



Naval Air Station Whidbey Island Restoration Advisory Board Meeting April 10, 2019



Agenda



- | | |
|--------------------|---|
| 5:00 – 5:10 | Welcome and Introductions |
| 5:10 – 5:20 | Overview <ul style="list-style-type: none">• Ground Rules• Review August 2018 RAB Action Items• Approve RAB Meeting Minutes |
| 5:20 – 6:20 | Environmental Restoration Program Overview/
Update <ul style="list-style-type: none">• CERCLA Five Year Review Update• LUC Overview• Area 6 Landfill Update• PFAS Update• Military Munitions Update• State Petroleum Sites Update |
| 6:20 – 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 an urgent call, please take the call outside the room.**
- **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.**



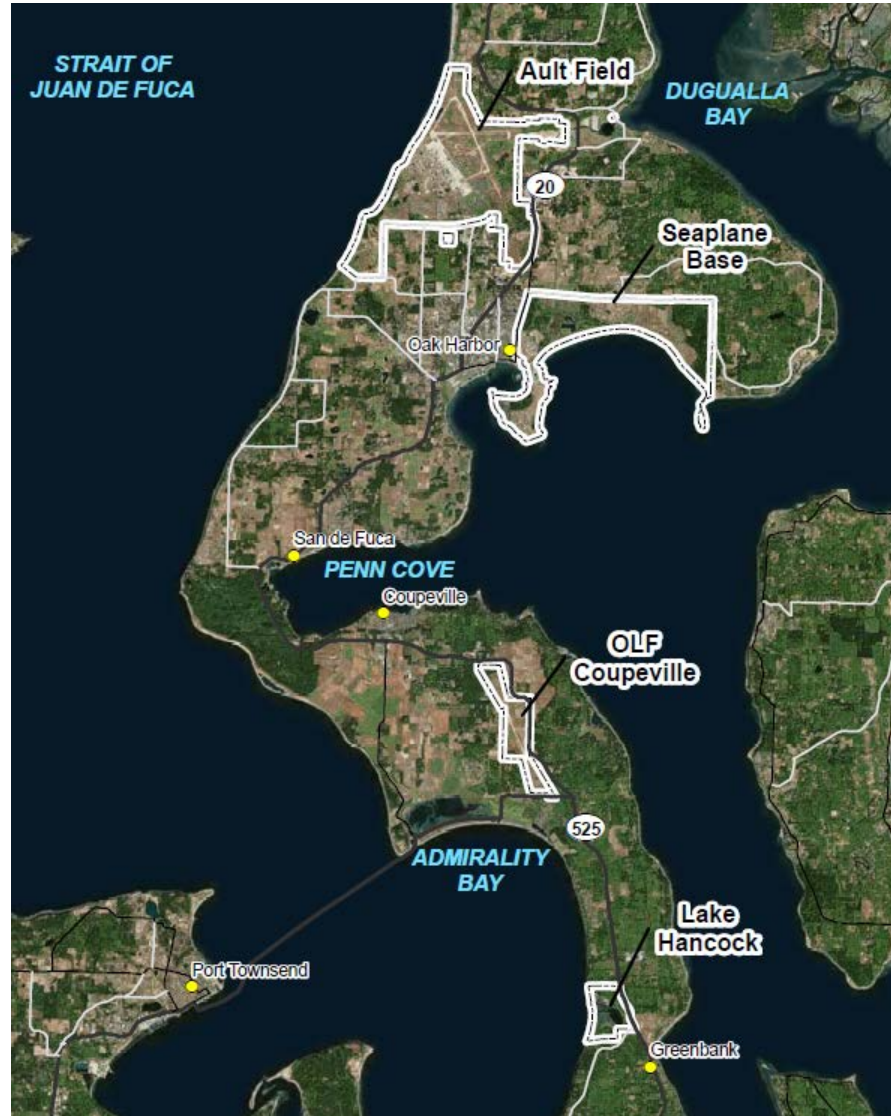
August 2018 RAB Action Items



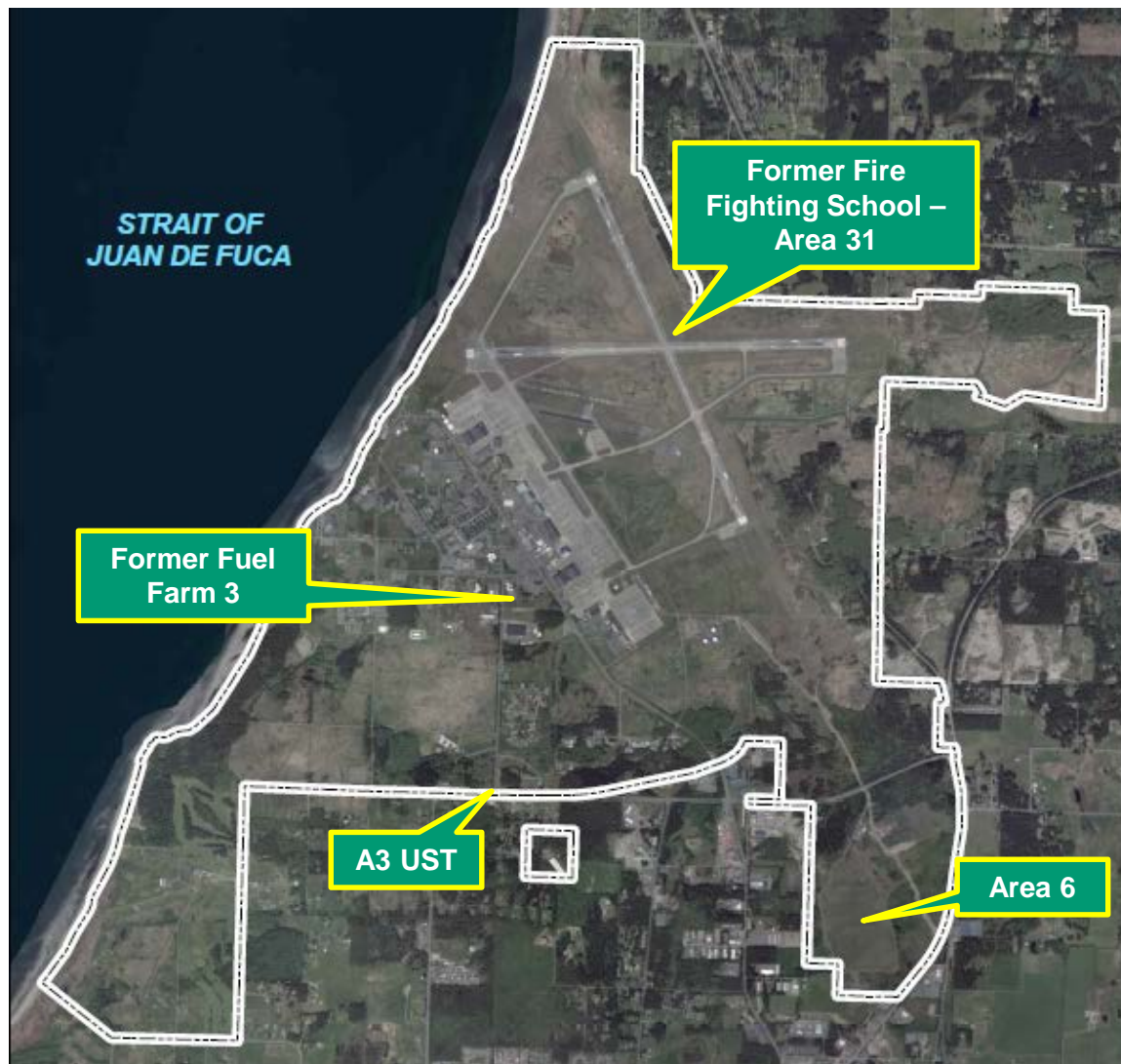
- ✓ **Five Year Reviews and Records of Decisions posted at:**
<https://www.navfac.mil/NASWIRAB>
 - ✓ **There is also a DVD available at the Oak Harbor Library at the reference desk.**
- ✓ **Information sheets/data sheets on 1,4-Dioxane and Vinyl Chloride posted at:** <https://navfac.navy.mil/NWPFAS>
- ✓ **Kendra to email Ms. Jackson PFAS sink filter details**
- ✓ **Will community members be able to review and comment on documents related to restoration?**
 - ✓ **RAB document review teams- new approach being developed**
- ✓ **Melanie to email Ms. Rose Mike Bianchi's information for vegetation removal questions.**



NAS Whidbey Island Environmental Restoration Sites



Ault Field “Active Sites”





Seaplane Base “Active Sites”





