



# Community Tour



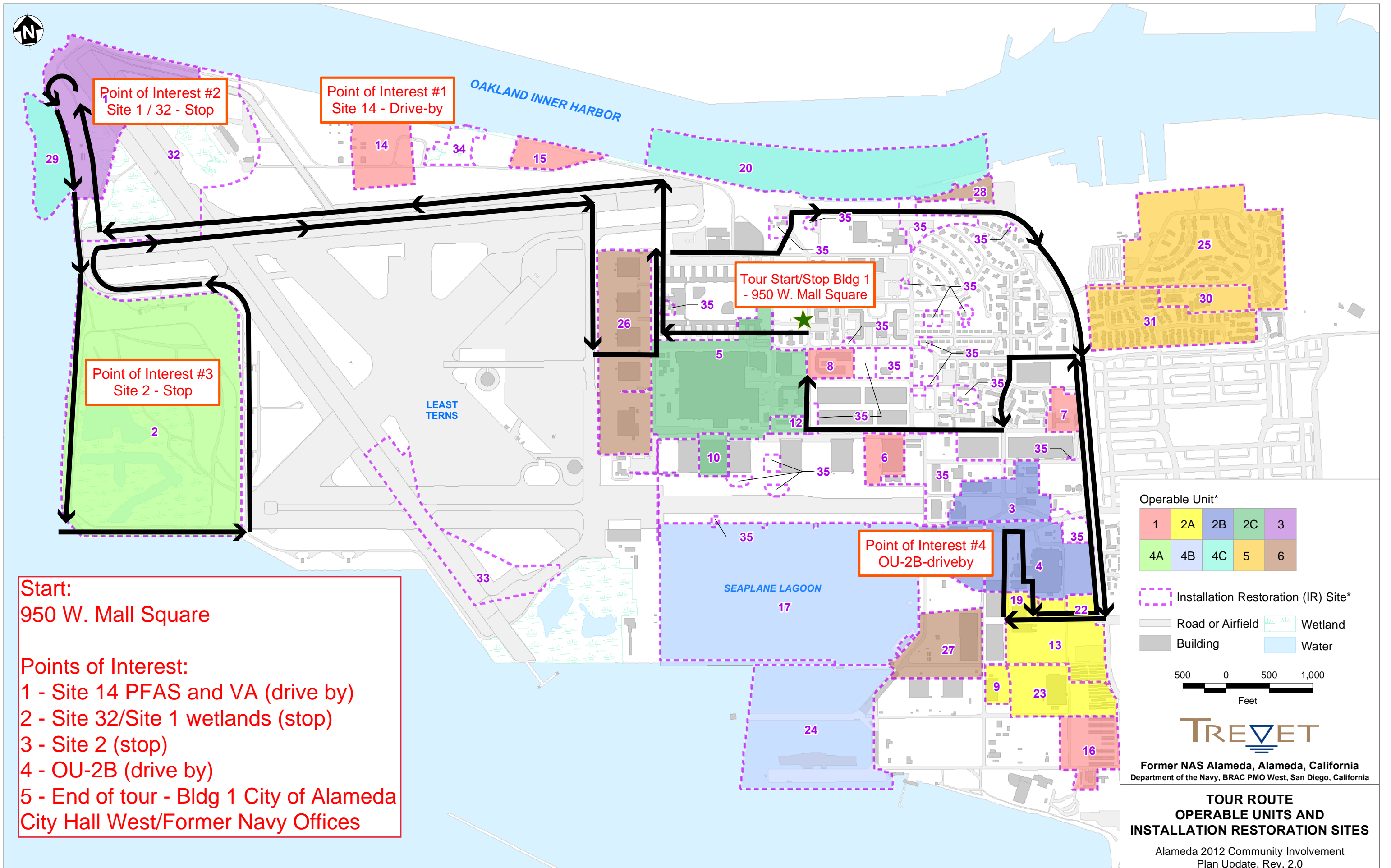
## Naval Air Station Alameda



**Alameda, California**

**August 3, 2024**

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**Start:**  
950 W. Mall Square

**Points of Interest:**  
 1 - Site 14 PFAS and VA (drive by)  
 2 - Site 32/Site 1 wetlands (stop)  
 3 - Site 2 (stop)  
 4 - OU-2B (drive by)  
 5 - End of tour - Bldg 1 City of Alameda  
 City Hall West/Formal Navy Offices

