Port of Portland

Forever Chemicals, Changing Rules: PDX PFAS Remedial Investigation

NEBC Business & Environment

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Anzie St Clair

Federal Requirements

Aqueous Film Forming Foam (AFFF)

For FAA certification, commercial airports are required to use firefighting foam that meets DoD's Military Specifications (MilSpec).

Until recently, the FAA required airports to use PFAS-containing foam to achieve airport certification.

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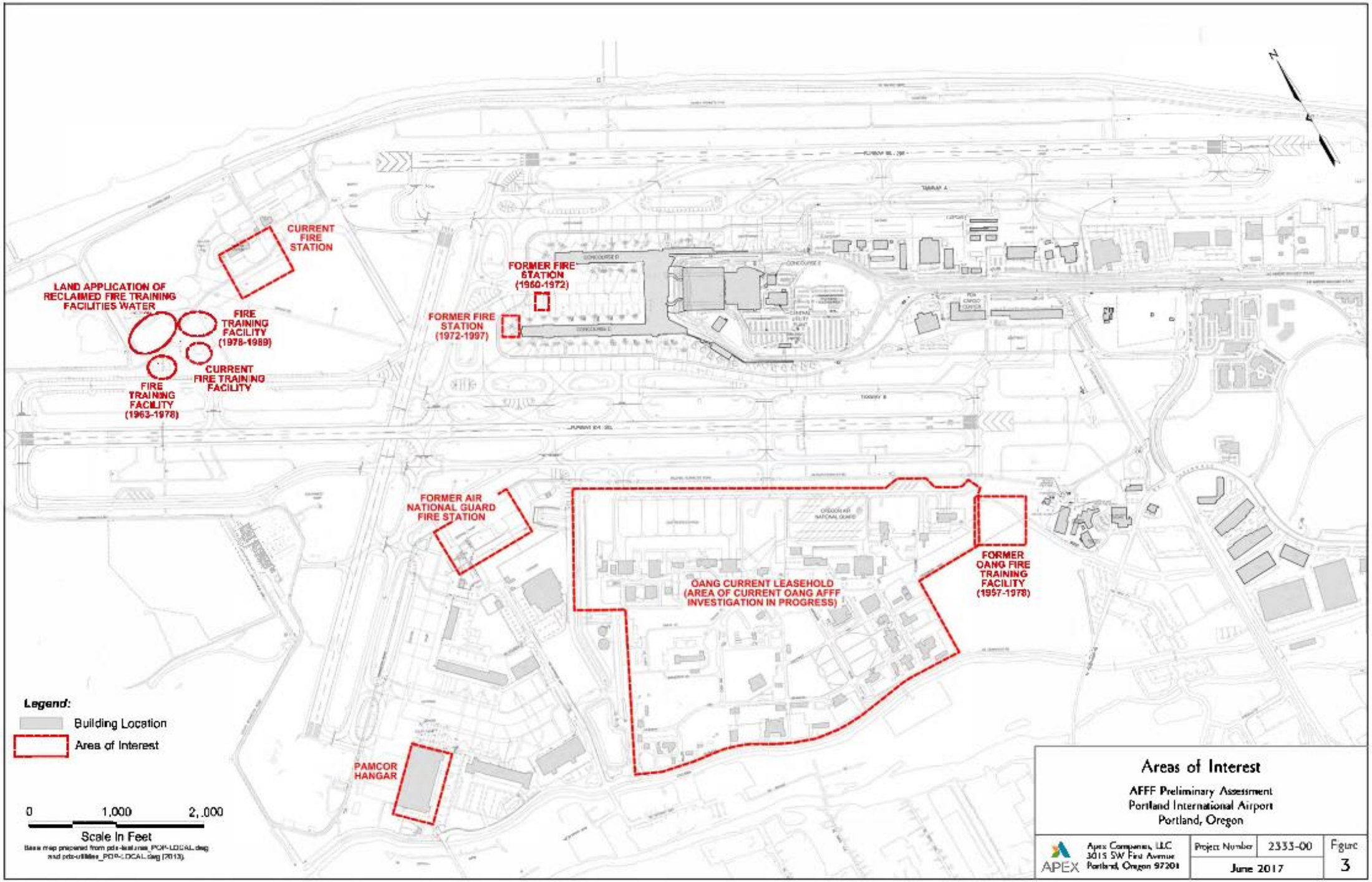
PDX Foam Transition

