



Naval Air Station Whidbey Island Restoration Advisory Board Meeting October 19, 2017



Agenda



5:00 – 5:10

Welcome and Introductions

5:10 – 5:20

Overview

- Ground Rules
- What is the RAB?
- Review May 2017 RAB Action Items
- RAB Accomplishments
 - Introduce new RAB members & Community Co-Chair(s)
 - RAB Charter

**5:20 – 5:50
(part 1)**

Environmental Restoration Program Overview/Update

5:50 – 6:00

BREAK

**6:00 – 6:30
(part 2)**

Environmental Restoration Program Overview/Update

6:30 – 6:50

Community Comments

6:50 – 6:55

Action Items

6:55 – 7:00

Next Meeting Date and Agenda Topics



Ground Rules



- **Please turn cell phones off or to vibrate.**
- **If you must take urgent calls on the cell phone, please take your conversation outside.**
- **Be respectful of others.**
- **Please talk one at a time and wait to be recognized by a Co-Chair.**
- **Please limit side conversations.**
- **Be patient when listening to others speak and do not interrupt them please.**
- **Please stay on topic, while limiting conversation to agenda topics.**
- **Please address any concerns about the discussion or the meeting with the Co-Chairs.**



What is the RAB?

*“A RAB is a stakeholder group that meets on a regular basis to discuss **environmental restoration** at a specific property that is either currently or was formerly owned by the DoD, but where the DoD oversees the environmental restoration process.”*

- What is **Environmental Restoration**?
 - Includes all environmental investigations and/or cleanup that fall under the CERCLA regulatory framework.
 - Also includes the Military Munitions Response Program and State-regulated Petroleum cleanups.
- More information on RABs, including the RAB Rule Handbook, can be found at:
<http://www.denix.osd.mil/rab/home/>
- More information on Environmental Restoration within the Navy can be found at:
<http://www.navfac.navy.mil/go/erb/>



May 2017 RAB Action Items



- Revitalize RAB memberships (on-going)
- Vote on RAB Co-Chair (complete)
- Revise and finalize RAB charter (complete)
 - Signed by ICO October 2017
- Provide update on history of restoration sites
- Finalize meeting minutes from 15 May 2017 meeting
 - Including common acronym list
- Received and approved applications for new RAB members (10 total)
- Held RAB member meeting
- Voted for Community Co-Chair
 - Kathy Lester (Lead Co-chair)
 - Gary Windlund (Deputy Co-Chair)

