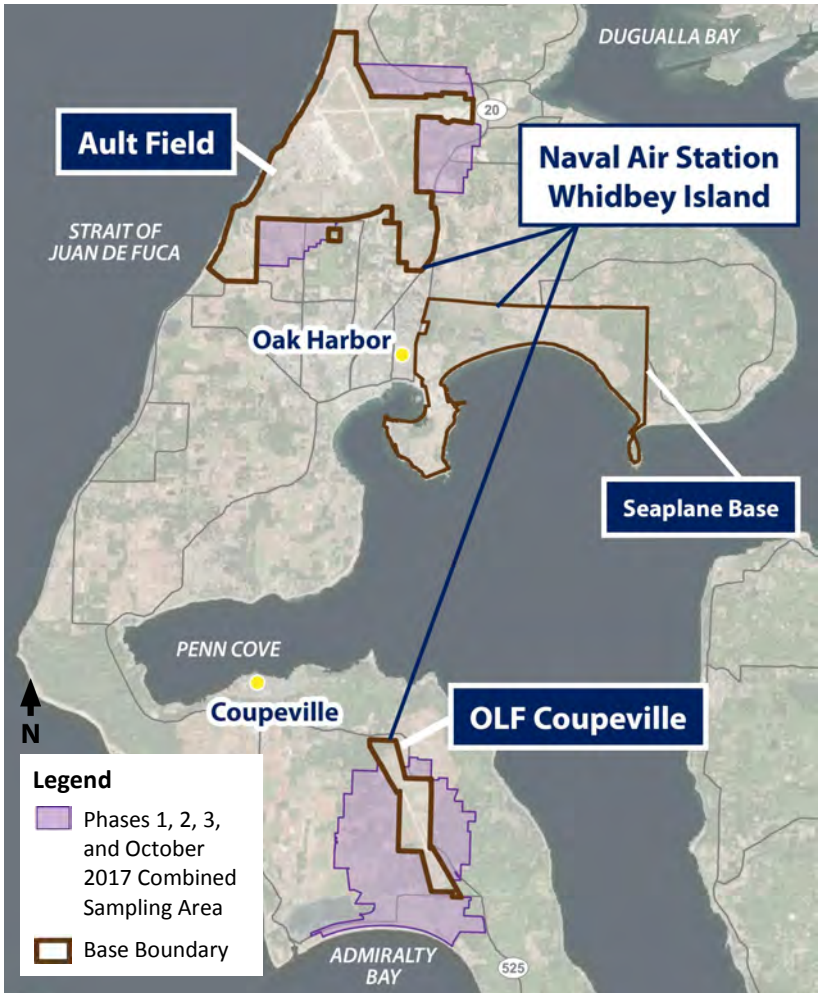
Naval Air Station Whidbey Island
Ault Field

Drinking Water Investigation

February 2018

The Navy is addressing past releases of per- and poly-fluoroalkyl substances, commonly known as PFAS, under the Navy Environmental Restoration Program. These substances may be present in the soil and/or groundwater at Navy sites as a result of historical fire fighting activities using aqueous film forming foam (AFFF). This foam was used for plane crashes, equipment testing, and training, as well as in other operations such as plating shops and hangars where AFFF was used in the fire suppression systems. *Based on historical use of AFFF, there are two areas of PFAS investigation at Naval Air Station Whidbey Island (NASWI): Ault Field and Outlying Landing Field (OLF) Coupeville (see Figure 1).*

Figure 1



Since drinking water sources may have been impacted by our past use of AFFF, our first step has been to sample drinking water sources that are close to known or suspected releases of AFFF. From November 2016 through June 2017, the Navy sampled 215 drinking water wells near Ault Field and OLF Coupeville for PFAS. In October 2017, the Navy resampled drinking water wells where PFAS were detected, and drinking water wells adjacent to properties with PFAS exceedances, in continuation of its voluntary drinking water investigation around Ault Field and OLF Coupeville. This is a precautionary measure to ensure residents living near our installations are not being exposed to PFAS in off-base drinking water.

The Navy is working closely with the Environmental Protection Agency (EPA) Region 10, the Agency for Toxic Substances and Disease Registry (ATSDR) Region 10, the Washington State Department of Health (DOH), and Island County Public Health to assess the potential releases and the impact to drinking water near Ault Field and OLF Coupeville. The Navy will continue to work with these agencies to protect public health.

This fact sheet focuses on the Ault Field Drinking Water Investigation. A separate fact sheet is available with information on the OLF Coupeville investigation.

If you are within the sampling area and you have not had your drinking water well sampled, the Navy encourages you to schedule sampling of your well by leaving a voicemail at 360-396-1030 or by emailing the Navy's Public Affairs Officer at PAO_feedback@navy.mil.

BACKGROUND

PFAS are manufactured chemicals that have been used since the 1950s in many household and industrial products because of their stain- and water-repellant properties (for example, fabric in upholstered furniture, carpet, nonstick cookware, floor wax, and the lining of microwave popcorn bags). PFAS are now widespread in the world because of the large amounts that have been manufactured and used. Once these compounds are released to the environment, they remain there for a long time.

