Emergency Response Action Memorandum
Naval Air Station Whidbey Island
Ault Field, Oak Harbor and Outlying Landing Field, Coupeville
Island County, Whidbey Island, Washington

I. PURPOSE

The purpose of this Emergency Response Action Memorandum is to document the decision by the Department of the Navy (Navy) to mitigate public exposure to per- and polyfluoroalkyl substances (PFAS), specifically perfluorooctane sulfonate (PFOS) and perfluoroocatonoic acid (PFOA), identified in drinking water wells adjacent to Naval Air Station (NAS) Whidbey Island Ault Field and Outlying Landing Field (OLF), Coupeville, Washington. The two sites are being addressed together as a combined area of concern.

This memorandum was prepared per Section 300.415(n)(2) of Title 40 of the Code of Federal regulations, as part of the National Contingency Plan (NCP). The Navy is the lead agency, under Executive Order 12580, for the CERCLA actions at NAS Whidbey Island. Ault Field is currently listed on the National Priorities List (NPL) and Outlying Landing Field Coupeville is not listed on the NPL.

This emergency removal action is in response to the discovery of PFOS and PFOA in drinking water supply wells near Ault Field and OLF Coupeville above the United States Environmental Protection Agency (EPA) Lifetime Health Advisory (LHA). The emergency removal action consisted of supplying bottled water to the residents where drinking water supply wells exceed the PFOA and/or PFOA LHA of 70 parts per trillion (ppt). The long term removal action will be addressed under a separate action memorandum.

Public health will be protected by completing the actions described in this Memorandum.

II. SITE CONDITIONS AND BACKGROUND

NAS Whidbey Island is headquartered on Whidbey Island, Oak Harbor, Washington, at the northern end of Puget Sound and the eastern end of the Strait of Juan de Fuca. This north-south oriented island is nearly 40 miles long, ranges from 1 to 10 miles wide, and lies within the Puget Sound Lowland, a topographic and structural depression between the Olympic Mountains and the Cascade Range.

NAS Whidbey Island was commissioned on September 21, 1942, and was originally used for seaplane patrol operations, rocket firing training, torpedo overhaul, and both recruit and petty officer training. After World War II the facility was placed on reduced operating status, and then updated in December 1949 to increase its Pacific Fleet support capabilities with two separate operations: Ault Field and the Seaplane Base. NAS Whidbey Island Ault Field is located just north of the city of Oak Harbor. NAS Whidbey Island Seaplane Base is located in south Oak Harbor. NAS Whidbey Island also operates the Outlying Landing Field (OLF) south of Oak Harbor near the Town of Coupeville.

The Navy has developed a protective policy to address past releases of per and polyfluoroalkyl substances, commonly known as PFAS, under the Navy Environmental Restoration Program. Navy Memorandum from Deputy Assistant Secretary of the Navy (Environment) dated 20 June 2016

Perfluorinated Compounds/Perfluoro*alkyl Substance (PFC/PFAS) – Identification of Potential Areas of Concern (AOC)* (DASNE MEMO) states "The Department of the Navy (DON) is committed to identifying, evaluating and where appropriate, remediating contamination resulting from its activities. DON will take immediate action to remove imminent threats to human health and the environment." The memorandum further identified the process "to efficiently identify, validate and prioritize the inventory of Sites and Area of Concern with known, or potential, PFC/PFAS release." Consistent with this memorandum and enclosures the Navy assessed sites with a known or potential for PFC/PFAS release and prioritized sites with drinking water supply within 1 mile down gradient from the site. These substances may be present in the soil and/or groundwater at Navy sites as a result of historical firefighting activities using aqueous film forming foam (AFFF). This foam was used for plane crashes, equipment testing, and/or 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 NAS Whidbey Island: Ault Field and OLF Coupeville (see Figure 1). Since people may be exposed to drinking water impacted by the Navy's past use of AFFF, our first priority was to sample drinking water sources that are near confirmed or potential AFFF releases.

The Navy identified off-site public and private drinking water wells adjacent to these facilities that may be impacted by historical Navy release of AFFF. Property owners were contacted by letter to request sampling of private wells for the presence of PFOS and PFOA and determine if an exposure to these compounds was occurring. Three open house public information meetings were held on 21 and 22 November 2016 to provide the public the opportunity to discuss questions or concerns associated with PFOA and PFOS with subject matter experts, including representatives from the Navy, EPA Region 10, Washington State Department of Health (DOH), Island County Public Health and the Agency for Toxic Substances and Disease Registry (ATSDR).

The Navy has been working in conjunction with EPA Region 10, ATSDR, Washington State 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 agencies to protect public health.