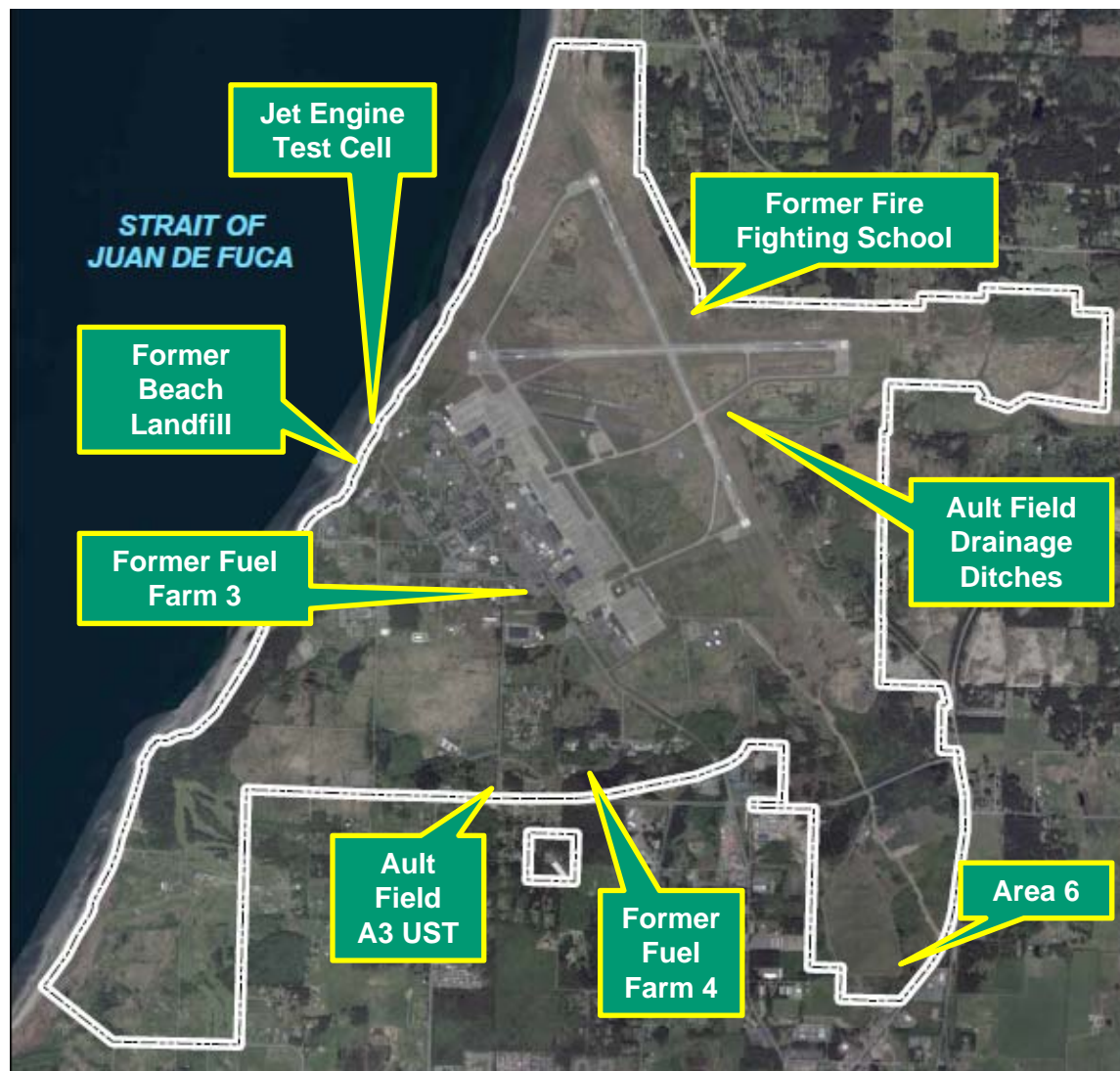


NAS Whidbey Island Environmental Restoration Sites





NAS Whidbey Island, Ault Field





NAS Whidbey Island, Seaplane Base



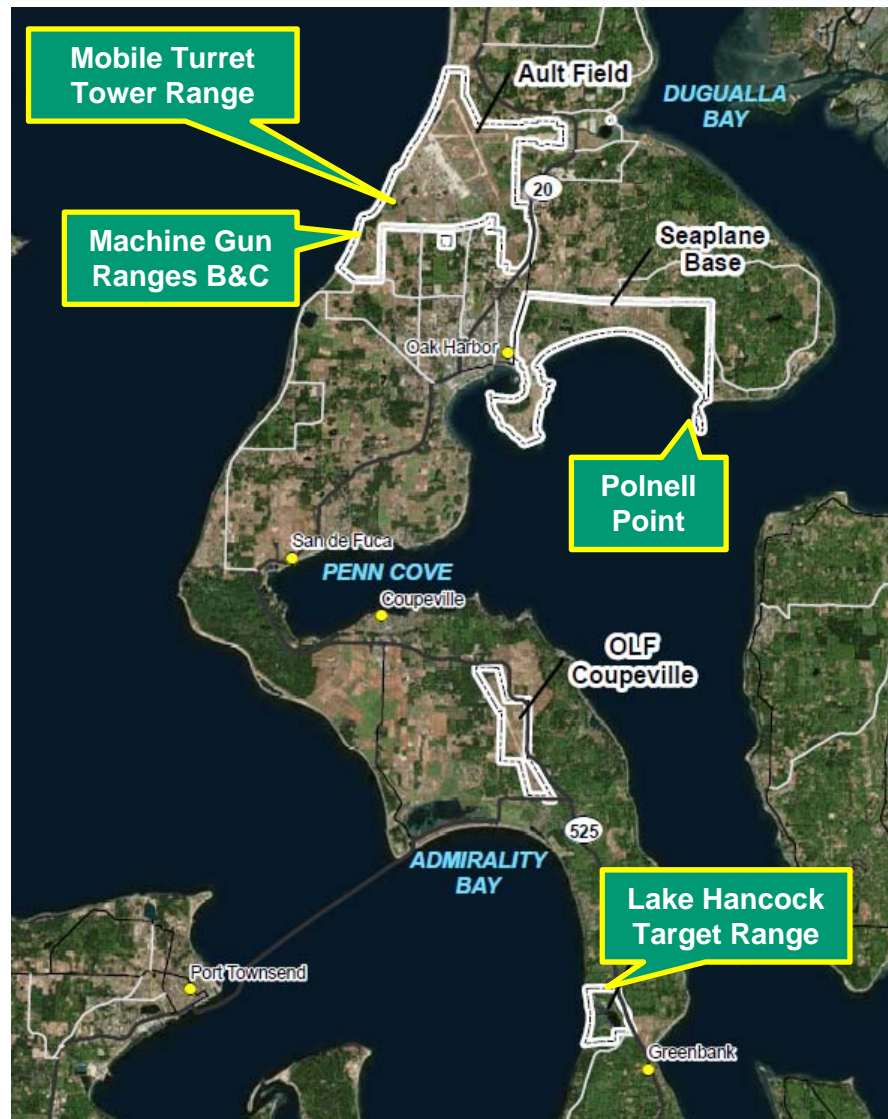


NAS Whidbey Island, Outlying Landing Field (OLF) Coupeville



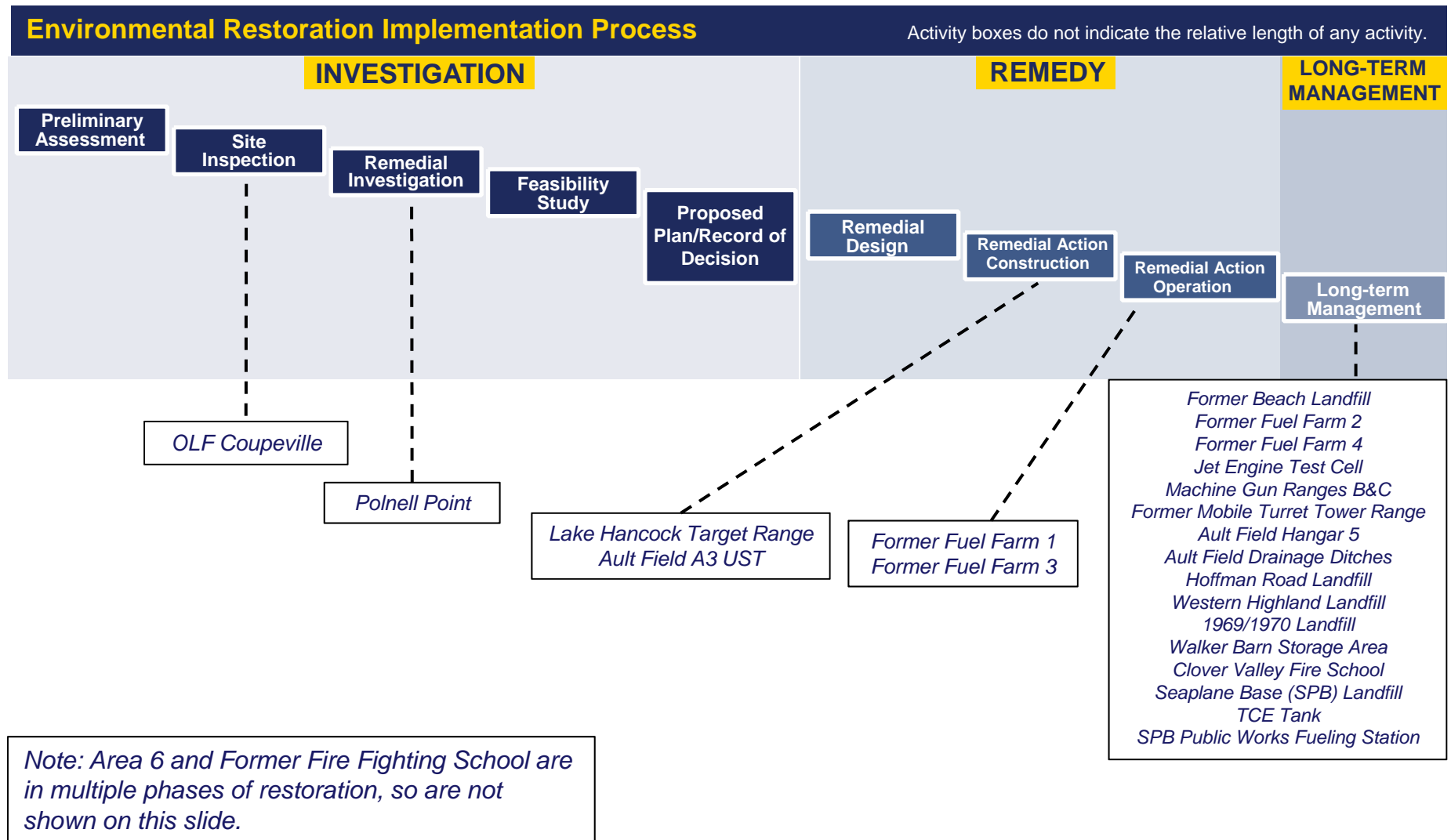


NAS Whidbey Island - Munitions Sites





Where are we in the Environmental Restoration Process?