Outlying Landing Field (OLF) Coupeville





CERCLA Five Year Review (FYR) Update



- **Overview of FYRs:**
 - Ensure that the remedial actions selected in the Record of Decisions (RODs) for Operable Units (OUs) 1 through 5 remain protective of human health and the environment.
 - Required for sites where remedial actions or remedies allow contaminants to remain in place at concentrations that do not allow for unlimited use and unrestricted exposure.
 - Gives an overview of progress, issues and recommendations in the CERCLA program since the last FYR.
- **Fifth CERCLA FYR (September 2014 to 2018)**
 - Must be signed by Captain Army in September 2019
 - Current Status - Draft document to EPA



Land Use Controls (LUCs)



Environmental Restoration Implementation Process

Activity boxes do not indicate the relative length of any activity.

INVESTIGATION

Preliminary Assessment

Site Inspection

Remedial Investigation

Feasibility Study

Proposed Plan/Record of Decision

REMEDY

Remedial Design

Remedial Action Construction

Remedial Action Operation

LONG-TERM MANAGEMENT

Long-term Management



- Land Use Controls (LUCs) are instituted during remedial action operation and long-term management phase of cleanup
- LUCs are required when contamination is left at a site above residential cleanup levels

Land Use Controls (LUCs)

- Engineering controls (i.e., fencing and signage) are the most common at NAS Whidbey Island



Signage at Lake Hancock



Signage at Machine Gun Range B

- All areas with LUCs, are inspected annually and reported to EPA and Ecology.

