



Naval Base Kitsap Bangor Silverdale, Washington PFAS Drinking Water Investigation Fact Sheet Initial Results and Path Forward

September 2020

The Navy is requesting permission to sample water obtained from drinking water wells that use groundwater within a designated area near Naval Base Kitsap (NBK) Bangor for certain per- and polyfluoroalkyl substances, commonly known as PFAS.

PFAS are a family of thousands of different chemicals which have been widely used in industrial and consumer products since the 1950s. PFAS have been used in many household and industrial products because of their stain- and water-repellent properties. PFAS are now present virtually everywhere in the world because of the large amounts that have been manufactured and used. Once these compounds are released, they break down very slowly.

The Navy developed a proactive policy to address past releases of PFAS at installations nationwide, as several PFAS are now of emerging public health concern. The U.S. Environmental Protection Agency (EPA) has issued a lifetime health advisory for two commonly used and studied PFAS, perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS).

The most common Navy activity that could have resulted in the historical release of PFOA, PFOS, and other PFAS to the environment is the use of firefighting foam (specifically aqueous film-forming foam, or AFFF) for testing, training, firefighting, and other life-saving emergency responses. PFAS compounds may be present in the soil and/or groundwater at NBK Bangor (Figure 1) as a result of historical uses of AFFF. Because of this historical use, there is potential for PFOA, PFOS, and other PFAS to be in the groundwater on base, and it may also be present in nearby off-base drinking water wells located in the direction that the groundwater flows away from the base within the designated sampling areas (Figure 2).

Records indicate that residents in the sampling areas either purchase their drinking water from Kitsap Public Utilities, purchase it from a local water purveyor, or use a private well for their drinking water. The Navy conducted initial sampling of 292 homes near NBK Bangor between February and April 2020. Based on the initial results the Navy will conduct sampling in an expanded area (Figure 2). **During expanded sampling, the Navy is asking to sample from drinking water wells that were not previously sampled, and are within the initial and expanded sampling areas.**

To be protective, the Navy will provide bottled water for drinking and cooking to any resident in the designated sampling areas whose drinking water well contains PFOA and/or PFOS above the EPA lifetime health advisory. The Navy will provide bottled water until a long-term solution is implemented.

