ACTION MEMORANDUM

Temporary Point-of-Use Drinking Water Treatment Naval Air Station Whidbey Island Ault Field, Oak Harbor and Outlying Landing Field, Coupeville

PREPARED BY: Naval Facilities Engineering Systems Command (NAVFAC) Northwest (NW)

DATE: January 2025

1.0 Purpose

The purpose of this Action Memorandum (AM) is to document the decision by the Department of the Navy (Navy) to take additional precautionary measures to reduce concentrations of per-and polyfluoroalkyl substances (PFAS) in off-base private drinking water wells containing certain PFAS above the Department of Defense (DoD) action levels for private drinking water wells (referred to as DoD's Action Levels elsewhere in this AM) (DoD, 2024) near Naval Air Station (NAS) Whidbey Island, in Oak Harbor and Coupeville, Washington.

The Navy is implementing a Time-Critical Removal Action (TCRA) in response to the PFAS above the DoD's Action Levels in private drinking water wells near NAS Whidbey Island. The TCRA is to provide a temporary point-of-use (POU) filtration system at one faucet at each residence served by a drinking water well above DoD's Action Levels, but below 70 parts per trillion (ppt) for perfluorooctanoic acid (PFOA) and/or perfluorooctane sulfonate (PFOS), until a more enduring solution can be implemented.

This AM was prepared per Section 300.415 (n)(2) of Title 40 of the Code of Federal Regulations, as part of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The Navy is the lead agency, under Executive Order 12580, for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) actions at NAS Whidbey Island. NAS Whidbey Island is currently listed on the United States Environmental Protection Agency (EPA) National Priorities List.

2.0 Site Conditions and Background

NAS Whidbey Island is comprised of four separate installations: Ault Field (including Area 6 Landfill), Outlying Landing Field (OLF) Coupeville, Seaplane Base, and former Lake Hancock Target Range. Seaplane Base and former Lake Hancock Target Range are not discussed further since they are not part of this AM. Naval activities began at NAS Whidbey Island on September 21, 1942. Ault Field currently supports several types of aircraft, 7,600 military personnel, and 1,300 civilian personnel. NAS Whidbey Island's current mission is to maintain and operate naval aircraft and aviation facilities and provide associated support. OLF Coupeville was commissioned for use by the Navy in 1943. OLF Coupeville has supported day and night Field Carrier Landing Practice operations by the Navy for aircraft based out of Ault Field since 1967. Such operations allow aviators to practice touch-and-go, simulating carrier landings and takeoffs. OLF Coupeville is seen by the Navy as an ideal airfield for this type of carrier training due to its remote location and low ambient lighting, which provides pilots an optimum experience that replicates landing aboard an aircraft carrier. The most common activity associated with a historical release of PFAS to the environment at NAS Whidbey Island is the use of firefighting foam (specifically, aqueous film-forming foam, or AFFF) for testing, training, firefighting, and other life-saving emergency responses, or associated disposal practices. Because of this historical use, PFAS are present in the groundwater at NAS Whidbey Island and have been detected in nearby drinking water wells that are located in the direction that the groundwater flows away from NAS Whidbey Island.

In 2016, the Deputy Assistant Secretary of the Navy (Environment) issued a memorandum to address past releases of PFAS, under the Navy Environmental Restoration Program. 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 one mile downgradient from the release site. The Navy initiated sampling in 2016 near NAS Whidbey Island to ensure the communities near our installations were not exposed to drinking water with PFOA and/or PFOS above 70 ppt, the DoD's action level at the time, because of a known or potential Navy release of PFAS-containing materials.

The Navy issued additional guidance to investigate potential PFAS sources and levels of contamination at Naval Installations and identify areas requiring further assessment. In 2018, Preliminary Assessments (PAs) were finalized for Ault Field (including Area 6 Landfill) and OLF Coupeville (CH2M, 2018b and c). The Ault Field PA identified 35 PFAS release areas and the OLF Coupeville PA identified three PFAS release areas. Between 2016 and 2020, Site Inspections (SIs) for PFAS occurred at Ault Field, Area 6 Landfill, and OLF Coupeville (MMEC, 2016; CH2M, 2018a; CH2M, 2019; CH2M, 2020; CH2M, 2021a, b; and CH2M, 2022). The presence of PFAS was confirmed above the applicable screening levels at the time of the investigations at Ault Field; Airfield (23 release areas), Area 31 (former Runway Fire Training School), Current Fire Training Area, two wastewater treatment areas, and the Area 6 Landfill. The presence of PFAS was also confirmed at OLF Coupeville. Remedial investigations (RIs) for PFAS are underway at Ault Field Airfield, Area 31, Current Fire Training Area, Area 6 Landfill, and OLF Coupeville.