- **January 2023 -** the Department of Defense published a new MilSpec for fluorine free foam, “F3”. This meant that foam manufacturers could apply to have their foam added to the “qualified products list”.
- **September 2023 -** the first fluorine-free product was added to the QPL, with a couple others to follow. DoD also released guidance on how to transition equipment to F3.
- **June 2024** - PDX became the first major airport (Index E) to fully eliminate the airport’s firefighting stocks of AFFF.

RESTRICTED AREA



Areas of Interest

AFFF Preliminary Assessment
Portland International Airport
Portland, Oregon

APEX Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number	2333-00	Figure 3
	June 2017		

Fire Training Investigation at PDX

- **1987 –** Air National Guard began investigation of its site
- **1988** – Port began investigation of its historic fire training area
- **1997** – Port implemented remedial action for petroleum constituents & VOCs at the historic fire training area
- **1999, 2003, 2007** – Guard implemented interim remedial action for petroleum constituents & VOCs
- **2004** – Port site closure with long-term groundwater monitoring
- **2017** – Guard site closure
- **2017** - The Port joined the VCP to investigate PFOS/PFOA
- **2020 -** The Air National Guard began to investigate PFOS/PFOA

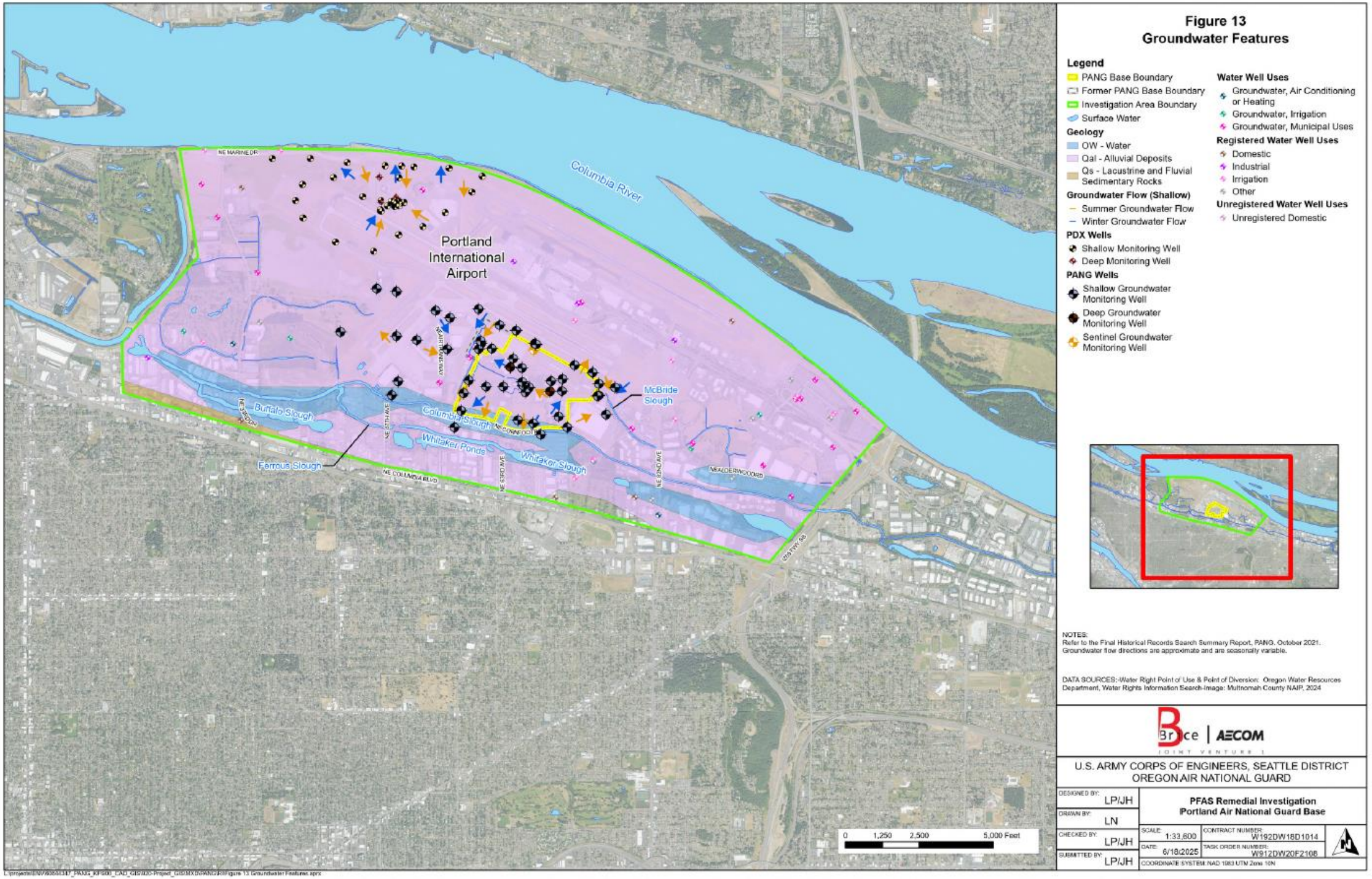


Figure 13
Groundwater Features

Legend

- PANG Base Boundary
- Former PANG Base Boundary
- Investigation Area Boundary
- Surface Water

Geology

- OW - Water
- Qal - Alluvial Deposits
- Qs - Lacustrine and Fluvial Sedimentary Rocks

Groundwater Flow (Shallow)

- Summer Groundwater Flow
- Winter Groundwater Flow