**Operable Unit\***

1	2A	2B	2C	3
4A	4B	4C	5	6

[Dashed Purple Line] Installation Restoration (IR) Site\*  
 [Grey Line] Road or Airfield [Green Swatch] Wetland  
 [Grey Swatch] Building [Blue Swatch] Water

500 0 500 1,000  
Feet

**TREVET**

Former NAS Alameda, Alameda, California  
 Department of the Navy, BRAC PMO West, San Diego, California

**TOUR ROUTE  
 OPERABLE UNITS AND  
 INSTALLATION RESTORATION SITES**

Alameda 2012 Community Involvement  
 Plan Update, Rev. 2.0

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## IR Site 14

### Site History

- Firefighter Training Area, located in the northwestern portion of Alameda Point
- Past uses at included firefighter training, parking equipment and storing miscellaneous items, defueling planes, cleaning machinery, storing ordnance, maintaining vehicles, fuel storage, and solvent use/storage
- Building 26 activities included storing and cleaning small-arms; oil and solvent use and storage and storing ammunitions and firearms
- Buildings 120, 121, 122, and 388 ammunition and related equipment storage
- Former Building 179 was used as a pump house for a water well
- Former Building 528 was used as a heavy equipment and vehicle maintenance shop

### Historical Environmental Concerns

- Soil contamination
- Groundwater contamination (vinyl chloride [VC])
- PFAS contamination of soil and groundwater





## IR Site 14

### Status of Environmental Cleanup

- Soil contamination: cleanup completed
- Groundwater contamination (VC):
  - o Since 2008, several phases of in-situ chemical oxidation (ISCO) have been conducted to clean up the vinyl chloride in the groundwater. The last phases were completed between 2018 and 2020 in the southern portion of the impacted groundwater plume
  - o Currently vinyl chloride monitoring is in progress
- PFAS contamination of soil and groundwater:
  - o Remedial investigation (RI) results showed that additional RI sampling is required
  - o Phase 2 RI field work will begin in 2025
  - o A pilot test is in progress to evaluate effectiveness of Colloidal Activated Carbon to minimize the migration of PFAS into the Oakland Inner Harbor
  - o Injections for pilot test completed in July 2023
  - o Post-injection performance monitoring for the pilot test is in progress