On April 26, 2024, the EPA issued a final National Primary Drinking Water Regulation (NPDWR) establishing nationwide drinking water standards for certain PFAS under the Safe Drinking Water Act (SDWA). This regulation applies to public drinking water systems. Operators of public drinking water systems regulated by the NPDWR have five years to meet these standards. In September 2024, DoD published "Prioritization of Department of Defense Cleanup Actions to Implement the Federal Drinking Water Standards for Per- and Polyfluoroalkyl Substances under the Defense Environmental Restoration Program," which describes DoD's plans to incorporate the EPA's drinking water regulation into DoD's ongoing PFAS cleanups, and prioritize actions to address private drinking water wells with the highest levels of PFAS from DoD activities.

Table 1 shows the DoD Action Levels for PFAS in Private Drinking Water Wells.

Table 1. DoD Action Levels for PFAS in Private Drinking Water Wells

PFAS	**Level**
perfluorooctanoic acid (PFOA)	12 parts per trillion (ppt)
perfluorooctane sulfonic acid (PFOS)	12 ppt
perfluorononanoic acid (PFNA)	30 ppt
perfluorohexane sulfonic acid (PFHxS)	30 ppt
hexafluoropropylene oxide dimer acid (HFPO-DA, or GenX)	30 ppt
hazard index for mixture of at least two of PFHxS, PFNA, HFPO-DA, and perfluorobutane sulfonic acid (PFBS)	3 (no units)

The Navy will initiate enduring solutions to address private drinking water wells impacted by PFAS from DoD activities where concentrations are known to be at or above the DoD's Action Levels (Table 1). This TCRA includes providing homes served by wells with PFAS greater than the DoD's Action Levels, but less than 70 ppt PFOS and/or PFOA, a temporary point of use (POU) filtration system (further described below) prior to full implementation of a more enduring solution.

As of December 2024, more than 300 off-base drinking water wells have been sampled by the Navy, and PFAS exceed one or more of the DoD's Action Levels in 26 wells. The Navy has conducted or is implementing removal

actions in response to PFOS and/or PFOA above the Navy's previous action level, 70 ppt, in 21 of 26 drinking water wells near NAS Whidbey Island, including Ault Field, Area 6 Landfill, and OLF Coupeville listed as follows:

- Providing bottled water to residents where water from private drinking water wells exceeded the Navy's previous action level, 70 ppt for PFOS and/or PFOA (Navy, 2017);
- Providing homes a POU filtration system in lieu of bottled water prior to implementing an enduring solution (Navy, 2018a);
- Adding treatment to the Town of Coupeville's water supply and connecting impacted homes in Coupeville with wells above 70 ppt to the Town of Coupeville's water supply (Navy, 2018b);
- Connecting five homes and one mobile home park to the City of Oak Harbor's water supply, connecting one home to a new, deeper drinking water well, and connecting one home to the Navy water supply (Navy, 2020); and
- Connecting one home and one business to the City of Oak Harbor water supply and connecting two homes to two new, deeper drinking water wells (Navy, 2024).

The five remaining drinking water wells, which contain certain PFAS above the DoD's Action Levels, but less than 70 ppt PFOS and/or PFOA, are the subject of this AM, and in accordance with the DoD policy, TCRAs are being conducted whenever possible. Further, in accordance with the DoD policy, bottled water may only be provided to homes with wells above 70 ppt PFOS and/or PFOA, so the Navy is providing POU filtration systems to these homes as a short-term solution prior to conducting an enduring solution.

3.0 Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities/Endangerment Determination

Potential releases of pollutants and contaminants may present an imminent and substantial endangerment to public health, welfare, and the environment. Any historical release on Navy facilities has the potential to impact groundwater and drinking water adjacent to the Navy facilities. The Navy continues to investigate releases and migration of those releases through the RIs at Ault Field, Area 31, Current Fire Training Area, Area 6, and OLF Coupeville (all reports forthcoming).

Following the September 2024 DoD policy memorandum, the Navy identified five private drinking water wells containing certain PFAS above the DoD's Action Levels, but less than 70 ppt PFOS and/or PFOA, and notified the residents.

4.0 Removal Action and Estimated Costs

Prior to implementing an enduring solution, this TCRA provides a POU filtration system to approximately 20 homes served by five wells with PFAS greater than the DoD's Action Levels, but less than 70 ppt PFOS and/or PFOA.