Environmental Restoration Land Use Controls

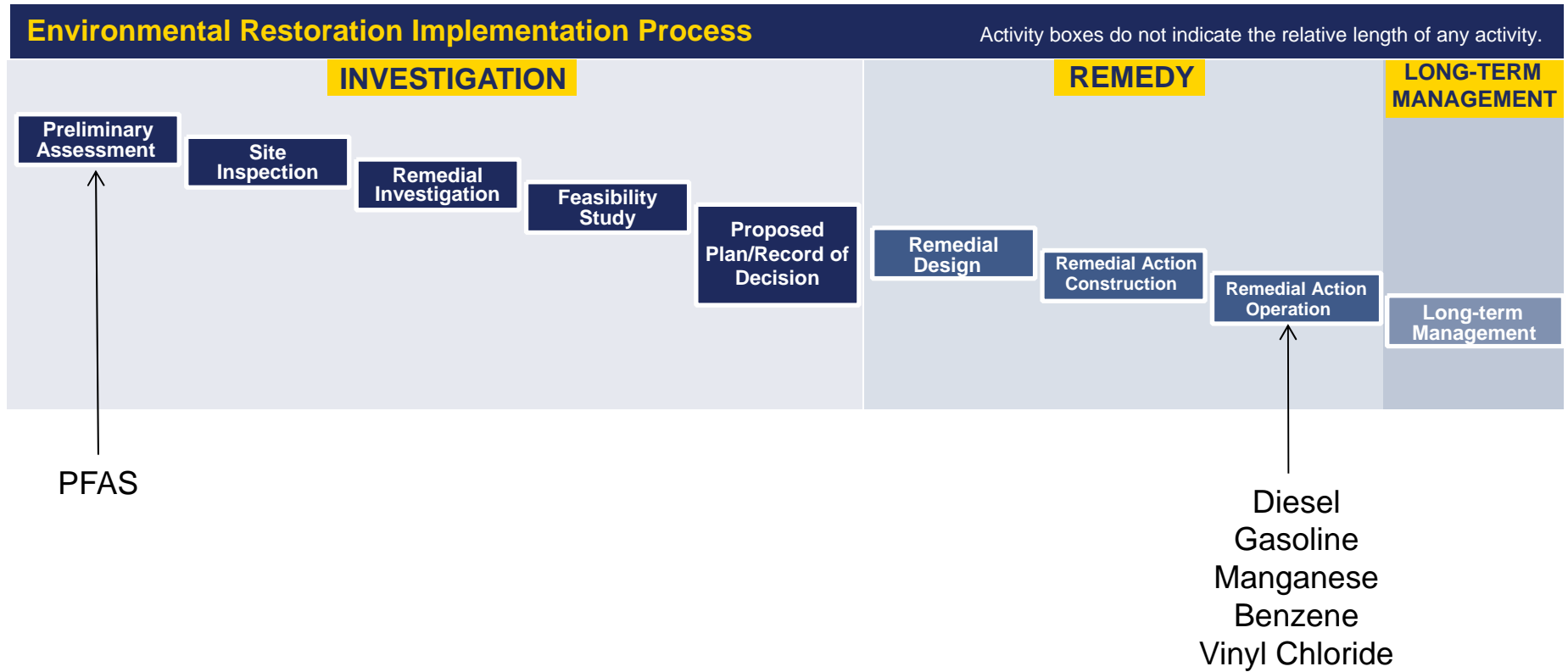


- Land Use Controls (LUCs) are part of remedial action operation and long-term management
- LUCs are required when contamination is left at a site above residential cleanup levels
- Types of LUCs include signs, fences, & deed restrictions
- All LUCs are inspected annually





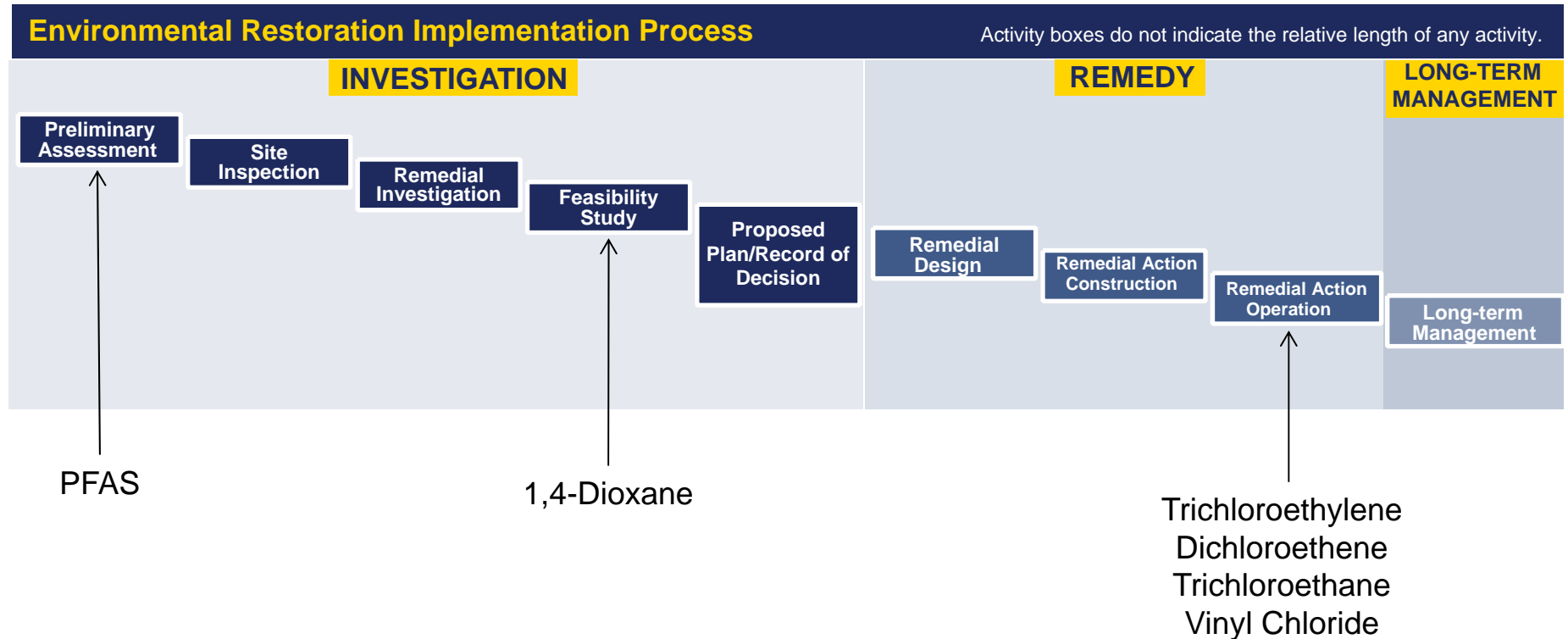
Where are we in the Environmental Restoration Process at the Former Fire Fighting School?



PFAS – Per- and polyfluoroalkyl substances



Where are we in the Environmental Restoration Process at Area 6 Landfill?



PFAS – Per- and polyfluoroalkyl substances



Area 6 Landfill – Background



Time Period	Event
1993	Signed Record of Decision (ROD) to address volatile organic compounds (VOCs) in groundwater
1995-1996	Constructed groundwater treatment system to contain the VOC groundwater plumes and installed a landfill cap
2003	1,4-Dioxane identified in groundwater at landfill
2009	Started evaluating treatment alternatives for 1,4-Dioxane, conducted 4 pilot studies on site
2015-2017	Drafted Focused Feasibility Study (FFS)

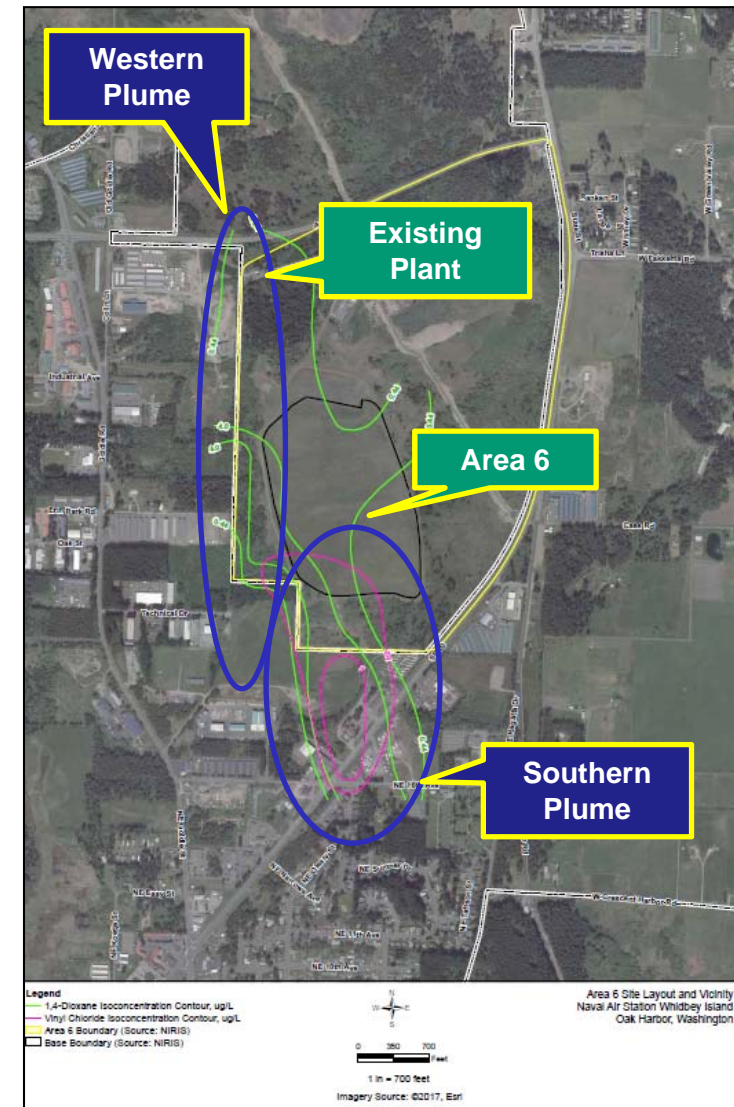




Area 6 Landfill – Update on New Remedy



- Existing pump and treat plant will be optimized to address the western plume
- New advanced oxidation pump and treat plant will be installed along the southern boundary to address southern/off-base plume
- Groundwater modeling will be performed to design best location and flowrates for new extraction wells at both plants
- Surface discharge of treated water (same as current system)





Area 6 Landfill



Work conducted since last RAB...