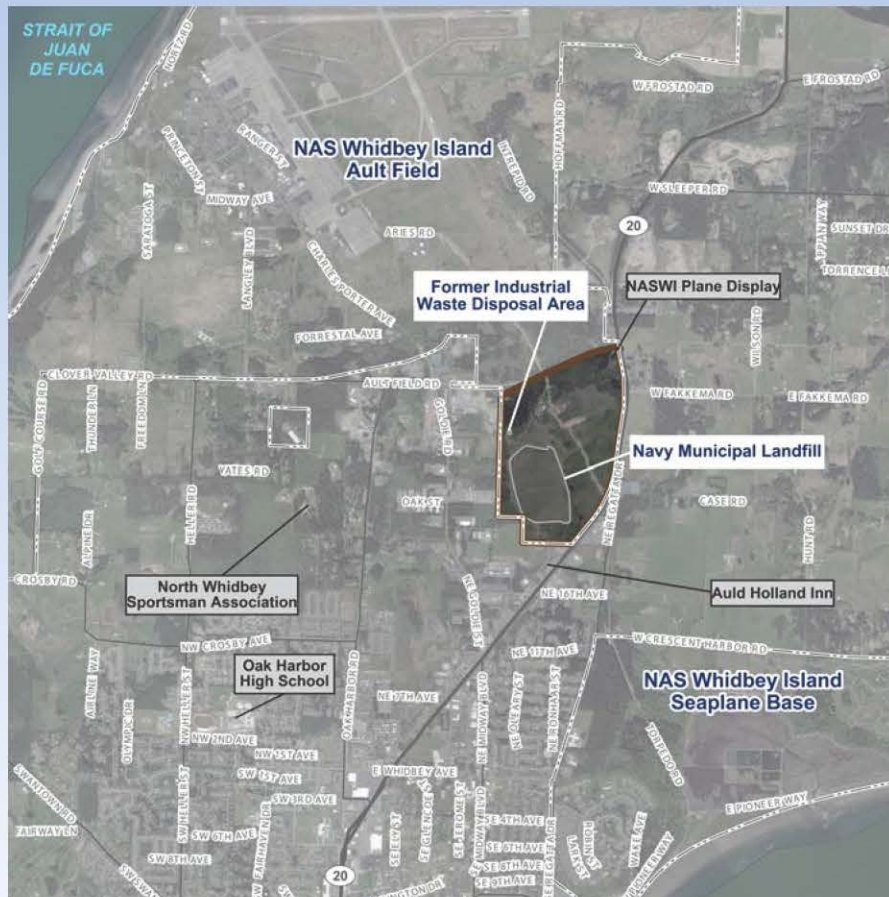
For further details, please refer to LUCs handout on back table.



Area 6 History

Additional information and updates can be found online at
<https://navfac.navy.mil/NASWIRAB>

If you have specific questions, please contact
PAO_feedback@navy.mil (email) or 360-396-1030 (voicemail)



LEGEND

- Area 6 boundary
- Base boundary

ROD Record of Decision
VOCs volatile organic compounds

Landfill Operations

- Former Industrial Waste Disposal Area (1969 to early 1980s)
 - Disposed liquid wastes included solvents, oily sludges, and thinners
- Navy Municipal Landfill area (1969 to 1992)

Landfill Cleanup

- Designated as Superfund Site in 1990 due to chlorinated volatile organic compounds present in groundwater
- 1993 – Record of Decision Signed, official landfill clean-up begins
 - Constructed Landfill cap
 - Installed groundwater treatment system to address chlorinated volatile organic compounds
 - Monitoring on and off-base movement of contaminants in groundwater

1,4-Dioxane Discovered in 2003

- Groundwater was not originally analyzed for 1,4-dioxane and was not part of the original clean-up effort in 1993
- Present in on- and off-site groundwater
- Existing groundwater treatment system does not remove 1,4-dioxane
- 1,4-Dioxane historically added to certain chlorinated solvents as a stabilizer

Current Clean-up approach needs to be changed to address 1,4- dioxane.

July 2018 – Finalized Focused Feasibility Study

- Evaluation of potential cleanup alternatives capable of addressing 1,4-dioxane and chlorinated VOCs

