of sealed asbestos transport

# Air Monitoring



- Air monitoring at minimum of 4 stations along perimeter of site
- Measurement of total particulates and asbestos
- If needed, contractor will stop work and make corrections



Example of air monitoring station

# EBMUD Experience



- EBMUD has decades of experience safely removing hazardous materials at reservoir sites
  - EBMUD reviews contractor's plans
  - Onsite construction inspectors
  - Regulatory oversight



EBMUD overseeing construction

# Berryman Reservoir



Berryman Reservoir in Berkeley

# Berryman Reservoir



- Located in Berkeley, on Euclid Avenue
- Construction in 2010-2011
- Demolish 15 million gallon (MG) open cut reservoir with panel craft liner over concrete and wood roof
  - Asbestos in panelcraft liner
  - Treated wood in roof supports
  - Lead in paint
- Construct 2.6 MG welded steel tank

# Berryman Reservoir



# Berryman Reservoir



# Berryman Reservoir



# Danville Reservoir



Danville Reservoir in Danville

# Danville Reservoir



- Located in Danville, on Highland Drive
- Construction in 2009
  - Upgrade a 15 MG open cut reservoir
  - Replace asbestos roof
  - Install concrete liner
  - Strengthen the roof

# Danville Reservoir



# Danville Reservoir



# Danville Reservoir



# Danville Reservoir



# Danville Reservoir



# Danville Reservoir



# Summit Reservoir



Summit Reservoir in Berkeley/Kensington

# Summit Reservoir



- Located in Berkeley, on Grizzly Peak Boulevard
- Construction in 2015-2019
  - Demolish 37 MG open cut reservoir
  - Asbestos and PCB in liner caulking
  - Treated wood in roof supports
  - Lead in paint
  - Construct 3.5 MG concrete tank

# Summit Reservoir



# Summit Reservoir



# Summit Reservoir



# Summit Reservoir



# Summit Reservoir



# Summit Reservoir

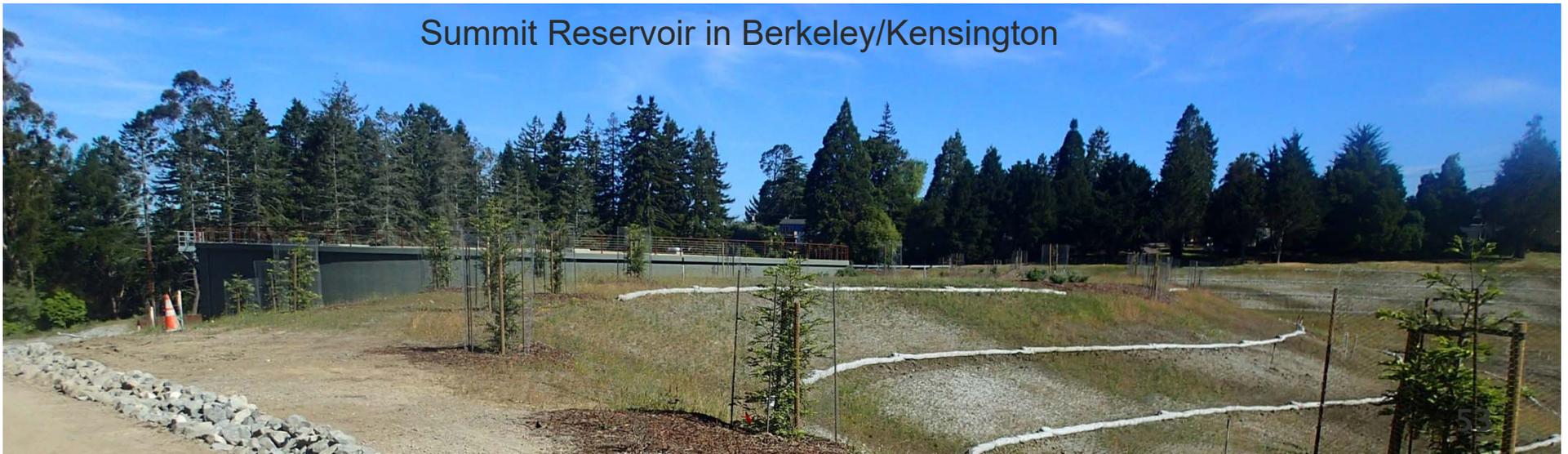


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Summit Reservoir in Berkeley/Kensington