PDX Wells

- Shallow Monitoring Well
- Deep Monitoring Well

PANG Wells

- Shallow Groundwater Monitoring Well
- Deep Groundwater Monitoring Well
- Sentinel Groundwater Monitoring Well

Water Well Uses

- Groundwater, Air Conditioning or Heating
- Groundwater, Irrigation
- Groundwater, Municipal Uses

Registered Water Well Uses

- Domestic
- Industrial
- Irrigation
- Other

Unregistered Water Well Uses

- Unregistered Domestic

NOTES:
Refer to the Final Historical Records Search Summary Report, PANG, October 2021.
Groundwater flow directions are approximate and are seasonally variable.

DATA SOURCES: Water Right Point of Use & Point of Diversion: Oregon Water Resources Department, Water Rights Information Search-Image: Multnomah County NAIP, 2024

Bruce | AECOM JOINT VENTURE I

U.S. ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT
OREGON AIR NATIONAL GUARD

DESIGNED BY: LP/JH	PFAS Remedial Investigation Portland Air National Guard Base
DRAWN BY: LN	
CHECKED BY: LP/JH	SCALE: 1:33,600 — CONTRACT NUMBER: W192DW18D1014
SUBMITTED BY: LP/JH	DATE: 6/18/2025 — TASK ORDER NUMBER: W912DW20F2108
	COORDINATE SYSTEM: NAD 1983 UTM Zone 10N

Construction Projects

- Avoid exacerbating site conditions
- Measures
  - Project design
  - Construction dewatering
  - Surplus soil handling/disposal

Challenges

- **The screening levels are very low**
- **The system inputs haven't fully been addressed**
  - PFAS still used in certain applications
  - There are many sources of PFAS and sources are not fully understood
- **Seismic resilience meets groundwater protection**
- **Physical constraints at PDX**
- **Pre-remedial decision**
  - Difficult to make interim material management decisions