

Emergency Response Action Memorandum
Naval Base Kitsap Bangor
Silverdale, Washington

I. Purpose

This Emergency Response Action Memorandum was prepared by Naval Facilities Engineering Command (NAVFAC) Northwest per Section 300.415(n)(2) of Title 40 of the Code of Federal regulations, as part of the National Contingency Plan (NCP). The Department of the Navy (Navy) is the lead agency, under Executive Order 12580, for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) actions at Naval Base Kitsap (NBK) Bangor. NBK Bangor is currently listed on the National Priorities List (NPL). The purpose of this Emergency Response Action Memorandum is to document the decision by the Navy to mitigate potential public exposure to per- and polyfluoroalkyl substances (PFAS), specifically perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), in off-base drinking water wells near NBK Bangor, Silverdale, Washington.

An emergency response action will be initiated if concentrations of PFOS and/or PFOA in off-base drinking water supply wells near NBK Bangor are detected above the United States Environmental Protection Agency (USEPA) lifetime health advisory level. There is evidence that exposure to PFAS can lead to adverse human health effects. PFAS are constituents found in aqueous film forming foam (AFFF) used in firefighting operations as well as in materials used for chrome plating; these activities have not been previously evaluated at NBK Bangor. These chemicals do not adsorb readily to soils and are consequently, frequently found in groundwater. On May 19, 2016, the EPA issued a lifetime health advisory level for PFOA and PFOS. This health advisory level offers a margin of protection for all Americans throughout their life from adverse health effects resulting from exposure to PFOA and PFOS in drinking water. The concentration in drinking water should not exceed 70 ppt when detected. PFOA and PFOS concentrations occur alone or are added together. The emergency response action will consist of supplying bottled water to the property owners for drinking and cooking if the drinking water supply well within the sampling area exceeds the USEPA lifetime health advisory level for PFOS and/or PFOA. The long-term removal action will be addressed under a separate action memorandum.

II. Site Conditions and Background

Naval activities began at NBK Bangor in June 1944, when the U.S. Naval Magazine, Bangor, was established to provide a deep-water shipment facility for ordnance. From 1944 into the early 1970s, the Navy facility at Bangor was primarily used for shipment and storage of ordnance and demilitarization of unserviceable and dangerous ammunition. In February 1977, NBK Bangor was commissioned as the West Coast homeport for the Trident Submarine Launched Ballistic Missile System, Naval Submarine Base Bangor. Naval Base Kitsap was created in 2004 by merging the former Naval Station Bremerton with Naval Submarine Base Bangor. The current mission of the Base is to provide administrative and personnel support for submarine force operations and logistical support for other Navy activities.

In 2016, the Deputy Assistant Secretary of the Navy (Environment) (DASN [E]) issued a memorandum to address past releases of PFAS, under the Navy Environmental Restoration Program (DASN (E). 2016. Policy Memo: Perfluorinated Compounds/Perfluoroalkyl Substances (PFC/PFAS) – Identification of Potential Areas of Concern (AOC). June 20.). In response to the

2016 memorandum, the Navy assessed sites with a known or potential PFAS release and prioritized sites with drinking water supply within 1-mile downgradient from the release site. Based on an evaluation of historical activities at NBK Bangor, 22 areas were identified as potential PFAS source areas. The Navy has identified off-base drinking water wells downgradient of these potential release areas that maybe impacted by past releases of PFAS-containing materials. The Navy will be sampling off-Base drinking water wells, within designated sampling areas, to determine if concentrations of PFOS and/or PFOA are detected above the USEPA lifetime health advisory level (Figures 1 and 2). Sampling areas and required response may expand beyond the initial designated sampling area based on off-base drinking water sampling results.

III. Threats to Public Health or Welfare or the Environment and Statutory and Regulatory Authorities

The Navy has identified off-base drinking water wells near NBK Bangor that may be impacted by past releases of PFAS-containing materials. Property owners whose drinking water supply wells contain concentrations of PFOA and/or PFOS above the USEPA lifetime health advisory level will be notified with 24 hours of receipt of preliminary analytical results. These property owners will then be provided bottled water as an Emergency Response Action under CERCLA. Bottled water will be provided until a long-term solution is evaluated and implemented to provide drinking water with concentrations of PFOA and PFOS below the USEPA lifetime health advisory levels.

IV. Proposed Actions and Estimated Costs

Beginning in February 2020 and into March 2020, the Navy will be sampling off-Base drinking water wells near NBK Bangor, within designated sampling areas, to determine if concentrations of PFOS and/or PFOA are detected above the USEPA lifetime health advisory level. If concentrations of PFOS and/or PFOA are in exceedance of the USEPA lifetime health advisory level, bottled water will be provided to impacted residents, as discussed in the section above.

The Navy has conducted two public meetings in Silverdale, Washington, on February 19, 2020 and February 20, 2020. The meetings provided the public the opportunity to discuss questions or concerns associated about PFOA and PFOS with subject matter experts, including representatives from the Navy, USEPA Region 10, Washington State Department of Health (WADOH), Washington State Department of Ecology (Ecology), Kitsap Public Health District (KPHD) and the Agency for Toxic Substances and Disease Registry (ATSDR). Potential additional public meeting(s) may be held in Silverdale, Washington, in the future if concentrations of PFOA and/or PFOS are detected in drinking water wells in exceedance of the USEPA lifetime health advisory level to address the results of the initial sampling effort and discuss the next steps in the investigation. The Navy has been working in conjunction with USEPA Region 10, ATSDR, WADOH, Ecology, and KPHD to assess the potential and known releases and the impact to off-base drinking water near NBK Bangor. The Navy will continue to work with these agencies to protect public health.

Costs associated with delivery of bottled water for drinking and cooking purposes are estimated to be \$1,020 per affected property per year.