- **Investigation Related (PFAS, 1,4-Dioxane, & Vinyl Chloride)**
 - Drafting on-base PFAS sampling and analysis plan
 - Off-base drinking water and groundwater well inventory search
 - Drafting off-base 1,4-dioxane and vinyl chloride sampling and analysis plan (and PFAS, if found on-base)
- **Feasibility Study Related (1,4-Dioxane)**
 - Finalized endpoint criteria for FFS
- **Remedial Action Operation Related (all VOCs)**
 - LUC inspection
 - On-going groundwater treatment system and landfill maintenance and operation
 - Conducted annual groundwater monitoring



Area 6 Landfill



Work planned before next RAB...

- **Investigation Related (PFAS, 1,4-Dioxane & Vinyl Chloride)**
 - Sample on-base groundwater wells for PFAS
 - Public meeting for off-base sampling
 - Off-base sampling for 1,4-dioxane, vinyl chloride, and PFAS (if found on-base)
- **Feasibility Study Related (1,4-Dioxane)**
 - Finalize FFS
- **Remedial Action Operation Related (VOCs)**
 - Continued on-going groundwater treatment system and landfill maintenance and operation



PFAS Drinking Water & Groundwater Investigation



Work conducted since last RAB...

■ Off-Base Residences

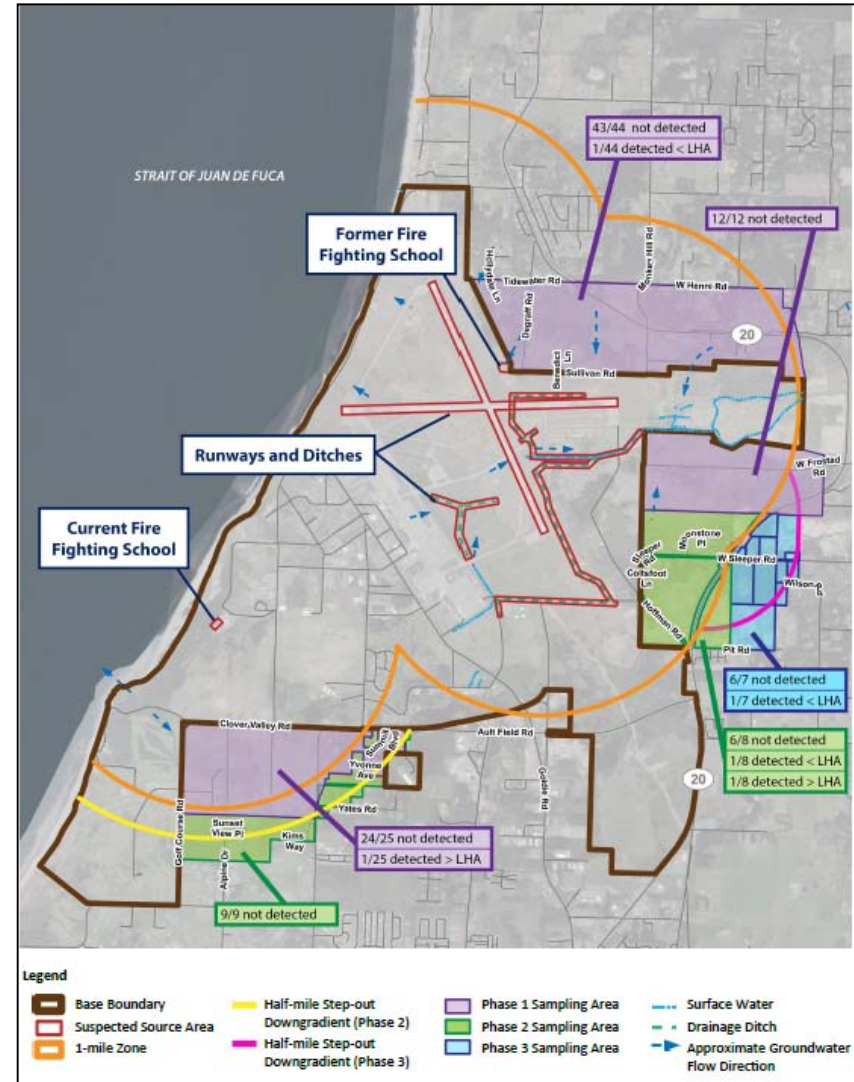
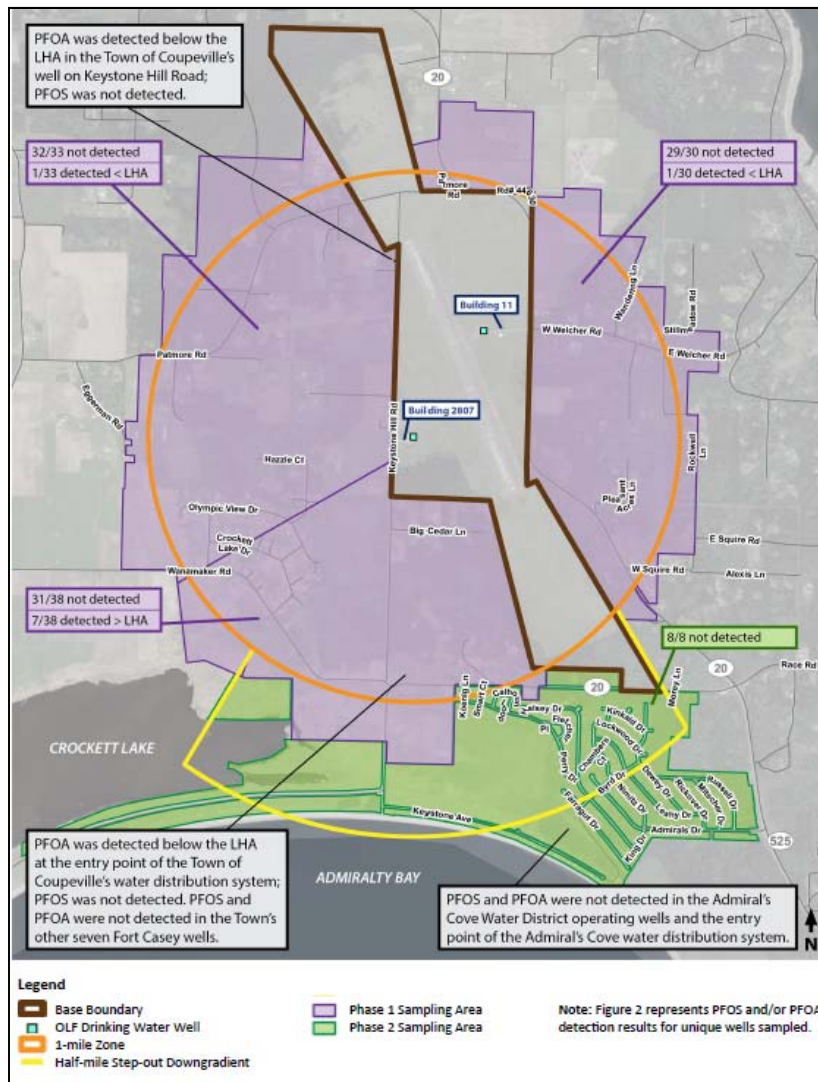
- Phase 3 drinking water investigation
- Continue provide bottled water to homes with Perfluorooctyl Sulfonate (PFOS) and/or Perfluorooctanoic Acid (PFOA) exceedances
- Work plan for off-base drinking water re-sampling
- Began evaluation of interim and long-term solutions

■ On-Base

- Began Preliminary Assessment for PFAS Ault Field, OLF Coupeville, and Seaplane Base
- Work plan development Site Inspections at Ault Field and OLF Coupeville