## IR Site 32

### Site History

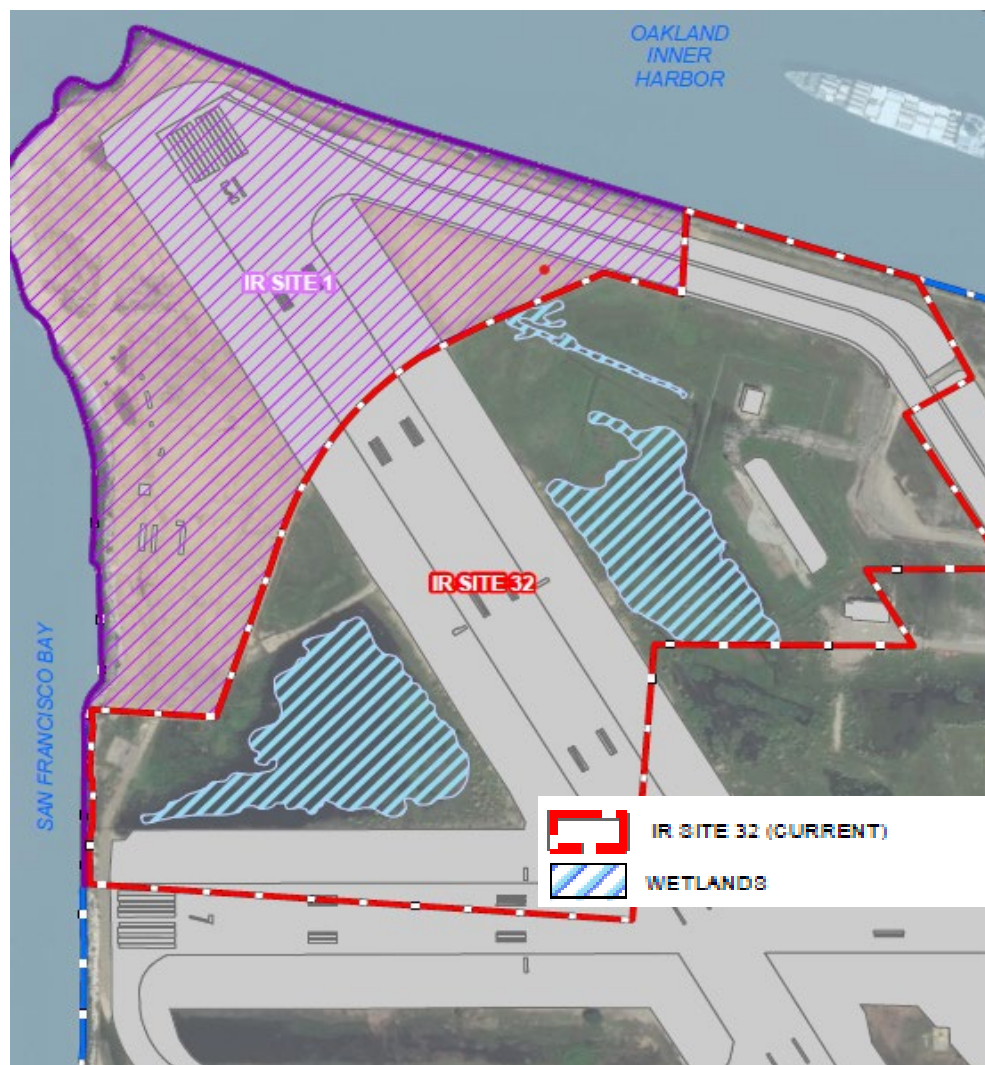
Originally open water of San Francisco Bay and then part of the Alameda Mole railroad starting in 1883. Following land reclamation via hydraulic fill and dredged materials in the early 1930s through early 1940s, the Site was used for equipment, vehicle, and aircraft staging. Taxiway and runway were extended through the Site in the late 1950s and an ordnance magazine with associated buildings were constructed in the early 1960s. Site is currently 60.3 acres of open space with seasonal wetlands.

### Historical Environmental Concerns

- Low Level radiological wastes (LLRW) resulting from earthmoving activities on Site 1 during runway construction
- Polychlorinated biphenyl (PCBs), polynuclear aromatic hydrocarbons (PAHs), and lead in soil, from past use

### Prior Environmental Actions

- Investigated as part of Site 1 starting in 1990 and then as a separate Site starting in 2007
- Removal action (2007) and further radiological investigation (2011 and 2013)
- Revised Remedial Investigation/Feasibility Study (2017)
- Proposed Plan (2018) presented the selected remedy for Site 32: 3-foot thick soil cover.



## IR Site 32

### **Fill Soil Import and Stockpiling (2021)**

- In anticipation of the remedial action (RA) construction, the Navy imported approximately 335,000 cubic yards of soil between 2018 and 2021 and stockpiled it onsite, for the planned soil cover remedy construction
- Soil importation and stockpiling activities were performed in accordance with the Final Fill Import, and Stockpiling Task Management Plan, for IR Site 32 (2018)

### **Record of Decision (ROD) (2023)**

- Final ROD was issued on 9/1/2023
- SELECTED REMEDY:**
- Scan surface soil and remove radiological contaminants
  - Install a 3-foot thick soil cover
  - Install Shoreline stabilization measures (similar to Site 1)
  - Install and establish erosion control vegetative on the cover
  - Mitigate for loss of wetlands (mitigation to be determined)



### **Remedial Design (RD) (2025)**

- RD conceptual design to be prepared 2025
- RD will present remedy components
- RD will include the results of the wetland mitigation valuation: “Jurisdictional Wetland Delineation Assessment”
- RD will include a Wetland Mitigation Plan, plan will identify the options evaluated and a realistic and preferred wetland mitigation approach for Site 32