The Navy evaluated two short-term TCRA options:

- POU treatment (single-sink water treatment)
- Point-of-Entry (POE) treatment (treatment at the wellhead)

The POU system will treat the residents' well water at a single sink tap to reduce PFAS concentrations to less than the DoD's Action Levels. POU systems are commercially readily available for purchase, work with existing home features, and do not require significant design considerations. POE systems are not as commercially readily available as POU systems, require additional infrastructure, and would have significant design considerations prior to implementation. The Navy chose the POU option because it reduces exposure to PFAS via drinking and cooking, has the shortest implementation schedule, and has the best cost effectiveness of the two options considered.

The Navy is continuing to evaluate potential PFAS exposure to the public via drinking water downgradient of NAS Whidbey Island. If additional drinking water samples above the DoD's Action Levels but below 70 ppt for PFOA

and PFOS in private drinking water wells are identified, the Navy will offer to install a POU treatment system for the impacted residences. The Navy will be providing a POU system to these residents until an enduring solution is evaluated and implemented to provide drinking water with concentrations of PFAS below the DoD's Action Levels.

The POU systems will be installed by a qualified contractor. At the time of this AM, at least 12 residents have requested the installation of a POU system.

The estimated project cost for providing POU installation and monitoring and maintenance for one year is $6,000 to $14,000 per house.

5.0 Expected Change in the Situation Should Action be Delayed or Not Taken

Failure to provide clean drinking water to residents with impacted drinking water would result in continued exposure to PFAS above the DoD's Action Levels for private drinking water wells.

6.0 Future Regulatory Standards for PFAS

This removal action is being performed for off-base drinking water based on exceedances of DoD's Action Levels. If additional regulations for PFAS are established, the Navy will need direction from DoD and all drinking water data collected will be re-evaluated to determine if additional removal actions by the Navy are warranted.

7.0 Recommendations

This memorandum documents approval of the TCRA to temporarily remedy off-base drinking water exposure to PFAS for five well locations affecting multiple residences near NAS Whidbey Island as a short-term solution prior to full implementation of an enduring solution. Conditions at the sites meet the NCP Section 300.415(b) and (n)(2) criteria for a removal action and approval is recommended for the proposed removal action. NAVFAC NW is undertaking this TCRA.

Approval:

FOR

N. J. Gammache
Captain, United States Navy
Commanding Officer

27 JAN 25

Date

8.0 References

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CH2M. 2018b. *Preliminary Assessment for Per-and Polyfluoroalkyl Substances (PFAS), Ault Field, Naval Air Station Whidbey Island, Oak Harbor, Washington*. November.

CH2M. 2018c. *Preliminary Assessment for Per-and Polyfluoroalkyl Substances (PFAS), OLF Coupeville, Naval Air Station Whidbey Island, Oak Harbor, Washington*. November.

CH2M. 2019. *Final Technical Memorandum for the Evaluation of Per- and Polyfluoroalkyl Substances in Groundwater, Ault Field, Naval Air Station Whidbey Island, Oak Harbor, Washington*. March.

CH2M. 2020. *Evaluation of Per- and Polyfluoroalkyl Substances, 1,4-Dioxane, and Vinyl Chloride in Groundwater and Drinking Water, Ault Field, Area 6 Naval Air Station Whidbey Island, Oak Harbor, Washington.* September.

CH2M. 2021a. *Phase 2 Site Inspection Report for Per- and Polyfluoralkyl Substances, Ault Field, Naval Air Station Whidbey Island, Oak Harbor, Washington*. September.

CH2M. 2021b. *Final Supplemental Site Inspection Report for PFAS at OLF Coupeville, Naval Air Station Whidbey Island*. October.

CH2M. 2022. *Final Supplemental Site Inspection Report Addendum for PFAS at OLF Coupeville, Naval Air Station Whidbey Island*. January.

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Navy. 2017. *Emergency Response Action Memorandum, near Naval Air Station Whidbey Island, Ault Field, Oak Harbor and Outlying Landing Field, Coupeville, Island County, Whidbey Island, Washington. February.*

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Navy. 2018b. *Action Memorandum – Town of Coupeville – Navy Water System Improvements, near Naval Air Station Whidbey Island, Outlying Landing Field, Coupeville, Washington*. July.

Navy. 2020. *Action Memorandum – Ault Field and Area 6 Drinking Water, near Naval Air Station Whidbey Island, Oak Harbor, Washington*. June.

Navy. 2024. *Action Memorandum – Off-Base Private Drinking Water Time Critical Removal Action, near Naval Air Station Whidbey Island, Oak Harbor, Washington*. June.