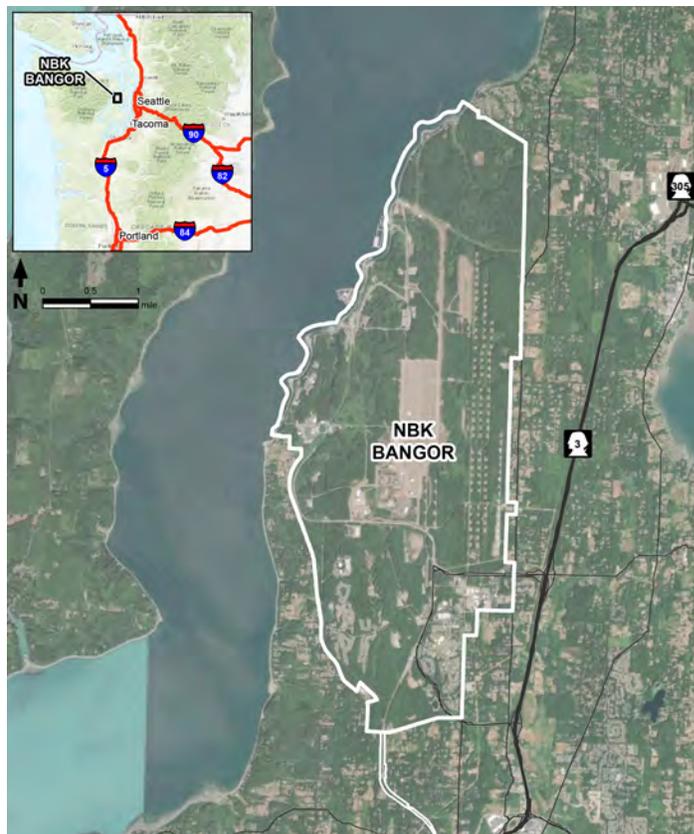
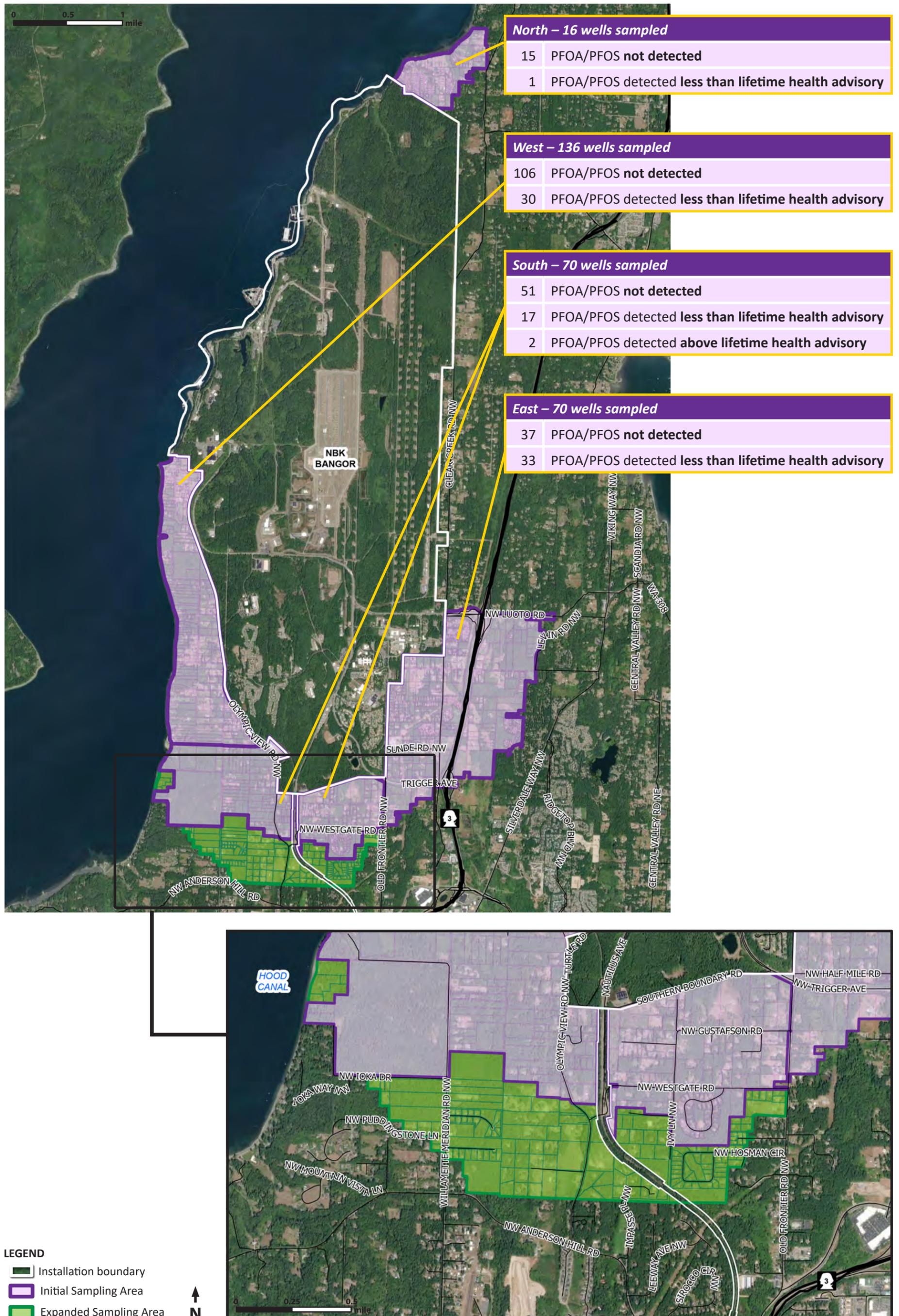


Figure 1 – NBK Bangor

PFAS are chemicals of emerging concern, which have no Safe Drinking Water Act regulatory standards or routine water quality testing requirements. EPA's lifetime health advisories are non-enforceable and non-regulatory. They provide technical information to states, agencies, and other public health officials on health effects, analytical methodologies, and treatment technologies associated with impacted drinking water.