Figure 1

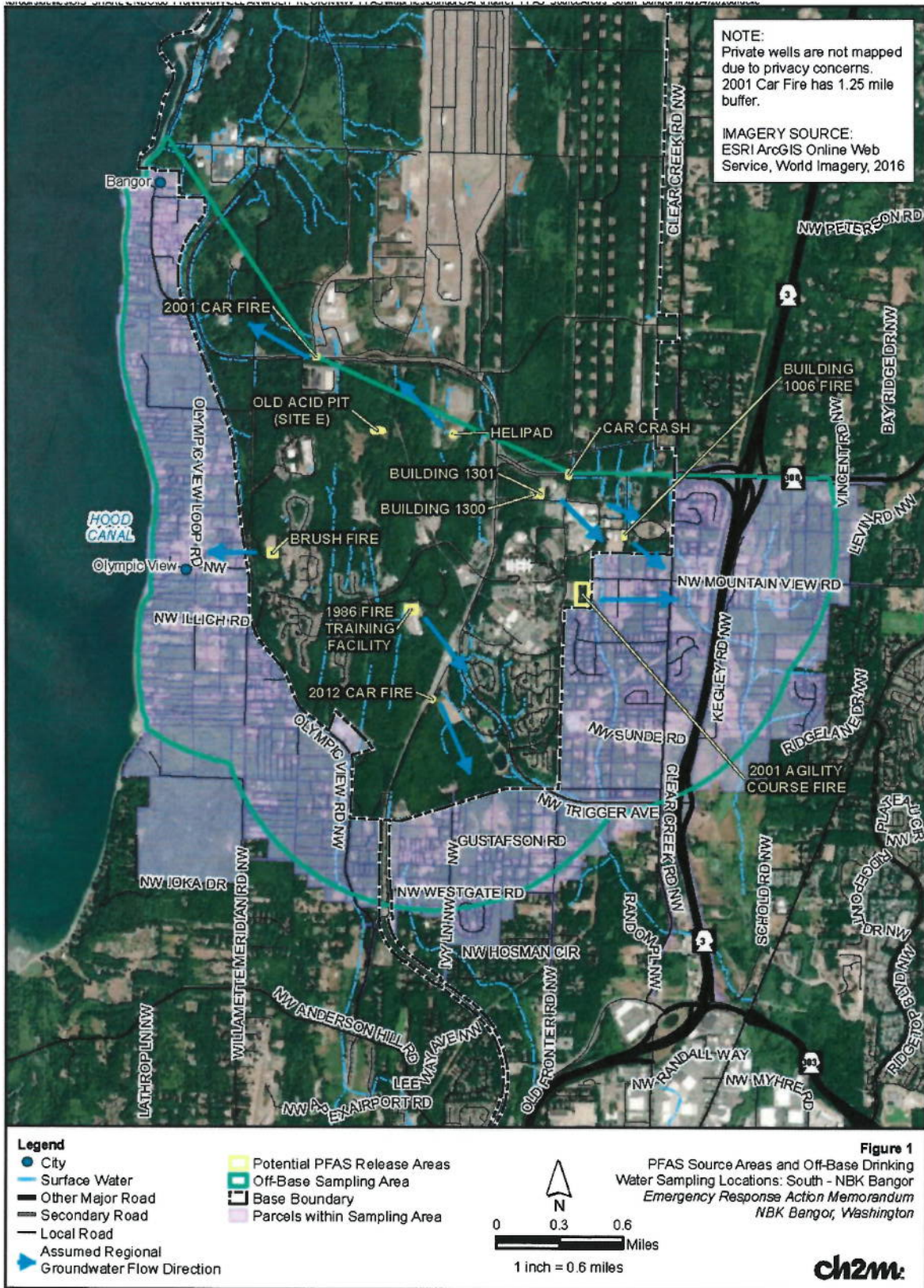


Figure 2

NOTE
Private wells are not mapped due to privacy concerns

IMAGERY SOURCE
ESRI ArcGIS Online Web Service, World Imagery, 2016



- Legend**
- City
 - Surface Water
 - Other Major Road
 - Secondary Road
 - Local Road
 - ➔ Assumed Regional Groundwater Flow Direction

- Potential PFAS Release Areas
- Off-Base Sampling Area
- ▭ Installation Boundary
- Parcels within Sampling Area

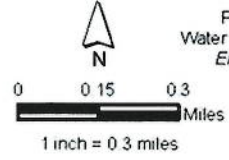


Figure 2
PFAS Source Areas and Off-Base Drinking Water Sampling Locations South - NBK Bangor
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V. Outstanding Policy Issues

Since there are no regulatory standards governing PFAS in drinking water, the USEPA developed a lifetime health advisory level establishing health-based hazard concentrations above which action should be taken to reduce exposure to certain PFAS, in particular PFOS and PFOA. The Navy initiated this Emergency Response Removal Action based on USEPA lifetime health advisory level for PFOS and PFOA. The science surrounding PFAS is still evolving. As the scientific community learns more, the USEPA lifetime health advisory levels may change or additional standards may be developed by other federal, state, or local agencies. These changes may necessitate additional actions to be taken by the Navy.

VI. Recommendation

This Action Memorandum documents approval of the Emergency Response Action to address off base drinking water exposure to PFOS and/or PFOA near NBK Bangor and the adjacent communities of Silverdale, Poulsbo, and Bangor, Washington. It was developed in accordance with CERCLA and the NCP and is based on past and current operations at the base. Conditions at the site meet the NCP section 300.415(b) criteria for a response action. NAVFAC Northwest approves this emergency response removal action.

Approval:



R. G. Rhinehart
Captain, U.S. Navy
Commanding Officer

3 MAR 20
Date