PFAS are a type of "emerging contaminant," which is a chemical or material characterized by a perceived, potential, or real threat to human health or the environment or by a lack of published health standards. PFAS have no Safe Drinking Water Act regulatory standards or routine water quality testing requirements. The EPA continues to study PFAS to determine if regulation is needed.

In May 2016, the EPA announced lifetime health advisory levels for two PFAS, specifically perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). According to the EPA: ***Health advisory levels are not regulatory standards. They are health-based concentrations which should offer a margin of protection for all Americans throughout their life from adverse health effects resulting from exposure to PFOS and PFOA in drinking water.*** The EPA health advisory level for lifetime exposure is 70 parts per trillion (ppt) for PFOS and 70 ppt for PFOA. When both PFOS and PFOA are found in drinking water, the combined concentrations should not exceed 70 ppt.

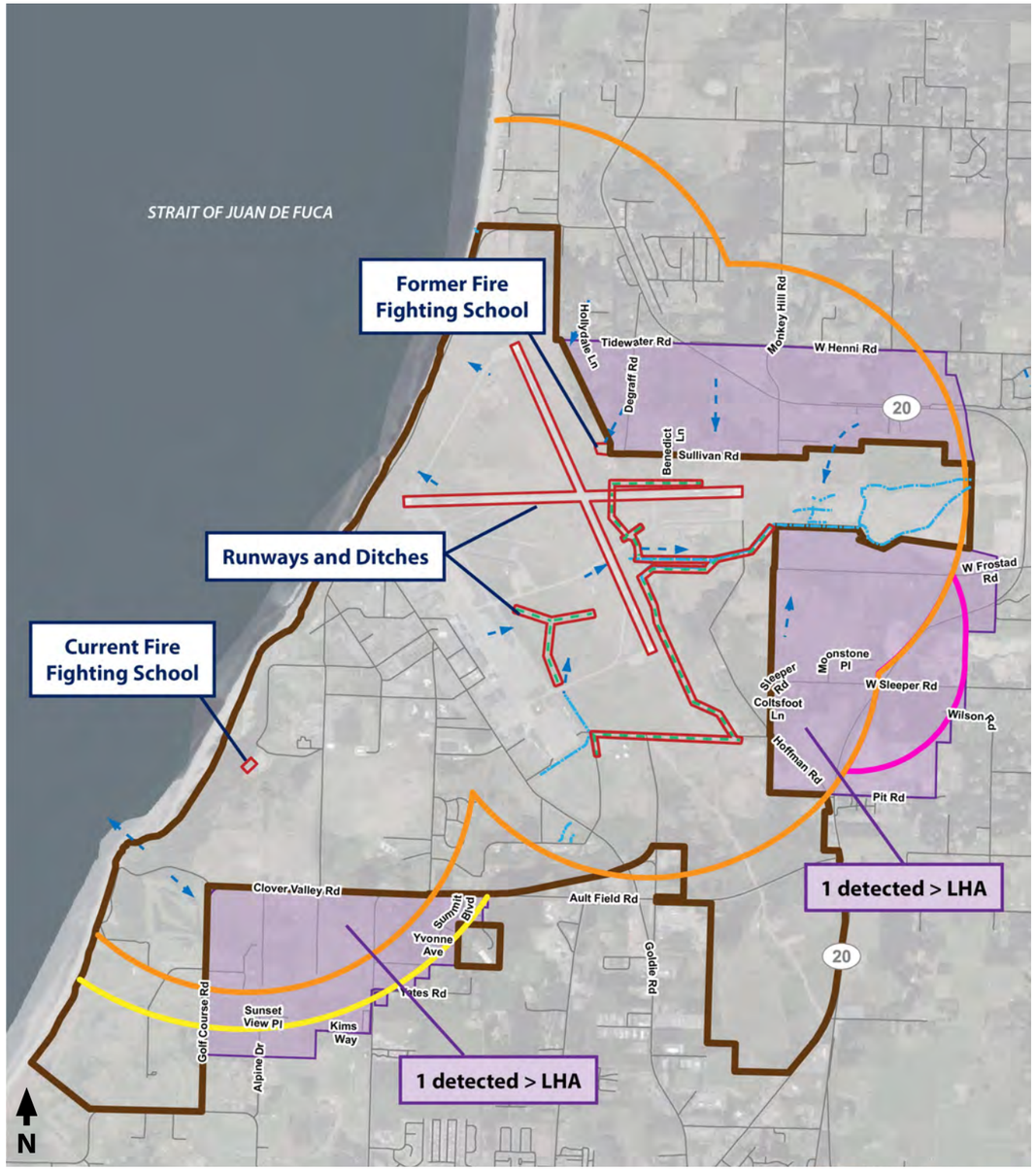
The drinking water investigation for Ault Field has focused on PFOS and PFOA because these are the only PFAS for which the EPA has established a lifetime health advisory level in drinking water.