Phase 3 Drinking Water Results

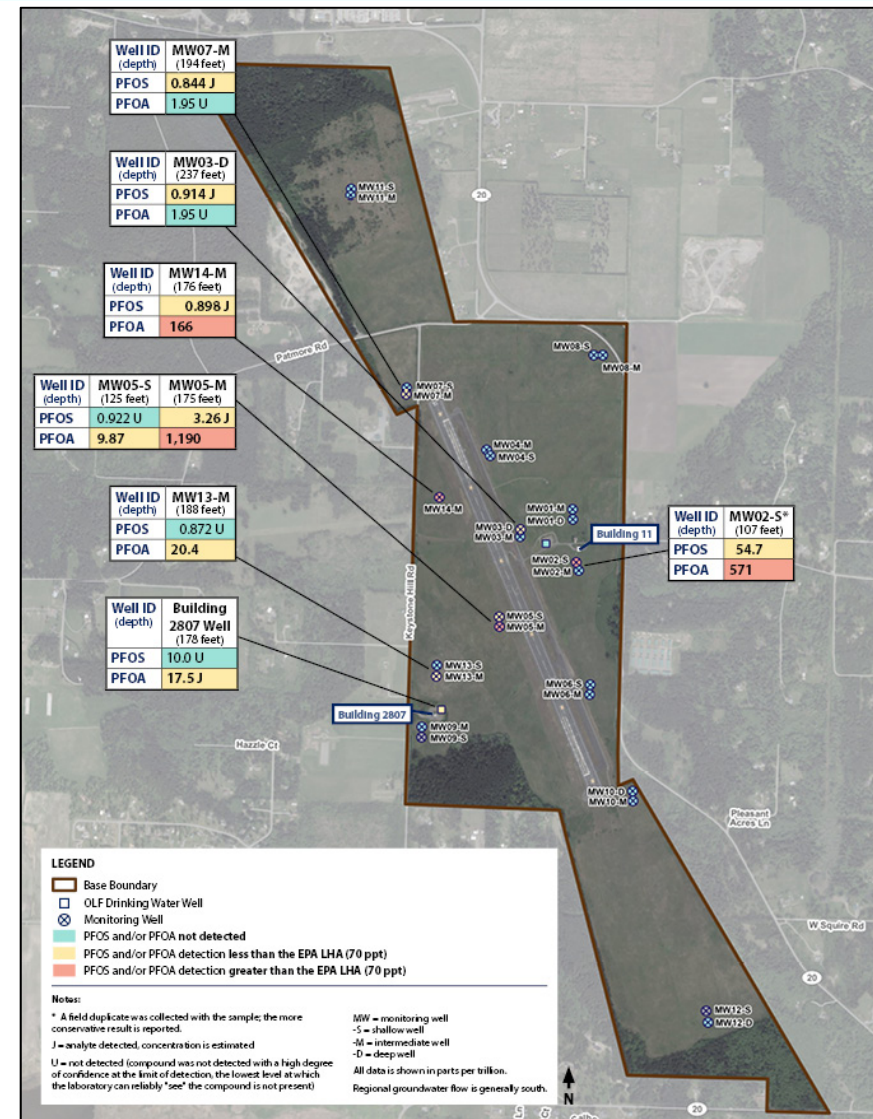




OLF Site Inspection Results



- 27 new groundwater wells
- 3 wells with PFOA above LHA
- 4 wells with PFOS or PFOA below LHA
- 18 wells with no detections
- 2 dry wells
- Groundwater flow generally to south
- No protective layer above middle aquifer (source of primary drinking water in area)





PFAS Drinking Water & Groundwater Investigation



Work planned before next RAB...

■ Off-Base Residences

- Off-base drinking water sampling for PFAS and other chemicals that may impact filter performance
- Interim solutions in place for homes with PFOS and PFOA exceedances

■ On-Base

- Site Inspection (drill and sample new groundwater wells) at Ault Field, OLF Coupeville, and Seaplane Base



Q&A SESSION



Any questions regarding PFAS or Area 6?



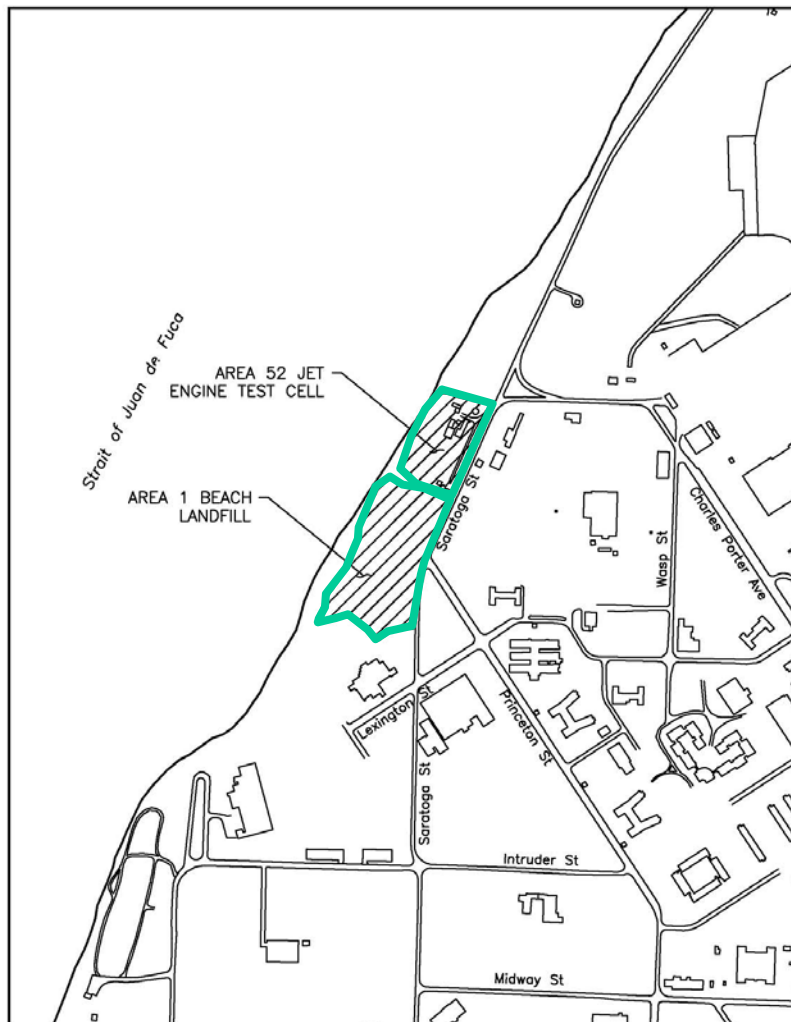
TIME FOR A SHORT BREAK





Area 1, Former Beach Landfill

Shoreline Erosion Protection System Construction



- Located on the western edge of Ault Field.
- Both Areas 1 & 52 are no longer being monitored. Both areas have LUCs in perpetuity due to presence of “landfilled” debris.
- The western boundary of Areas 1 & 52 consists of an 10 to 13-foot high shoreline bluff protected by a 1340-foot long seawall constructed in 2012 as part of an “Time-Critical” repair.
- Function of seawall prevent exposure to landfill contents due to wave erosion.