The Navy established a proactive policy to ensure the communities near our installations are not exposed to drinking water with PFOA and/or PFOS above the EPA's lifetime health advisory due to past known or likely Navy release of products containing PFAS. Following this policy, the Navy identified potential PFAS release areas on NBK Bangor that may present an exposure to nearby residents using wells for their drinking water. This drinking water well investigation will allow us to

Figure 2 – Initial and Expanded Designated Sampling Areas



identify and address any current exposure to PFOA and/or PFOS above EPA’s lifetime health advisory.

There is no legal requirement to conduct this drinking water testing. The Navy is performing this voluntary testing because it is important that we ensure our neighbors in the designated sampling areas are not drinking water with PFOA and/or PFOS concentrations above the EPA lifetime health advisory as a result of known or suspected releases of PFAS from NBK Bangor. The Navy is conducting the investigation in collaboration with partners such as EPA Region 10, the Agency for Toxic Substances and Disease Registry, the Washington State Department of Ecology, the Washington State Department of Health, and the Kitsap Public Health District.

PFAS

The EPA has issued a lifetime health advisory for two commonly used and studied PFAS, PFOA and PFOS, and is currently studying PFAS to determine if national regulation is needed. The EPA’s lifetime health advisory provides Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS in drinking water. The EPA’s health advisory for lifetime exposure is 70 parts per trillion (ppt) for PFOA and 70 ppt for PFOS. When both PFOA and PFOS are found in drinking water, the combined concentrations should not exceed 70 ppt.

INITIAL DRINKING WATER RESULTS

In February 2020, the Navy initiated off-base drinking water sampling near NBK Bangor. The table below summarizes the results of the initial sampling.

| <i>Initial Drinking Water Results near NBK Bangor for PFAS</i> | | | |
|--|--------------|----------|--|
| Samples collected | Not detected | Detected | Detections of PFAS above the EPA lifetime health advisory* |
| 292 | 209 | 83 | 2 |

* The 2 detections above the EPA lifetime health advisory are included in the number of detections.

292 samples were collected by the Navy between February and April 2020; 2 samples exceeded the lifetime health advisory of 70 ppt set by the EPA (Figure 2). The results indicate that exposure to PFOA and PFOS is not occurring at many of the private drinking water wells that have been sampled to date. Some properties in the initial sampling area did not request to have their drinking water tested. The Navy is still requesting permission to sample private drinking water wells, not previously tested in the initial sampling area, to ensure additional exposure is not occurring.

EXPANDED DRINKING WATER SAMPLING

Out of the 292 samples collected by the Navy between February and April 2020, 70 were collected to the south of NBK Bangor and 2 samples exceeded the health advisory of 70 ppt set by EPA. Because of these two exceedances, the Navy is expanding

the drinking water investigation downgradient from this area. This new sampling area is referred to as the expanded sampling area (see Figure 2). At this time, the Navy is not planning to expand the sampling area on the north, east, or west of NBK Bangor.

ACTIONS BASED ON RESULTS

The preliminary results from the off-base drinking water sampling are expected approximately 30 days after collecting the samples. We will provide verbal notification to the property owners of their personal drinking water results and follow-up actions if needed. The Navy will do its best to keep the results of individual properties confidential to the extent permitted by law.

The Navy will provide an alternate water source, likely bottled water, for drinking and cooking to any resident in the designated sampling areas whose drinking water well contains PFOA and/or PFOS above the EPA’s lifetime health advisory. The Navy will continue to provide the alternate water until a permanent solution is implemented.

HEALTH INFORMATION

Exposure to PFOA and PFOS appears to be global. Studies have found both compounds in the blood samples of the general population. Studies on exposed populations indicate that PFOA and/or PFOS may have caused 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.

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 PFOA and/or PFOS 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 PFOA and PFOS, EPA recommends people not drink or cook with water that contains these compounds above the EPA’s lifetime health advisory.

FOR MORE INFORMATION

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

If you have specific questions, contact the Navy Public Affairs office at:
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 PAO_Feedback@navy.mil