



# Naval Air Station Whidbey Island OLF Coupeville

## Phase 2 Drinking Water Investigation

February 2017

### INTRODUCTION

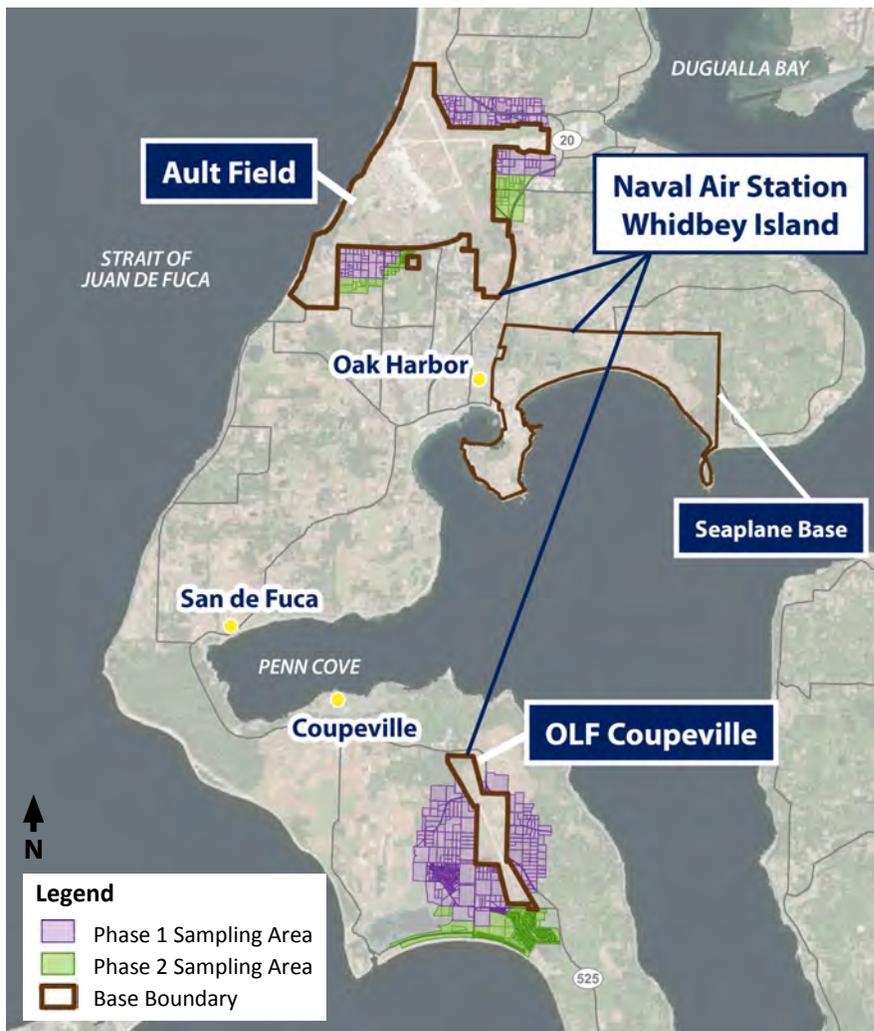
The Navy is addressing past releases of per- and poly-fluoroalkyl substances, commonly known as PFAS, under the Navy Environmental Restoration Program. These substances may be present in the soil and/or groundwater at Navy sites as a result of historical fire fighting activities using aqueous film forming foam (AFFF). This film 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 system. *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 is to sample drinking water sources that are close to confirmed or probable past AFFF releases. The Navy is working in conjunction with Environmental Protection Agency (EPA) Region 10, Agency for Toxic Substances and Disease Registry (ATSDR), Washington State Department of Health (DOH), and Island County Public Health to assess the potential releases and the impact to drinking water at Ault Field and OLF Coupeville. The Navy will continue to work with these agencies to protect public health.

The Navy is conducting this voluntary measure to ensure we protect drinking water quality both on- and off-base.

This fact sheet focuses on the OLF Coupeville Drinking Water Investigation. ***The Navy is requesting access to***

Figure 1



***sample all private drinking water wells within the Phase 1 and Phase 2 sample areas near OLF Coupeville (see Figure 2) and will be coordinating with the community water purveyors to sample the water supply wells in this area for those residents receiving their drinking water from a community system.***

A separate fact sheet is available with information on the NASWI Ault Field investigation.

**If your preliminary results show that your drinking water contains PFOS and/or PFOA above the EPA health advisory level, then the Navy will provide bottled water or an alternate water supply until a long-term solution is implemented.**

**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 “emerging contaminants,” which are chemicals or materials 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 is currently studying 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.