Beach Landfill, Area 1

Shoreline Erosion Protection System Construction

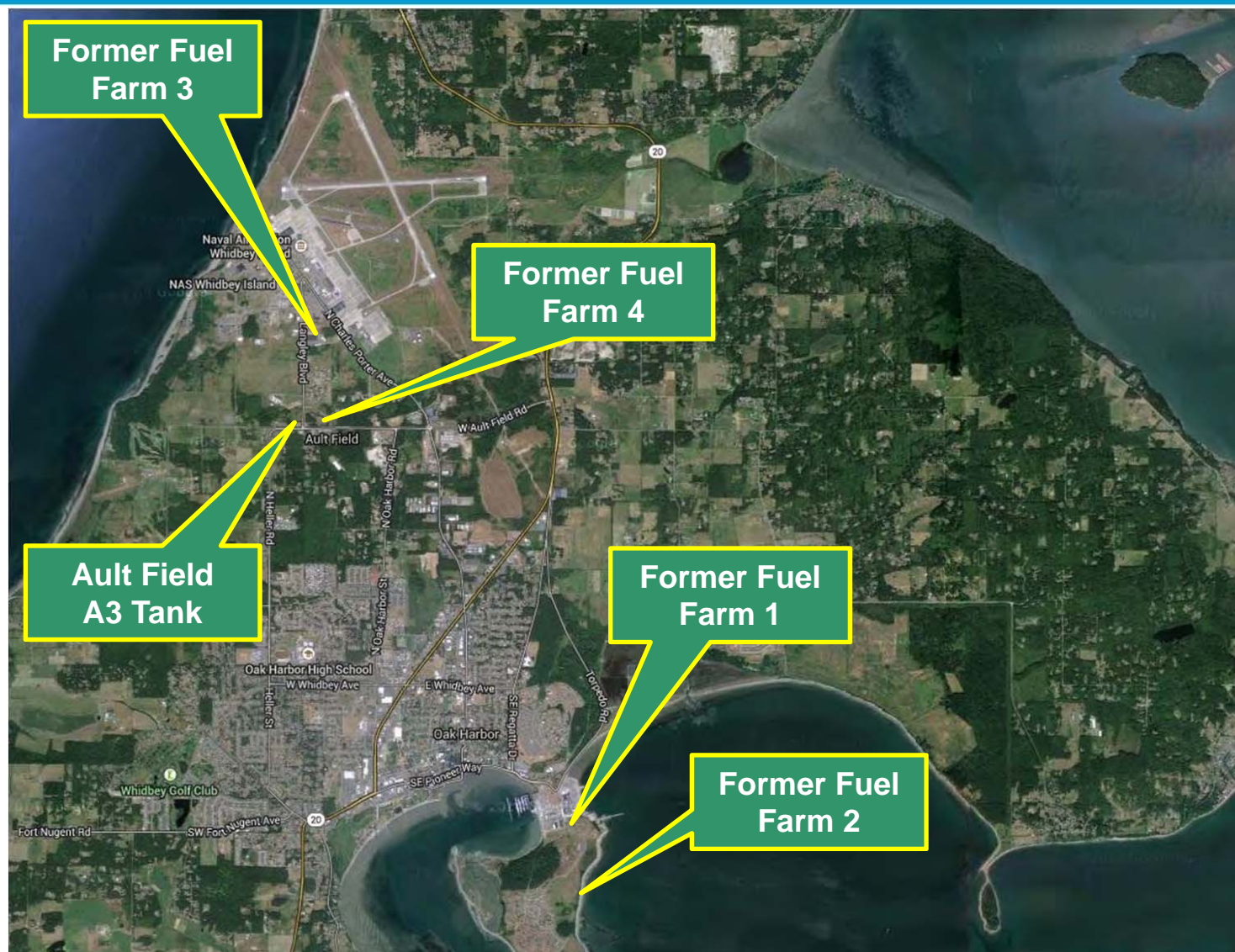


- Seawall construction completed in March 2017
- Final grading/restoration completed in September 2017 – delayed due to wet conditions
- Seeding completed in late September 2017
- Planning on seawall repair every 5 years





Petroleum Restoration Program





Petroleum Restoration Program Update



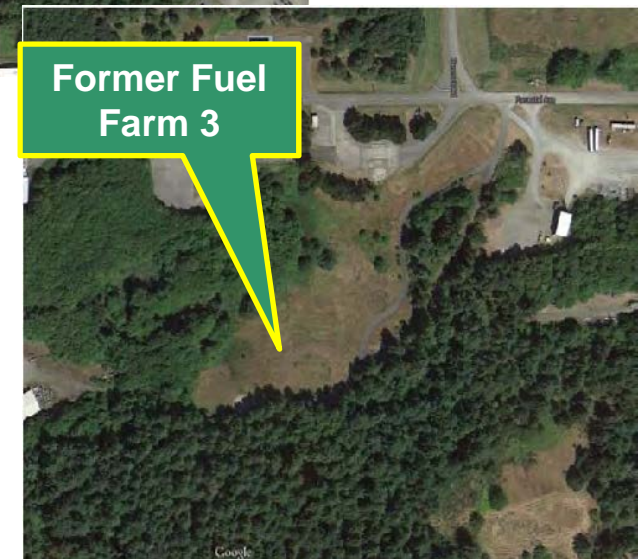
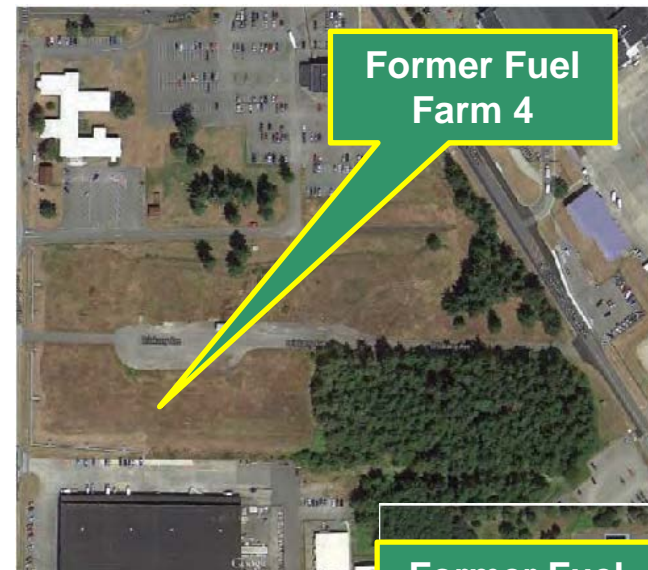
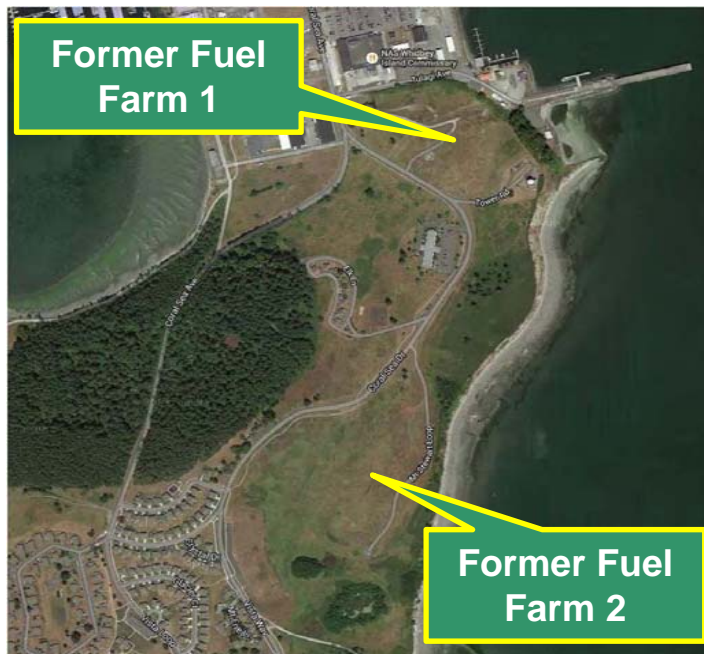
Work conducted since last RAB:

Completed Since August 2016

- Groundwater monitoring sampling

Work planned before next RAB:

- Work on 3rd Five Year Review





A3 Underground Storage Tank Site

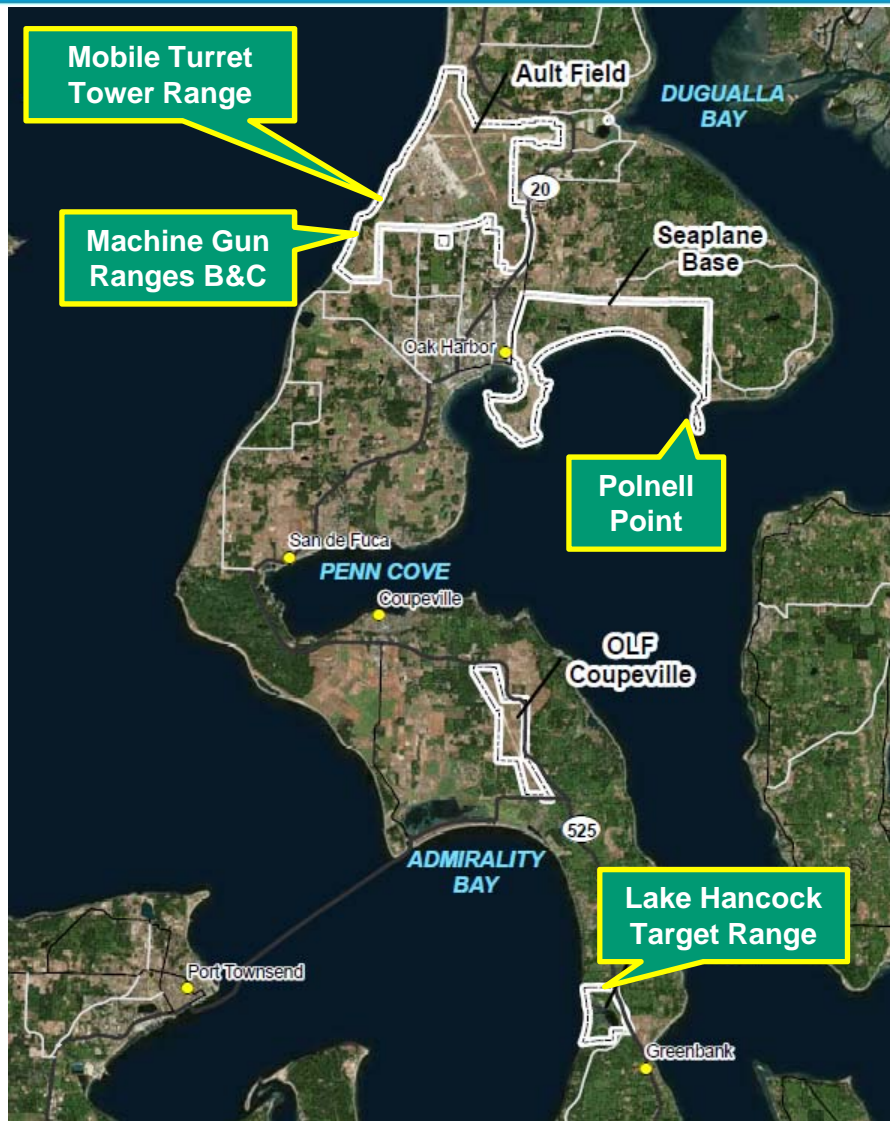


Time Period	Event
2013	A 4000-gallon Underground Storage Tank (UST) was discovered during construction of A3 Skywarrior Airplane memorial.
2015	A Site Investigation (SI) was conducted to delineate the extent of petroleum contamination in soil and groundwater.
2016-2017	A Supplemental SI was conducted to delineate the horizontal extent of contamination and to investigate geophysical anomalies identified in 2015 study.
2018	Planned excavation of soil above WA Department of Ecology's soil cleanup levels. Restore site to previous conditions.





Military Munitions Response Program



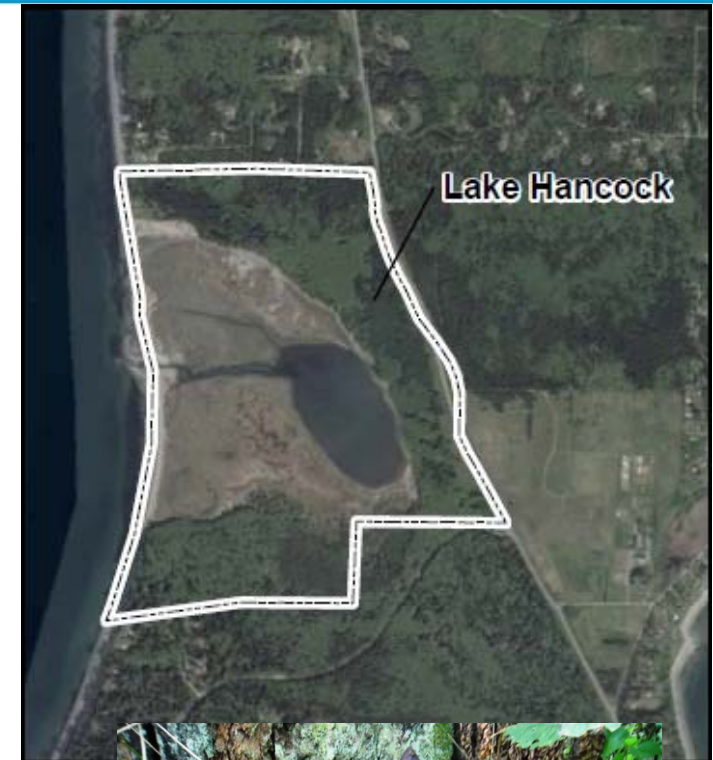
- Lake Hancock Target Range
- Machine Gun Ranges
 - Mobile Turret Tower Range
 - Machine Gun Ranges B & C
- Polnell Point Explosive Ordnance Disposal/Burn Area



Lake Hancock Target Range



Time Period	Event
1972-1973	EOD Surface and Limited Subsurface Clearance: Surface clearance of wetlands, beach areas and underwater to ~ 50 feet off the beach. Recovered 14 tons of practice bombs, rockets & smokes. Subsurface clearance of ~3 acres, recovered 3 inert rocket motors from depths of 3' to 5'. All recovered items described as inert.
1995-1997	Site Hazard Assessment: Sediment and surface water sampling; no munitions related compounds exceedances, some metals found above background.
1996	Geophysical Survey and Investigation: Found steel plates and various metallic debris.
1997	Removal Action: Cleaned up metal-contaminated soil/sediment near the former observation shelter.
2002	Initiation of Military Munitions Response Program....