# IR Site 1

## Site History

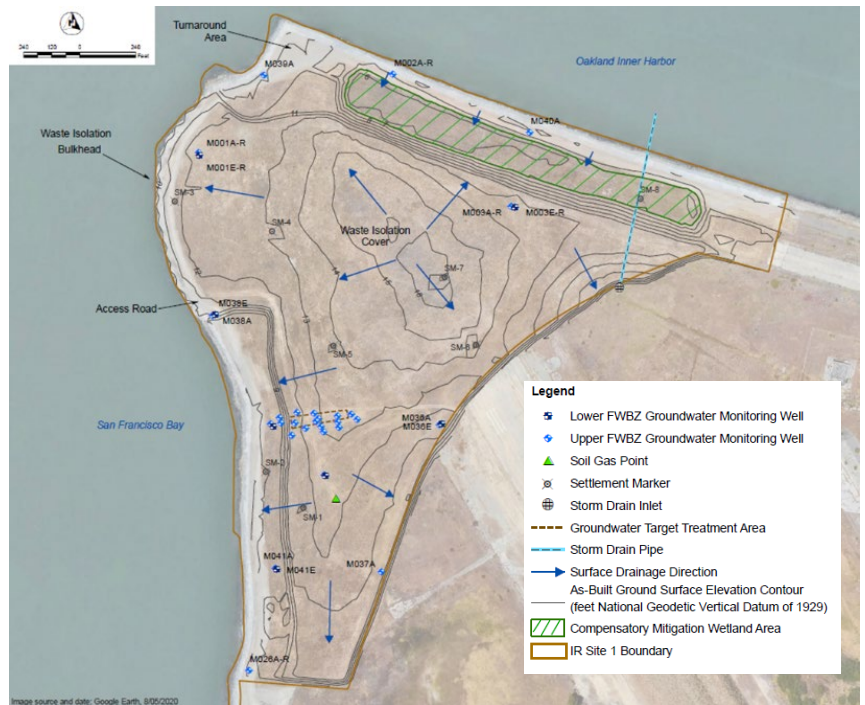
- Location of the Alameda Mole railroad and ferry transit pier in the late 1800s
- The principal waste disposal area for former Naval Air Station Alameda between 1943 and 1956
- Taxiways and runways were extended over the disposal area in the 1950s

## Historical Environmental Concerns

- Burnt waste material and construction demolition debris
- Low-level radiological waste disposal (1943-1956)

## Soil Remedial Action (2015)

- Surface soil scanned, radiological contaminants removed
- Installed a 3-foot thick soil waste isolation cover (WIC)
- Waste Isolation Bulkhead (WIB) installed on northwest point
- Shoreline stabilization measures installed on shoreline
- Installed and established erosion control vegetative cover on WIC
- Constructed 2.25 acres of Compensatory Mitigation Wetlands on site
- Final Soil Remedial Action Completion Report (RACR) (2022)



## Groundwater Remedial Action (RA) (2015)

- In-Situ Chemical Oxidation (ISCO) to treat VOC groundwater plume (3 rounds of injections) prior to installing WIC
- Installed Treatment Area Well Network (TAWN) (post RA)
- Ongoing groundwater monitoring of TAWN to monitor progress towards meeting remediation action objectives (RAOs) and remediation goals (RGs)

## Ongoing Operations, Maintenance and Monitoring of Remedy

- Groundwater monitoring (quarterly/semiannual/annual)
- Long-Term Operations and Maintenance (LTM) of the WIC, WIB and mitigation wetlands

## Shoreline Stabilization Project (2020)

- Shoreline stabilization installed to ensure the long-term protection of the soil cover remedy from erosion
- Approximately 3,280 linear feet of new shoreline revetment (armor rock) installed along SF Bay and Oakland Inner Harbor shorelines



# IR Site 1

## Compensatory Mitigation Wetlands Adaptive Management (2021 – on)

- Challenges identified in 2020 with establishing native wetland vegetation needed to meet success criteria of Site 1 wetlands
- The Navy (with BCT approval) implemented adaptive measures in 2021
- Remove non-native/invasive species from 2.25 acres of wetlands and 50-foot buffer zone surrounding the wetlands
- Plug planting (9,000 propagules) of carefully selected population of native wetland species
- Installation and operation of temporary irrigation system to support establishment of new native plants during dry season
- Monthly non-native invasive species weeding events within wetlands and 50-foot buffer zone
- Surface soil nutrient testing, and application of nutrient amendments to topsoil
- Annual re-seeding events