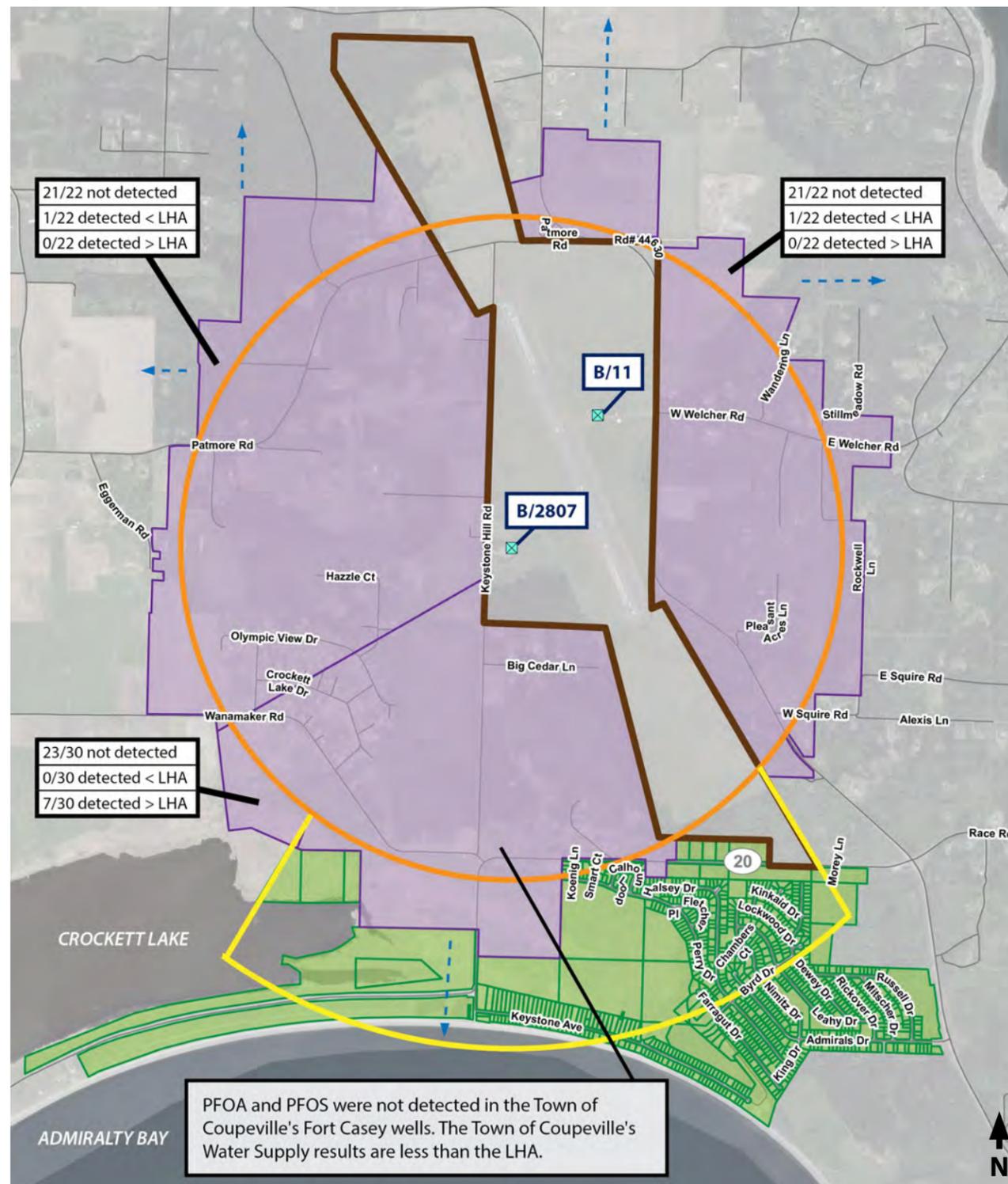
The drinking water investigation for OLF Coupeville will focus on PFOS and PFOA because these are the only PFAS for which the EPA has established a health advisory level in drinking water.

**PHASE 1 INVESTIGATION**

There is no historical documentation that AFFF was used at OLF Coupeville; however, PFOA was detected in one of the on-base drinking water well locations sampled in September 2016. This detection was below the EPA health advisory, but it does indicate a potential previous release of AFFF near Building 2807 (see Figure 2).

There is significant uncertainty regarding groundwater flow direction at the site because the Navy has not conducted previous groundwater investigations at OLF Coupeville. The Navy used Building 2807, the location of the well with a PFAS detection, as the center point to draw a 1-mile radius to initiate off-base drinking water sampling. This Phase 1 designated sampling area (see Figure 2) includes more than 350 properties. Drinking water in this area is supplied by private drinking water wells and community well fields, which provide drinking water to multiple properties.