November 2018 – Finalized the Proposed Plan

- Proposed Plan to clean up VOCs and 1,4-dioxane in groundwater

Proposed Plan is available here in hard copy

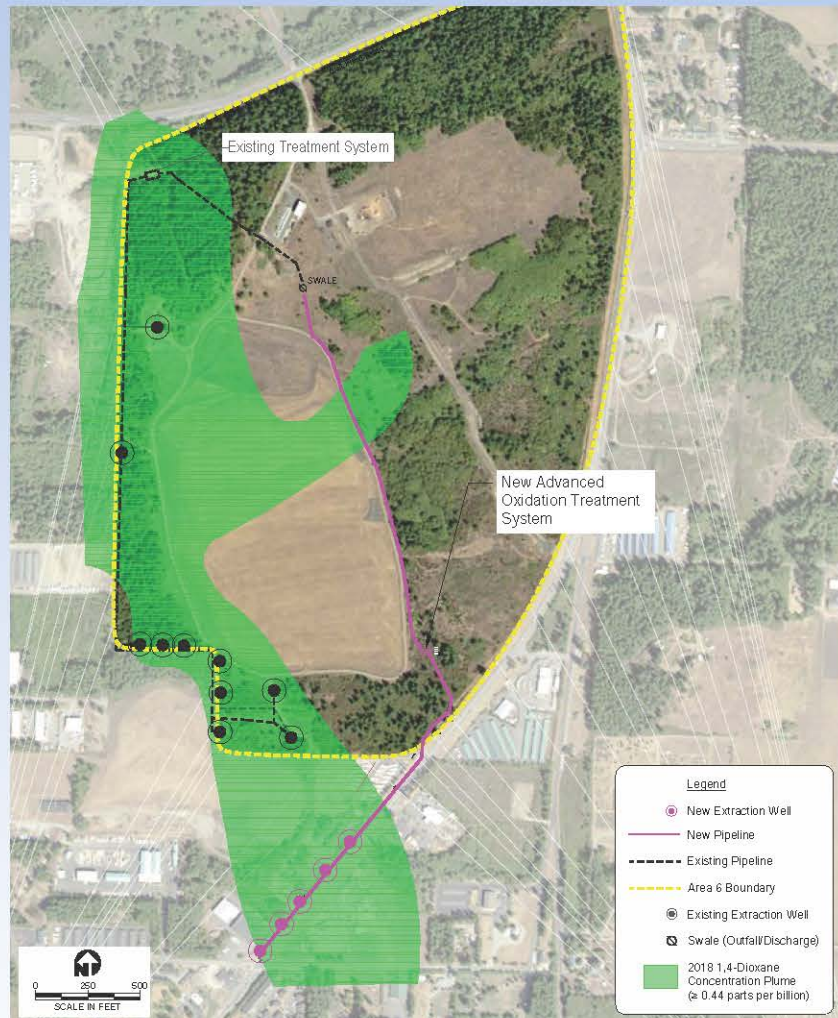
The Navy is proposing to amend the 1993 Record of Decision (ROD Amendment) to address 1,4-dioxane and chlorinated volatile organic compounds.



Area 6 Proposed Plan Overview

Additional information and updates can be found online at
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New Preferred Cleanup Alternative

- The Preferred Alternative includes groundwater treatment using advanced oxidation processes, adds a treatment plant to the south, upgrades the current treatment plant to AOP from air stripping, and expands the well network
- Two independent groundwater treatment systems, one in the north and one in the south
 - Both will use AOP to remove 1,4-dioxane and chlorinated volatile organic compounds
 - Expand the groundwater extraction network
 - Replace existing system with an AOP system in the north

Proposed Changes to 1993 Record of Decision Chemicals of Concern (COC)

- Add 1,4-dioxane as a COC
- Remove 1,1-dichloroethane as a COC since it has never been detected above the cleanup level
- Remove cis-1,2-dichloroethene as a COC because it has not been detected above the cleanup level in groundwater collected since 2008
- Proposed Remediation Goal changes for vinyl chloride and 1,1-dichloroethene

Integrated Remedy (2 Steps) for Groundwater Cleanup

1. Active Treatment – Groundwater Extraction and Treatment until contaminant concentrations have been reduced to 3 times the cleanup levels or concentrations have stabilized
 2. Passive Treatment – Monitored Natural Attenuation until cleanup levels achieved
- Land use and institutional controls until cleanup is complete

AOP advanced oxidation process
COC chemical of concern



Area 6 Landfill



Work conducted since last RAB...

- **Routine Remedial Action Operation Related (all VOCs)**
 - **Performed LUC inspections**
 - **Conducted on-going groundwater treatment system and landfill maintenance and operation**
 - **Conducted annual groundwater monitoring**



Area 6 Landfill



Work conducted since last RAB related to ROD Amendment (1,4-Dioxane)...

- **Proposed Plan**
 - Finalized Proposed Plan – November 2018
 - Proposed Plan Public Open House – 17 Dec 2018
 - Received comments from public – will be addressed in Part 3 of the ROD Amendment
- **ROD Amendment**
 - Draft reviewed by EPA
 - Management meeting with EPA to resolve outstanding issues
- **Remedial Design**
 - Finalized Southern Groundwater Extraction, Treatment, and Recharge (GETR) System (New Advanced Oxidation Plant presented in Proposed Plan)



Area 6 Landfill



Work planned before next RAB...

- **Finalize ROD Amendment**
 - Needs to be signed by EPA and Navy
- **Remedial Action Operation Related (VOCs)**
 - Continue on-going groundwater treatment system and landfill maintenance and operation
- **Contract award for Southern GETR System**



PFAS Drinking Water “Solutions”



Work conducted since last RAB...

- **Off-Base Residences**

- Continued to provide bottled water to homes with PFOS/PFOA exceedances
- **Long-term solution in Coupeville**
 - Awarded contract for the water treatment plant (WTP) extension and pipeline construction (Sept 2018)
 - Completed 100% WTP extension and pipeline design (March 2019)
 - Started construction of WTP extension (February 2019)
- **Long-term solution in Oak Harbor near Ault Field (including Area 6)**
 - Internal draft completed for Engineering Evaluation/Cost Analysis



PFAS Drinking Water “Investigation & Solutions”



Work planned before next RAB...