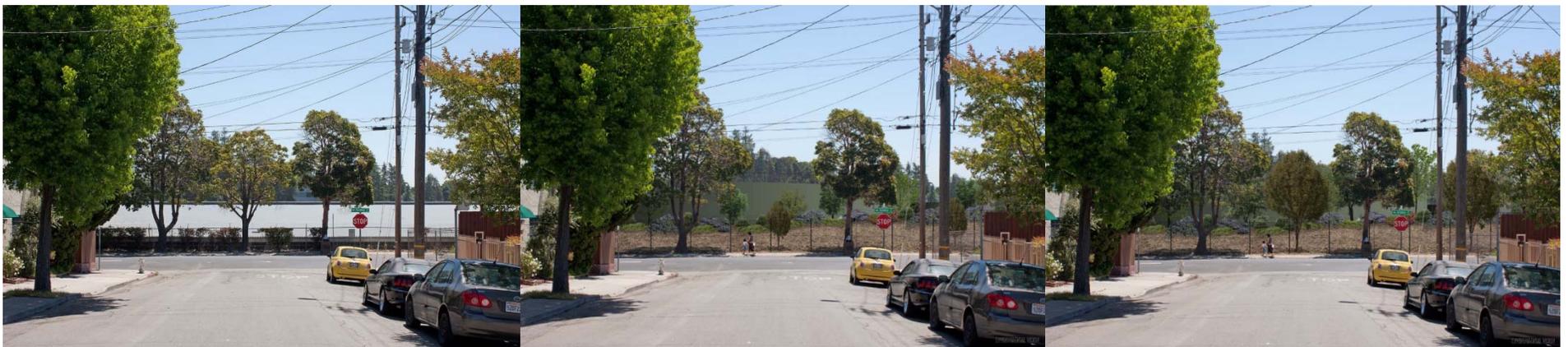


# Next Steps



- Draft EIR Public Review: **Nov 15, 2019 to Jan 13, 2020**
- Publish Final EIR: **May 2020**
- Board Certify Final EIR: **June 2020**
- Complete Design: **2026**
- Construction: **2026 to 2031**

Ardley Avenue at E. 32<sup>nd</sup> Street



Existing

5 years after construction

10 years after construction

## Central Reservoir Replacement Project

The East Bay Municipal Utility District (EBMUD) is replacing its 154-million-gallon Central Reservoir. Constructed in 1910 on a 27-acre site, the Central Reservoir is EBMUD's largest distribution reservoir and provides emergency and operational storage to about 52,000 metered services from Oakland and Emeryville to the Oakland/San Leandro border, including most of the City of Alameda.

Central Reservoir has reached the end of its useful life and will be demolished and replaced with new tanks that are approximately 20 feet higher than the existing reservoir. The project includes demolition of the existing reservoir and materials storage building, three new 17-MG concrete tanks, a new rate control station, a valve structure, service road and site paving, a bioretention area, and security fencing, all within the existing reservoir property. The project may also include an access driveway to connect the Redwood Day School parking area to Ardley Avenue.

Construction for this project is expected to occur over a six-year period, from 2026-2031.

EBMUD prepared a final site plan based on input from community meetings held in September 2017 and February 2018. Using the final site plan, EBMUD initiated the environmental review process including preparation of an EIR that will evaluate project impacts and identify ways to reduce and/or eliminate environmental impacts. On November 15, 2019, EBMUD will publish the Draft Environmental Impact Report (EIR). EBMUD will also hold a public meeting in early December to discuss the results of the EIR with the community.

### Workplan and schedule

The overall work plan and schedule is as follows:

CENTRAL RESERVOIR REPLACEMENT  
OAKLAND, CA



# EIR Availability and Comment Period Deadline



- EIR is available:
  - [www.ebmud.com/central](http://www.ebmud.com/central)
  - Oakland Public Library (Dimond Branch)
- Draft EIR comments due by **January 13, 2020:**
  - [centralreservoir@ebmud.com](mailto:centralreservoir@ebmud.com)
  - Aaron Hope, Project Manager  
375 Eleventh Street, MS 701  
Oakland, CA 94607-4240
- Send general questions about EBMUD
  - Laura Luong, Community Affairs Representative  
[laura.luong@ebmud.com](mailto:laura.luong@ebmud.com)  
(510) 287-0140