Lake Hancock Target Range

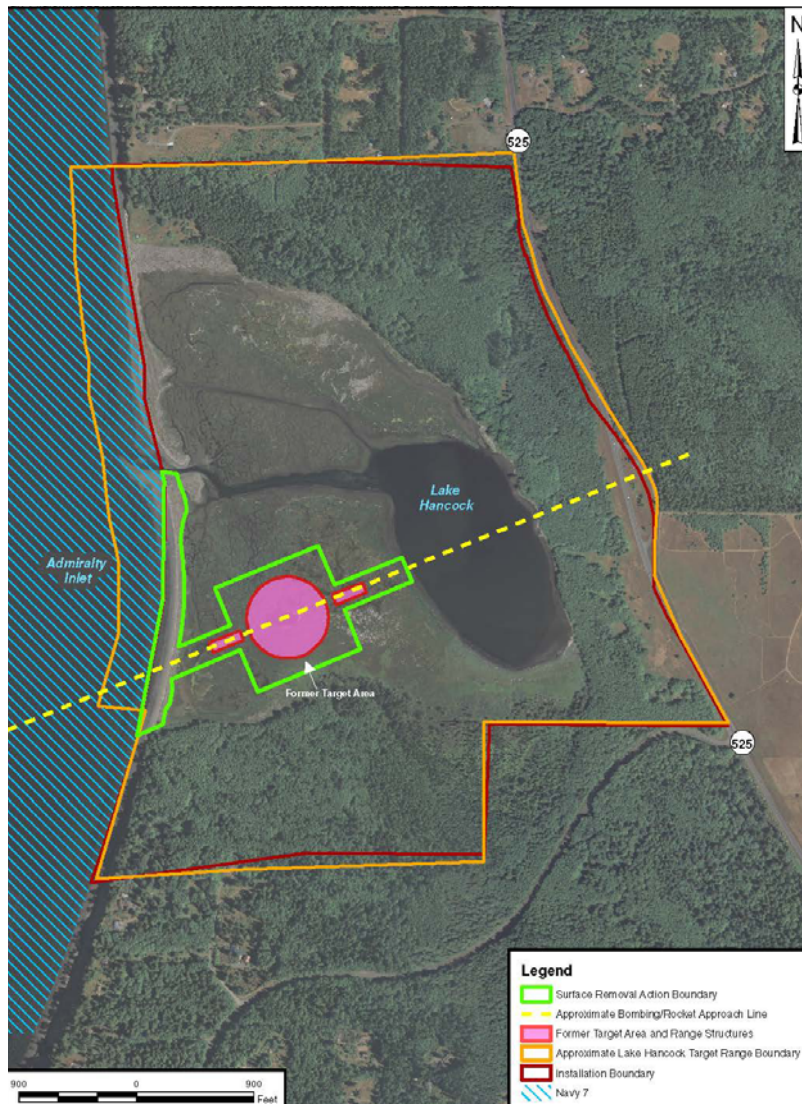


Time Period	Event
2007	Preliminary Assessment: Potential munitions-related hazards identified.
2009	Site Investigation: Analyzed for lead and perchlorate in soil/sediment; no exceedances found.
2010-11	Feasibility Study: Four alternatives for surface and limited subsurface clearance evaluated.
2012-13	Wetlands Delineation & Impact Study: WA Department of Ecology agreed to surface clearance only (no subsurface) for the high-quality wetlands
2016	Proposed Plan: Final chosen remedy included surface removal and land use controls. Public meeting to present Proposed Plan was held in Greenbank on 11 July 2016.
18 Sept 2016	Record of Decision: Signed by CAPT Moore and Ecology representative.
2016-17	Biological Assessment: Completed initially in 2013 as part of substantive NEPA consultation process; revised/updated as needed.
2017-18	Remedy to be implemented....



Lake Hancock Target Range

Remedial Action



- **Surface Removal Only (within green outlined area)**
- **Land use controls, including:**
 - Annual inspections and surface removal of munitions debris (if required) around target area;
 - Five-year inspections and surface removal of munitions debris (if required) within the entire removal action area;
- **Repair and/or replace fencing and signage.**

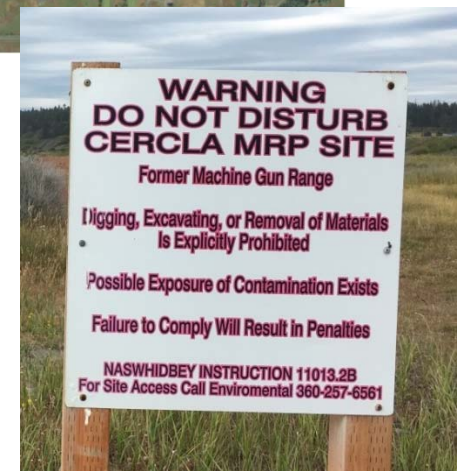
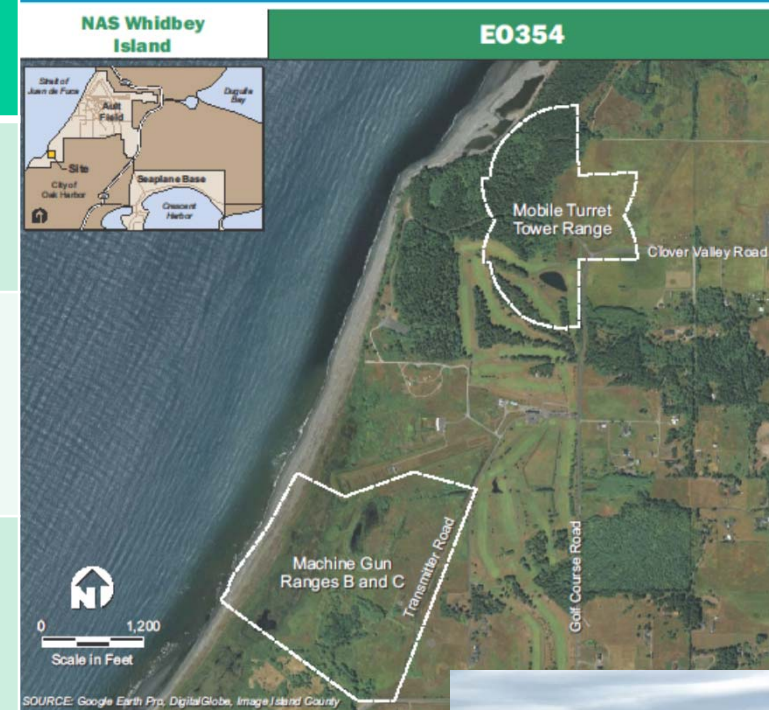




Aviation Fleet Gunnery School



Time Period	Event
1940s-1957	Machine Gun Ranges B & C: Land-to-air and land-to-land training of naval aviation gunners using .50-caliber machine guns
1940s-1948	Mobile Turret Tower Range: Used to train naval personnel to fire at moving targets from fixed and mobile firing positions using 12-gauge shotguns.
2007	Preliminary Assessment: Recommended SI for Machine Gun Ranges B and C and the Mobile Turret Tower Range.
2013	Site Investigation: No munitions constituents above industrial soil cleanup levels. USEPA concurred with no further action with land use controls limiting land use to recreational/industrial use only.
2013-Future	Annual LUC Inspections: In perpetuity.

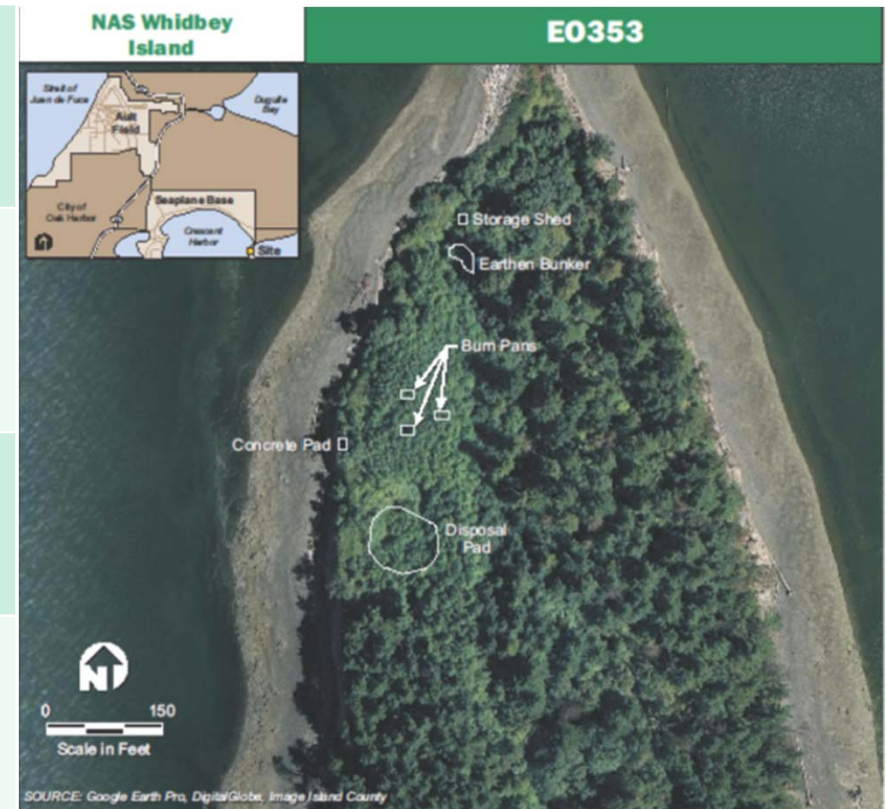




Polnell Point



Time Period	Event
1992	Hazardous Waste Evaluation Study: Analyzed soil from 8 shallow borings, no ordnance chemical contamination present.
2000	EOD Visual Survey: Found “very minimal amounts of non-explosive ordnance debris.” No live ordnance items were encountered..
2006	Preliminary Assessment: Recommended SI for munitions constituents including perchlorate.
2009	Site Investigation: No exceedances of munitions constituents above industrial soil cleanup levels. Identified munitions debris embedded in cliff face and on beach.
2023-24	Remedial Investigation planned...





Community Input



- **Community Comments**
- **Action Items**
- **Next Meeting Date, Time and Location**
- **Future Agenda/Discussion Topics**
- **Meeting Adjournment**