- **Off-Base Residences**
 - Periodic drinking water well sampling in April 2019
 - Continue construction of Coupeville’s WTP extension and pipeline for impacted residences
 - WTP operational by June 2019
 - Connections complete by Fall 2019
 - Long-term solution in Oak Harbor near Ault Field (including Area 6)
 - Submit Engineering Evaluation/Cost Analysis for stakeholder/public review



Coupeville WTP and water main extension, Project Area



WTP Extension Construction



**Tree and brush removal
(view north)**



**Soil removal
(view southeast)**

WTP Extension Construction



**Subgrade preparation
(view south)**



**New storm drain lines
(view south)**



PFAS Drinking Water “Investigation”



Work conducted since last RAB...

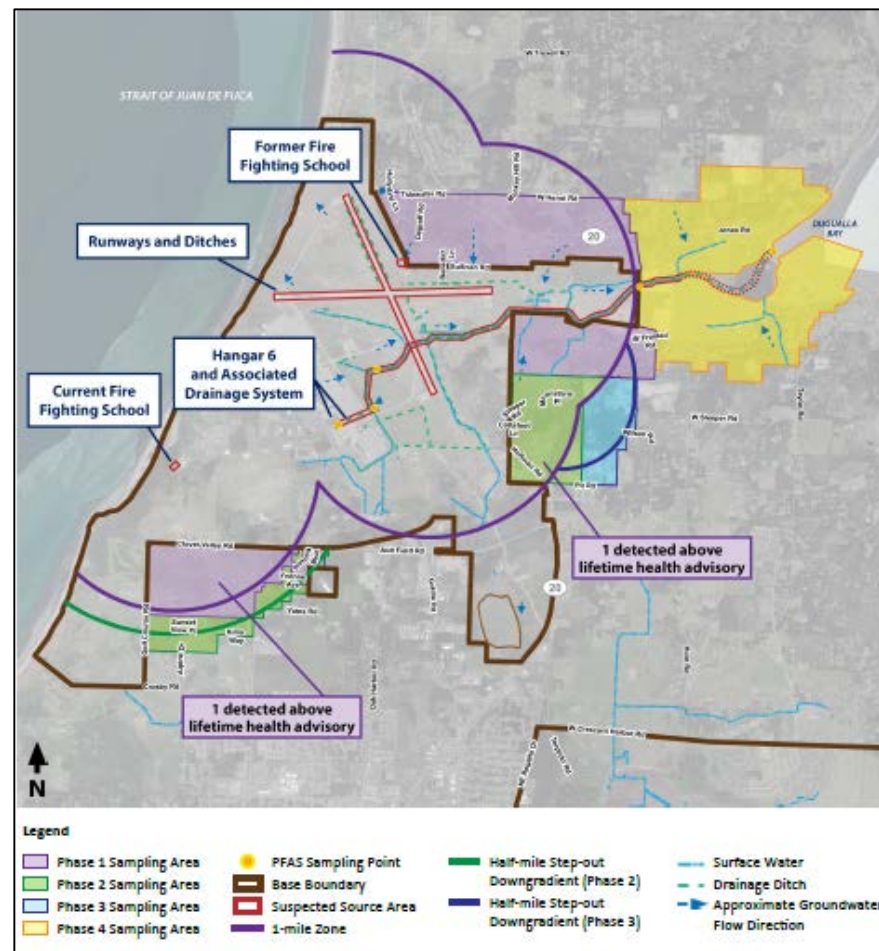
- **Off-Base Residences**
 - **August 2018 drinking water well re-sampling near Area 6**
 - All wells with exceedances (5)
 - **September 2018 drinking water well re-sampling near Ault Field and OLF Coupeville**
 - All wells with exceedances (10), detections only, and wells adjacent to properties with exceedances
 - **Ault Field Phase 4 drinking water sampling...**



Ault Field Phase 4 PFAS Drinking Water Results



- Public meeting December 2018
- Sampling began January 2019
 - 38 wells sampled as of 29 March; 6 more wells to be sampled
 - No exceedances
 - Three wells with low detections
- No plan for Phase 5 based on current results





Ault Field - PFAS Storm Water Results



- **PFAS discovered in storm water line near Hangar 6 exceeding LHA**
- **Follow-on sampling around flight line**
 - PFOS/PFOA ranging from 16.3 - 4110 parts per trillion (ppt)
- **Monthly sampling ongoing during 2019**
 - PFOS/PFOA in storm water at the installation boundary range from 113.1 - 171.8 ppt
- **Project executed to slip line leaking storm water drain at Hangar 6**
 - Repair conducted in March
 - Pipe sampled in March; PFAS starting to decline in pipe
- **Longer-term project to clean, video, and assess condition of storm water system ~ award 2019**
 - Necessary repairs to-be-determined



