



Naval Air Station Whidbey Island OLF Coupeville

Drinking Water Investigation

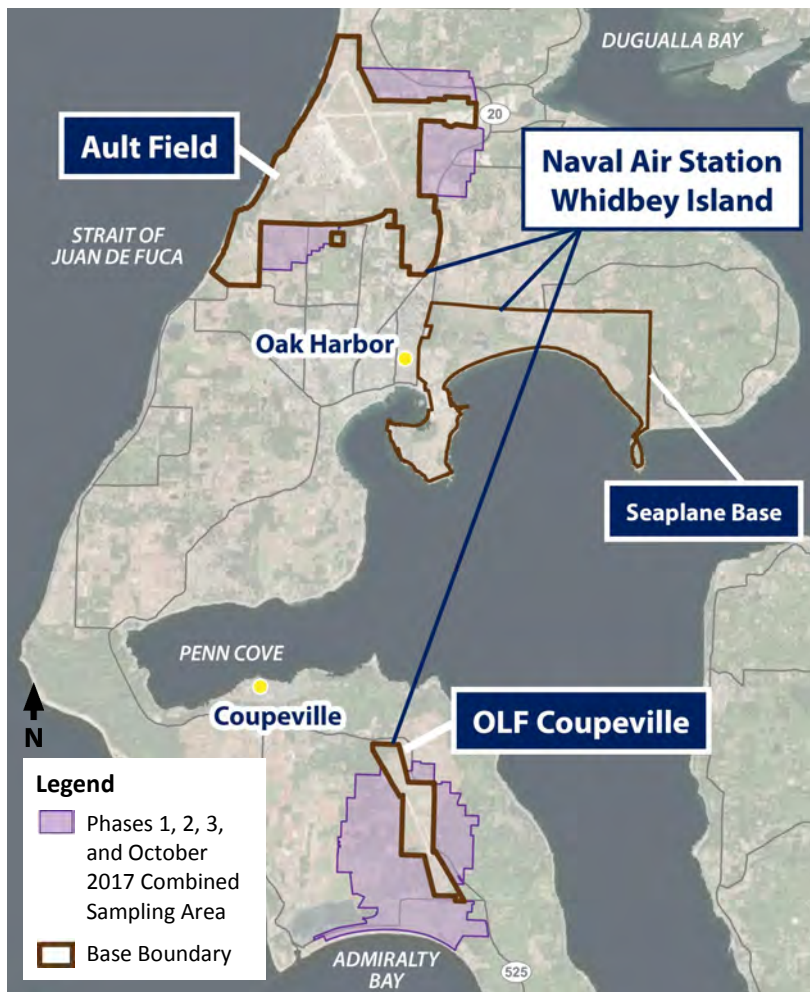
February 2018

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).*

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

Figure 1



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

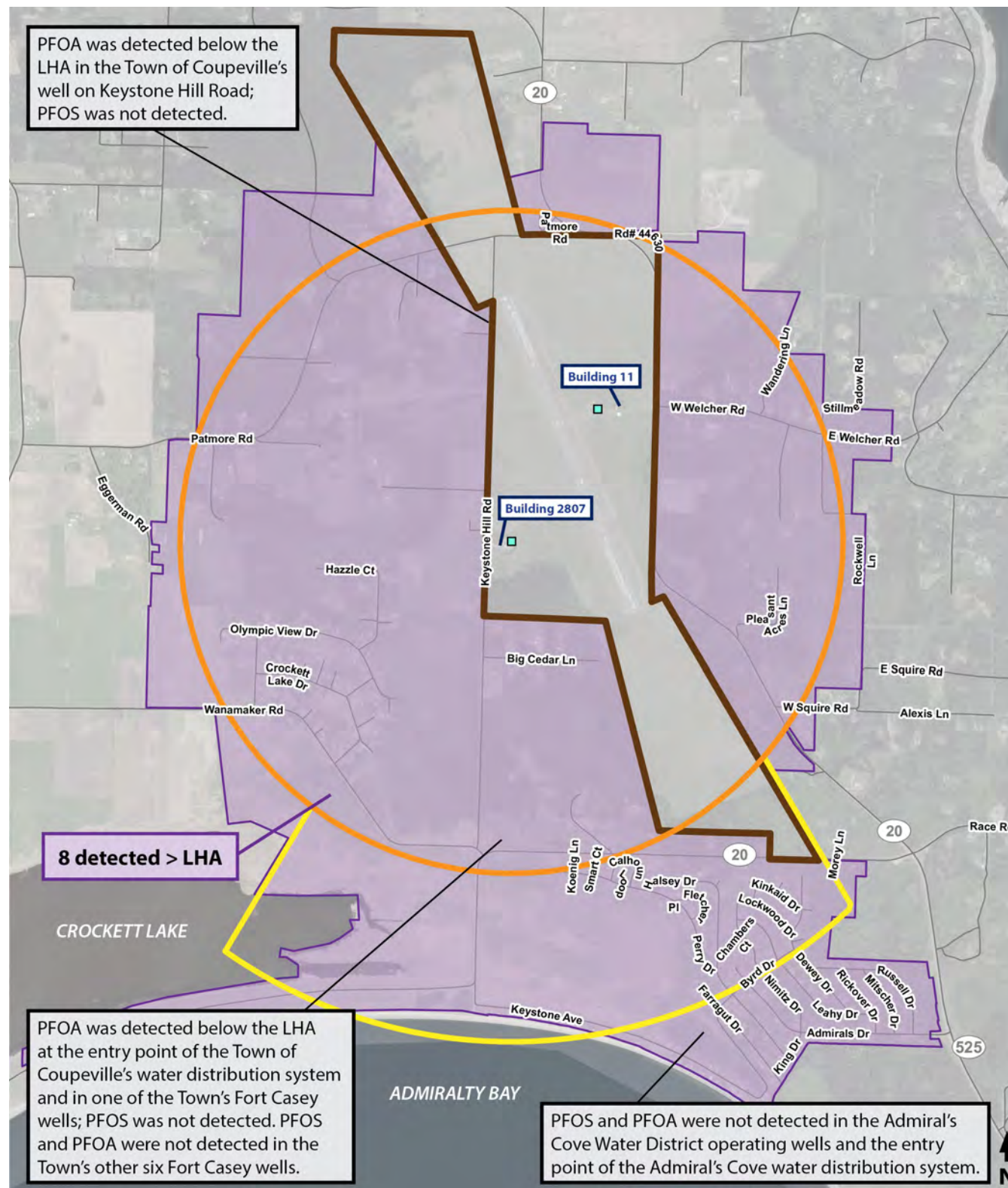
DRINKING WATER INVESTIGATIONS, NOVEMBER 2016–JUNE 2017 AND OCTOBER 2017

The Navy conducted on-base drinking water sampling at OLF Coupeville in fall 2016. PFOA was detected in one on-base drinking water well below the EPA lifetime health advisory, which indicates a potential previous release of AFFF near Building 2807 (see Figure 2). No previous groundwater investigations were conducted at OLF Coupeville, so there was significant uncertainty regarding groundwater flow direction. Due to this uncertainty, the Navy used Building 2807 as the center point to draw a 1-mile radius to initiate off-base drinking water sampling.

The Phase 1 sampling area included more than 397 properties. Phase 1 drinking water sampling occurred from November 2016 to March 2017. The Phase 1 results indicate that PFOS and/or PFOA are above the EPA lifetime health advisory in seven off-base drinking water wells located south of the OLF runway. Based on the Phase 1 results, the Navy expanded the drinking water investigation a half-mile downgradient of this area. This additional area is referred to as the Phase 2 sampling area .

The Phase 2 sampling area included more than 795 properties, including 768 properties in Admiral’s Cove that are provided water by

Figure 2



Legend

- Base Boundary
- OLF Drinking Water Well
- 1-mile Zone
- Half-mile Step-out Downgradient
- Phases 1 and 2 and October 2017 Combined Sampling Area

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

a common community drinking water system. Phase 2 drinking water well sampling occurred from February to March 2017. Nine drinking water samples were also collected to the south of OLF Coupeville. Of those samples, PFOS and/or PFOA were not detected in any wells, including the Admiral’s Cove water supply wells and water distribution system. Based on the Phase 2 results, the Navy did not expand the drinking water sampling area near OLF Coupeville beyond the Phase 2 sampling area; however, one additional well within the Phase 1 area that had not been previously sampled was sampled in June 2017. PFOS/PFOA were not detected in the additional well.

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 seven off-base drinking water wells, and in one of two newly sampled locations south of OLF Coupeville, resulting in a total of eight off-base wells with PFAS concentrations above the EPA lifetime health advisory. The tables below summarize the results for all phases of drinking water sampling and resampling near OLF Coupeville.