DRINKING WATER INVESTIGATIONS, NOVEMBER 2016–JUNE 2017 AND OCTOBER 2017

The Phase 1 off-base drinking water sampling area was selected based on groundwater flow direction and the on-base locations of known or suspected releases of AFFF. The Phase 1 area extends approximately 1 mile to the east of the Ault Field runway, a half-mile to the north of the former Fire Fighting School, and 1 mile downgradient from the current Fire Fighting School (see Figure 2).

The Phase 1 sampling area included more than 176 properties. Phase 1 drinking water sampling occurred from November 2016 to February 2017. The results indicate that PFOS and/or PFOA are above the EPA lifetime health advisory in one off-base drinking water well located south of the current Fire Fighting School. Based on these results and other information made available to the Navy, the Phase 1 drinking water investigation area was extended an additional half-mile downgradient from the current Fire Fighting School and to include additional parcels east of the runway and runway ditches on the east side of Ault Field. This additional area is referred to as the Phase 2 sampling area.

Figure 2



Legend

- Base Boundary
- Suspected Source Area
- 1-mile Zone
- Half-mile Step-out Downgradient (Phase 2)
- Half-mile Step-out Downgradient (Phase 3)
- Phases 1 , 2, and 3, and October 2017 Combined Sampling Area
- Surface Water
- Drainage Ditch
- Approximate Groundwater Flow Direction

Note: Figure 2 represents PFOS and/or PFOA exceedances for unique wells sampled during all phases, including October 2017.

The Phase 2 sampling area included 60 properties. Phase 2 drinking water sampling occurred from February to March 2017. The results indicate that PFOS and/or PFOA are above the EPA lifetime health advisory in one additional off-base drinking water well located east of the Ault Field runway. The Navy also resampled the Phase 1 well with the health advisory exceedance; this result confirmed that exceedance. Based on the Phase 2 results, the Navy expanded the drinking water investigation a half-mile downgradient of this area. This additional area is referred to as the Phase 3 sampling area. Phase 3 drinking water sampling occurred in June 2017. The results indicate that PFOS and/or PFOA are present in one drinking water well, but at levels below the EPA lifetime health advisory.

In October 2017, the Navy conducted a follow-on drinking water sampling event which included resampling of drinking water wells where PFOS and/or PFOA were previously detected (above or below the EPA lifetime health advisory) and sampling of drinking water wells at properties located adjacent to properties with PFOS and/or PFOA exceedances. The purpose of the follow-on sampling event was to evaluate seasonal and spatial variability of PFAS concentrations in off-base drinking water wells. The results of the October 2017 resampling confirmed the EPA lifetime health advisory exceedances in the two off-base drinking water wells. The tables below summarize the results for all phases of drinking water sampling and resampling near Ault Field.

Phase 1, 2, and 3 Combined Sampling Area Drinking Water Results at Ault Field			
Wells with Permission to Sample	Wells Sampled	Validated Results	Validated Results above EPA LHA
105	105	105	2

October 2017 Resampling Drinking Water Results at Ault Field			
Wells with Permission to Sample	Wells Sampled	Validated Results	Validated Results above EPA LHA
9	9	9	2

LHA = lifetime health advisory

ACTIONS BASED ON RESULTS

The Navy continues to provide bottled water for drinking and cooking purposes to mitigate exposure to PFAS for two residences near Ault Field until a long-term solution is implemented. Recently, the Navy offered affected residences a second mitigation option, which includes a filtration system installed under the kitchen sink to supply cooking and drinking water. The Navy continues to evaluate long-term solutions for the two residences. The options include providing a public or community water supply, providing household water treatment at the existing well, or installing a new drinking water well.

PUBLIC MEETING

The Navy is hosting NAS Whidbey Island's Restoration Advisory Board Meeting in March. Representatives from the Navy and its federal, state, and local partners will be at the Restoration Advisory Board Meeting to share information and answer your questions.

Please attend at any time during the meeting to have your questions answered.

Restoration Advisory Board Meeting
Thursday, March 1, 2018, 5–7 p.m.

NAS Whidbey Island Chief Petty Officers' Club, Ballroom
1080 W Ault Field Road
Oak Harbor, WA 98278

HEALTH INFORMATION

Exposure to PFOS and PFOA appears to be global. Studies have found both compounds in the blood samples of the general population. Studies on exposed populations indicate that PFOS and/or PFOA may cause elevated cholesterol levels and possibly low infant birth weight. In studies conducted using laboratory animals, effects on developmental, neurological, immune, thyroid, and liver function were observed. Evidence linking PFOS and/or PFOA with cancer is inconclusive.

Health effects from exposure to low levels of PFAS are not well known and studies are continuing. At this time, it is not possible to link exposures to PFOS and/or PFOA to a person's individual health issues. Blood tests are available to measure these chemicals, but they are not routinely done because the results can be inconclusive and test results do not predict health effects. Long-term exposure effects are still being investigated by the EPA.

Based on what is known and still unknown about PFOS and PFOA, it is recommended that people not drink or cook with water that contains these compounds above the EPA lifetime health advisory level.

FOR MORE INFORMATION

www.secnav.navy.mil/eie/pages/pfc-pfas.aspx

The Navy has established the following website to keep you updated as more information becomes available:
http://go.usa.gov/xkMBc