PFAS Groundwater Investigation



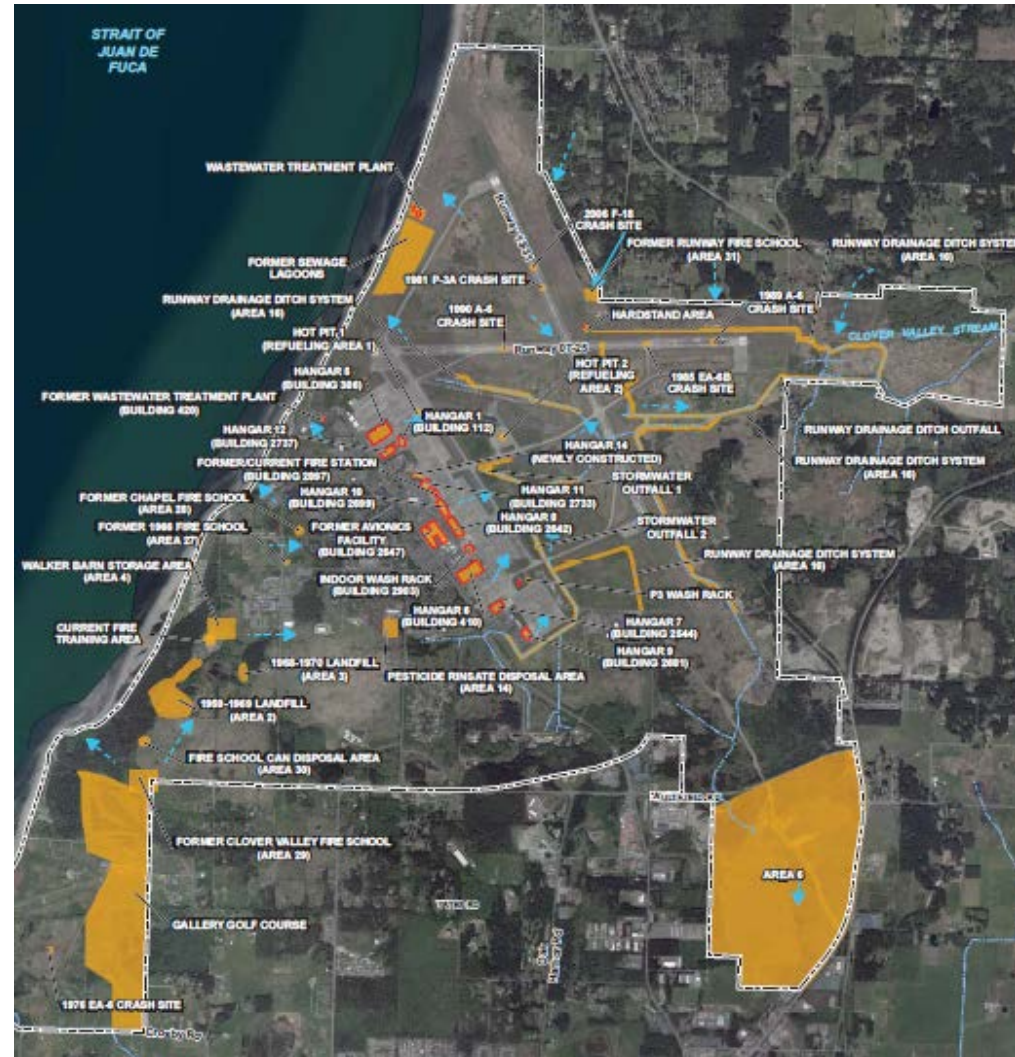
Work conducted since last RAB...

- **On-Base**

- **Finalized PFAS Preliminary Assessments for Ault Field, OLF Coupeville, and Seaplane Base**
- **Finalized Tech Memo from Focused Site Inspections at Ault Field**
- **Finalized Data Report for OLF Coupeville Aquifer Test**
- **Planning for Full Ault Field Site Inspection (includes well installation near runways, aprons, and other areas of interest)**
- **Planning for Seaplane Base Site Inspection**
- **Planning for OLF Supplemental Site Inspection**

Ault Field PA Areas of Concern

- 39 areas evaluated (“orange areas”)
- 35 known or potential PFAS release areas
- 32 areas moving to Site Inspection
- 3 areas moving to Remedial Investigation
 - Area 6, Current Fire Fighting School, Former Runway Fire School



OLF Coupeville PA Areas of Concern

- Three areas evaluated (“orange areas”)
- Two potential PFAS release areas
 - Building 2709 (Crash Truck Shelter)
 - Facility 1, 2 and 11 (Control Tower, Airfield Operations Building, and Potable Water Well Pump House)
- Both areas moving to Remedial Investigation



Seaplane Base PA Areas of Concern

- Six areas evaluated (“orange areas”)
- Two known or potential PFAS release areas are being carried forward to Site Inspection (“orange areas”)
 - Building 18 (Vehicle Maintenance) and Biosolids Application Area





PFAS Groundwater Investigation



Work planned before next RAB...

- **On-Base**
 - **Complete work plans and start field work for Full Ault Field Site Inspection**
 - **Complete work plans and start field work for OLF Supplemental Site Inspection**
 - **Complete work plans for Seaplane Base Site Inspection**