Phase 1 and 2 Combined Sampling Area Drinking Water Results at OLF Coupeville			
Wells with Permission to Sample	Wells Sampled	Validated Results	Validated Results above EPA LHA ^a
110	110	110	7 ^b

October 2017 Resampling Drinking Water Results at OLF Coupeville			
Wells with Permission to Sample	Wells Sampled	Validated Results	Validated Results above EPA LHA ^a
25	25	24	8 ^c

Notes:

- ^a LHA = lifetime health advisory
- ^b Two of the wells in the Phase 1 and 2 Combined Sampling Area that exceed the LHA are shared wells between two residences; thus, 7 wells/9 residences are impacted near OLF Coupeville.
- ^c Two of the wells in the October 2017 resampling event that exceed the LHA are shared wells between two residences; thus, 8 wells/10 residences are impacted near OLF Coupeville.

ACTIONS BASED ON RESULTS

The Navy continues to provide bottled water for drinking and cooking purposes to mitigate exposure to PFAS for ten residences (eight private drinking water wells) near OLF Coupeville until a long-term solution is implemented. Recently, the Navy offered affected residences a second mitigation option, which includes a filtration system under the kitchen sink to supply cooking and drinking water. The Navy has identified connecting the ten residences to the Town of Coupeville's drinking water system and adding treatment to the Town's water system for PFAS as the most protective and efficient long-term solution. Absent unforeseen circumstances, the Navy estimates the design, construction, and verification of the water distribution lines and the modifications to the Town's treatment plant will take up to 1.5 years; however, we are evaluating ways to expedite the process where possible.

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

ON-SITE GROUNDWATER INVESTIGATION

The Navy conducted sampling of 27 newly installed on-base groundwater monitoring wells in February and March 2017. PFOS and/or PFOA were detected above the EPA lifetime health advisory in three wells located near the center of the runway at OLF Coupeville. This on-base investigation also confirmed that the primary groundwater flow direction from OLF Coupeville is to the south toward Admiralty Bay. Based on the information collected, a Phase 3 sampling area was not recommended. The Phase 1 and 2 sampling areas included the off-base drinking water wells downgradient (in the direction of groundwater flow) from groundwater wells on OLF Coupeville with PFOS and/or PFOA above the EPA lifetime health advisory level.

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>