## Groundwater Optimization Study (2024)

- Navy conducting a groundwater optimization study to determine if site conditions support ongoing reductive dechlorination through Monitored Natural Attenuation (MNA)
- Collecting additional data to assess the presence of petroleum free-product (Light, Non-Aqueous Phase Liquid, or “LNAPL”), evaluate ongoing progress towards groundwater RGs, and determine if additional GW treatment is warranted.
- Installed three additional downgradient groundwater monitoring wells within the TAWN and adjacent to the SF Bay shoreline, to further assess potential groundwater impacts to surface water
- Results of this study are anticipated to be submitted to the BCT in September 2024



## Access Roadway Improvements (2023)

- Beginning in August 2023, the Navy removed a temporary access roadway (installed in 2019 to support the shoreline stabilization project), and re-installed a permanent and durable access road
- The new access road ensures continued, safe long-term Site access in support of ongoing CERCLA LTM actions

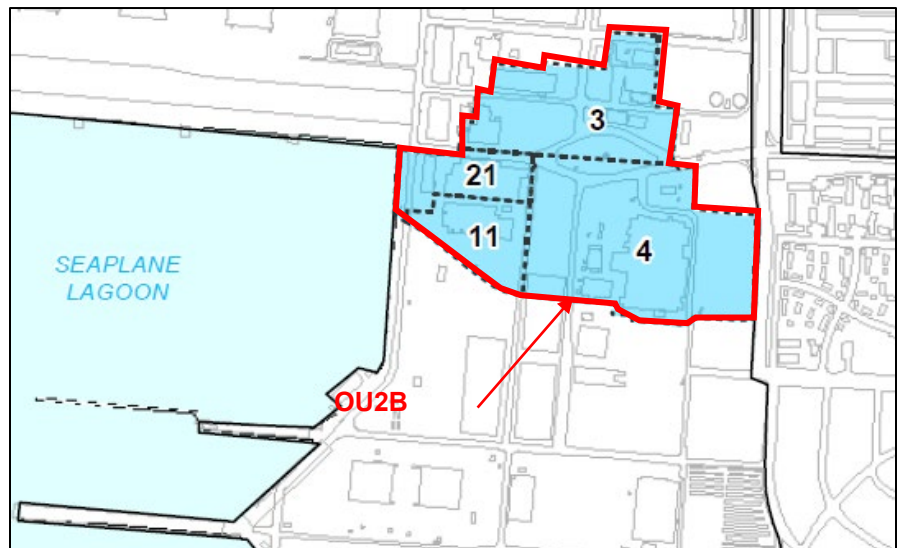




## Operable Unit 2B (OU2B) IR Sites 3, 4, 11, and 21

### Site History:

- Site 3: Former Fuel Storage Area
- Site 4: Building 360 – Aircraft Engine Facility
- Site 11: Building 14 – Engine Test Cell
- Site 21: Building 162 – Ship Fitting and Engine Repair
- The fuel storage and maintenance facilities were located in the eastern part of Alameda Point
- Building 360 was a major industrial facility, housing multiple shops including a blast shop, paint show, machine shops, welding shop, and plating shop



### Historical Environmental Concerns:

- Soil Contamination
- Groundwater Contamination

### Soil Remedial Action (2014):

- Excavation and disposal of impacted soils from IR Site 3 in 2014
- Confirmation soil sampling confirmed limits of excavation areas
- Final Soil Remedial Action Completion Report (RACR) 2015



Soil Remedial Action 2014

# Operable Unit 2B (OU2B) IR Sites 3, 4, 11, and 21

## Groundwater Remedial Action (RA):

- Groundwater contamination at IR Sites 4, 11, and 21
- Several treatability studies conducted for cleanup of groundwater, including bioremediation
- In-situ bioremediation (ISB) and institutional controls (ICs) as the selected remedy for groundwater
  - o Based on modeling conducted during the feasibility study, the Record of Decision (ROD) estimates that it will take between 25 and 40 years for the remedial goals (RGs) to be achieved
- The Final Groundwater RD/RAWP was prepared and finalized in 2018
- Four ISB injection events (Events 1 through 4) were completed between 2018 and 2021
- Monitoring of groundwater is ongoing and performed under the Basewide Groundwater Monitoring Program (BMGP)
- The fifth ISB injection event (Event 5) began in July 2024
- PFAS has been identified at IR Site 4 and additional PFAS investigation is planned