Petroleum Restoration Program Update

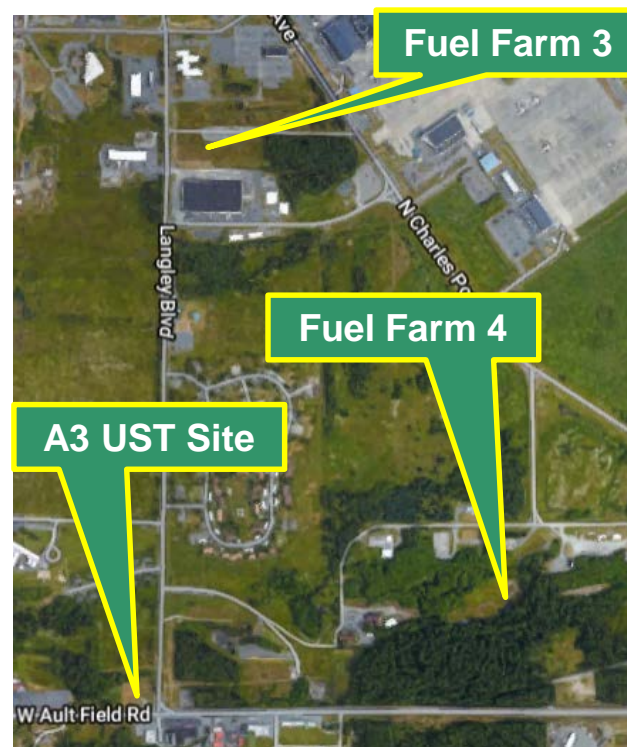
Work conducted since last RAB:

- Continued free-product recovery and groundwater monitoring/sampling
- Finished remedial action at A3 UST

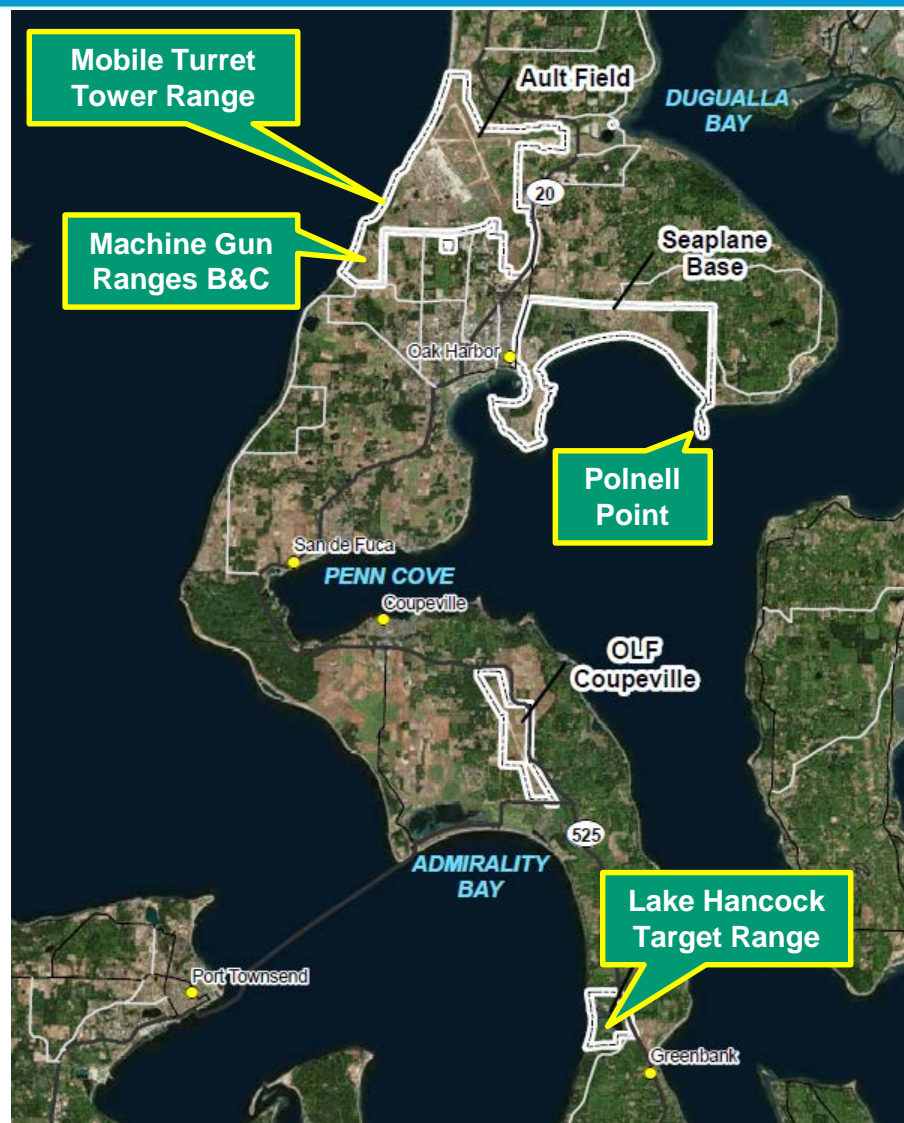


Work planned before next RAB:

- Free-product recovery and groundwater monitoring/ sampling at Fuel Farms



Military Munitions Response Program



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

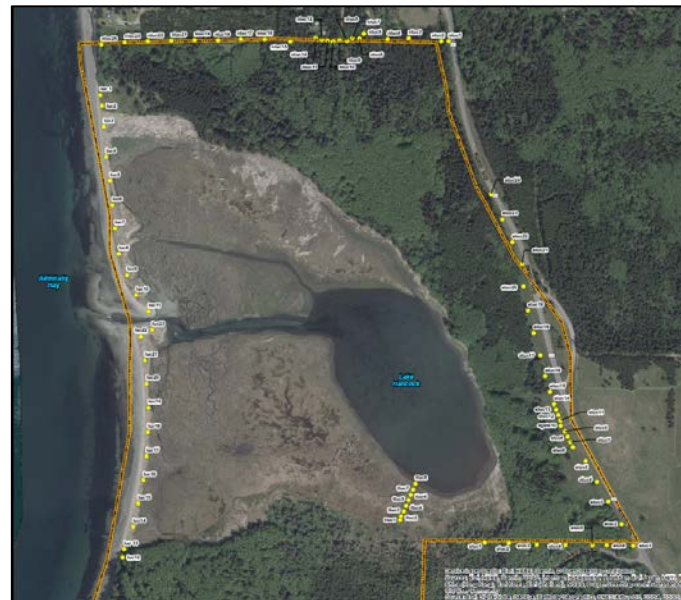


Lake Hancock Target Range

2019 Removal Action



- Installed 4000 feet of fencing
- Repaired 5200 feet of fencing
- Installed 83 signs
- Surface removal (27.7 acres)
 - 236 munition anomalies identified, all “Material Documented as Safe” found
 - Example item: Sub-Caliber Aircraft Rocket (2.25” x 16”) (see picture to right)





Lake Hancock Target Range



- **Work planned before next RAB...**
 - **Reporting:**
 - Remedial Action Construction Report
- **Future work planned...**
 - **Land use controls, including:**
 - Annual and/or five-year inspections and surface removal of munition debris (if required) around target area
 - Repair/fix signage and fencing





Relevant websites



- **NASWI RAB**

<https://navfac.navy.mil/NASWIRAB>

- **NASWI PFAS**

<https://navfac.navy.mil/NWPFAS>

- **Navy ER and BRAC Program**

https://www.navfac.navy.mil/navfac_worldwide/specialty_centers/exwc/products_and_services/ev/erb/prog.html



Community Input



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

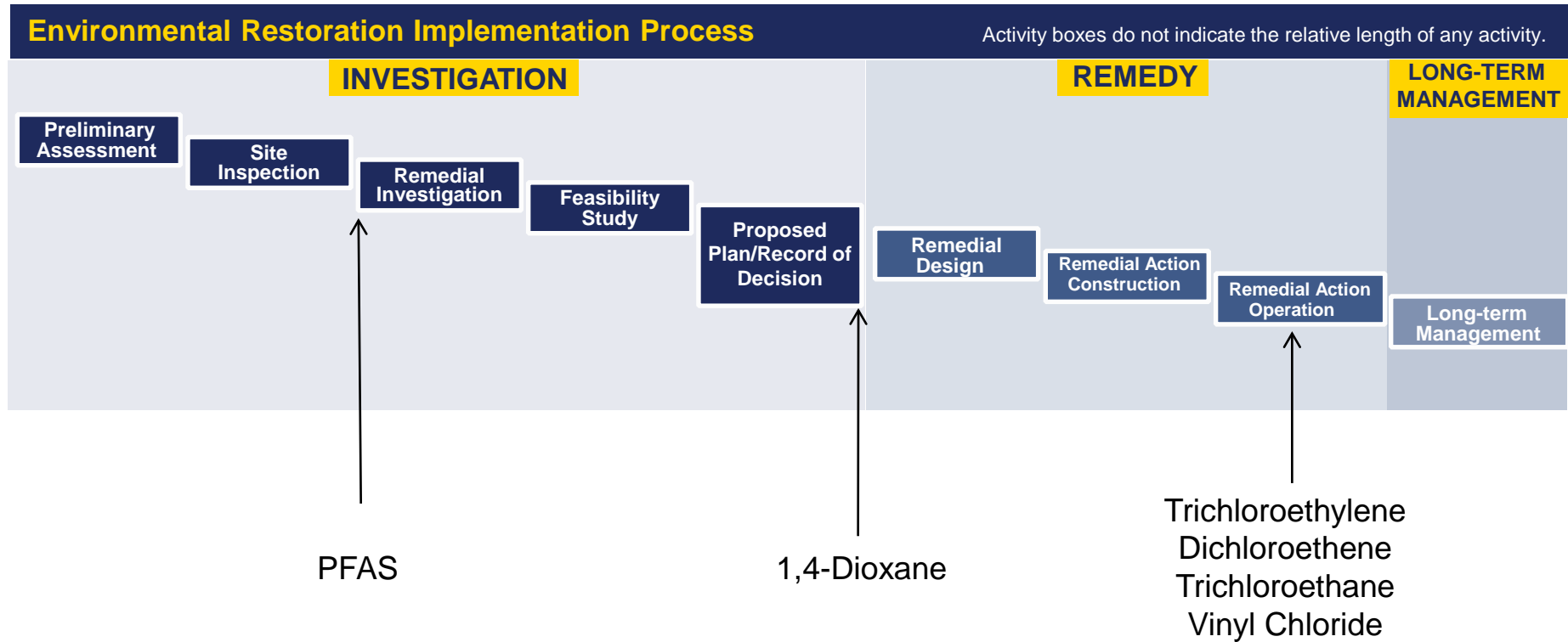


Supporting Slide for Area 6





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



PFAS – Per- and polyfluoroalkyl substances