Figure 2



**Legend**

- Base Boundary
- OLF Coupeville Supply Well
- 1-mile Zone
- Half-mile Step-out Downgradient
- Phase 1 Sampling Area
- Phase 2 Sampling Area
- Approximate Groundwater Flow Direction

**Summary Table Definitions**

Number of samples with PFOA and/or PFOS <b>not detected</b>
Number of samples with PFOA and/or PFOS detections <b>less than the EPA LHA</b>
Number of samples with PFOA and/or PFOS detections <b>greater than the EPA LHA</b>

The Navy performed the first round (Phase 1) of off-base drinking water sampling in November–December 2016. The table below summarizes the results of the sampling at OLF Coupeville. The results indicate that exposure to PFOA and PFOS is occurring at a small number of private drinking water wells – 7 out of 77, or 9 percent – that have been sampled to date. However, in many cases well owners were not able to provide important information regarding their well construction, such as the depth of the well. Since there are distinct aquifers that drinking water wells may be using, the Navy wants to continue to sample in specific areas to ensure additional exposure is not occurring.

Samples Collected	PFOA and/or PFOS Not Detected	PFOA and/or PFOS Detected Below EPA Health Advisory	PFOA and/or PFOS Detected Above EPA Health Advisory
77	66	4	7

Note: Values in the table also include results from two on-base wells and the Town of Coupeville water distribution system.

**PHASE 2 INVESTIGATION**

Out of the 77 samples collected by the Navy in November–December 2016, seven samples exceeded the health advisory of 70 ppt set by EPA. These seven samples were located south of the OLF runway, and the Navy is expanding the drinking water investigation one half-mile downgradient from this area. This new sampling area is referred to as the Phase 2 sampling area (see Figure 2).

Twenty-two drinking water samples were collected east of OLF Coupeville. Of those samples, PFOA was detected in one well, but was below the EPA health advisory of 70 ppt. PFOA and PFOS were not detected in the remaining samples. Twenty-two samples were taken west of OLF Coupeville. Of those samples, PFOA was detected in one well, but was below the EPA health advisory. PFOA and PFOS were not detected in the remaining samples. The Navy also sampled the Town of Coupeville water distribution system. PFOA was detected below the health advisory, and PFOS was not detected.

At this time, the Navy is not planning to expand the sampling area on the north, east, or west of the field. This may change in the future depending on the results of the OLF site investigation (see “Site Investigation” next page).

**With permission, the Navy would like to sample all drinking water wells in the designated sampling area.**

**If your property is within the designated sampling area and you have a drinking water well on your property,** you may schedule sampling of your well at the Open House Public Meetings, by leaving a voicemail at 360-396-1030, or by emailing the Navy's Public Affairs Office at PAO\_Feedback@navy.mil.

Representatives from the Navy, EPA, ATSDR, Washington State DOH, and Island County Public Health will be at the Open House Public Meetings to discuss this important project with you.

**Please attend at any time during one of the following meetings to have your questions answered.**

#### **Coupeville**

Wednesday, February 15, 2017, 4–7 p.m.  
Coupeville High School "commons," 501 S Main Street

#### **Oak Harbor**

Thursday, February 16, 2017, 5–8 p.m.  
Oak Harbor High School, 1 Wildcat Way

#### **ACTIONS BASED ON RESULTS**

Results from Phase 2 drinking water sampling are expected in spring 2017. The Navy will provide notification to each property owner of their personal drinking water results and follow-up actions if needed. We will keep the results private to the greatest extent possible.

The EPA recommends that water containing PFOS and/or PFOA above the health advisory levels not be used for drinking or cooking. If your preliminary results show that your drinking water contains PFOS and/or PFOA above the EPA health advisory level, then the Navy will provide bottled water or an alternate water supply until a long-term solution is implemented.

The Phase 2 sampling area, as shown on Figure 2, may be expanded in one or more directions in the future depending on results.

#### **SITE INVESTIGATION**

The Navy is installing up to 28 on-base groundwater monitoring wells at OLF Coupeville. This investigation will inform the Navy about where PFOS and/or PFOA is present in the groundwater at OLF Coupeville and about important aquifer characteristics. The sample results are expected in spring 2017.

## 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.

***Consuming water above the EPA health advisory level may be a health concern.***

## FOR MORE INFORMATION

***[www.secnav.navy.mil/eie/pages/pfc-pfas.aspx](http://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>**

You may schedule drinking water sampling for your residence by leaving a voicemail at **360-396-1030** or by sending an email to **PAO\_feedback@navy.mil**.