At OLF Coupeville there is no historical documentation that AFFF was used; 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's drinking water investigation includes all off base properties within 1-mile of Building 2807. This area is referred to the Phase 1 sampling area (see Figure 2) and 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. The Navy performed the first round of Phase 1 sampling from 28 November to 21 December 2016. Out of the 77 samples collected by the Navy seven samples exceeded the EPA health advisory of 70 ppt.

At Ault Field the Navy previously identified three areas where AFFF releases occurred or are suspected to have occurred. These areas include the Former Fire Fighting School, the Ault Field Runways and associated drainage ditches, and the Current Fire Fighting School (see Figure 3). PFOS and PFOA have

been detected in the shallow groundwater at the Former Fire Fighting School above the EPA health advisory. PFOS detected at 2,370 ppt and PFOA detected at 58,500 ppt confirming the past release of these compounds. AFFF has been historically used at the Current Fire Fighting School, but no sampling for PFOS/PFOA has been conducted at this location. Because of the complex groundwater flow at Ault Field, the confirmed or potential release of AFFF, and the nearby private and community drinking water wells, the Navy selected both up- and cross-gradient to groundwater flow as the Phase 1 sampling area near Ault Field. Specifically, the Navy extended the sampling area approximately 1 mile to the east of the east-west runway and ½ mile to the north of the Former Fire Fighting School (see Figure 3). The Navy's drinking water investigation also included off base properties 1-mile down-gradient from the Current Fire Fighting School. The Navy performed the first round of Phase 1 sampling from 28 November to 21 December 2016. Out of the 55 samples collected by the Navy, one sample exceeded the EPA health advisory.

Residents near Ault Field and OLF with tested drinking water concentrations of PFOS and/or PFOA above the LHA have been provided bottled water for drinking and cooking, in accordance with Department of Navy policy. As of this date, a total of nine residences are receiving bottled water based on concentrations identified in eight drinking water wells.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES / ENDANGERMENT DETERMINATION

Confirmed and potential releases of pollutants and contaminants due to the Navy use of AFFF may present an imminent and substantial endangerment to public health, welfare, and the environment. The confirmed and potential historical releases of AFFF on Navy facilities may have impacted groundwater and drinking water adjacent to the Navy facilities. The source and areal extent of PFOS and/or PFOA is not yet known. The Navy is continuing to assess potential exposure through drinking water adjacent to the facilities and will implement subsequent Site Inspections and Remedial Investigations based on findings.

IV. REMOVAL ACTION AND ESTIMATED COSTS

On 9 December 2016, the Navy began supplying bottled water for drinking and cooking to the first residence with PFOS and/or PFOA concentrations measured in drinking water wells above the EPA LHA as an emergency removal action. Since that date the Navy has supplied bottled water to nine residences due to concentrations in eight drinking water wells that exceed the LHA.

The Navy is continuing to evaluate potential exposure to the public through drinking water. If during the course of the drinking water sampling, additional drinking water samples above the LHA are identified, the Navy will supply bottled water to impacted residences. Bottled water will be supplied to these residents until a long-term solution is evaluated and implemented to provide drinking water with concentrations of PFOA and PFOS below the EPA LHA. A long-term solution has not yet been identified.

The Navy plans to conduct additional sampling for potential off base exposure in February and March 2017. If drinking water sampling results exceed the PFOA and/or PFOA LHA, then the Navy will immediately supply bottled water to the additionally impacted residents until a long-term solution is evaluated and implemented to provide drinking water with concentrations of PFOA and/or PFOS below the EPA LHA.

The estimated project cost for providing bottled water per residence for 1 year is approximately $1,000.

V. 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 PFOS and/or PFOA above EPA LHA.

VI. FUTURE REGULATORY STANDARDS FOR PFAS

This emergency response removal action is being performed for off base drinking water based on the exceedance of the EPA LHA for PFOA and PFOS. If the EPA LHA for PFOA and PFOS is reduced, the analytical data from all residences' drinking water sampled will be reevaluated. In the event this reevaluation indicates additional adversely impacted drinking water, additional removal actions by the Navy may be warranted (i.e., alternate drinking water to impacted residents).

VII. RECOMMENDATIONS

This Action Memorandum documents approval of the Emergency Response Removal Action selected to address off base drinking water exposure to PFOS and/or PFOA. Providing alternative drinking water to the impacted residences will reduce the potential exposure to PFOS and PFOA in drinking water. The Naval Facilities Engineering Command, Northwest, is undertaking this emergency response removal action.

Approval:

C Moore

G. C. MOORE
Captain, U.S. Navy
Commanding Officer

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Date

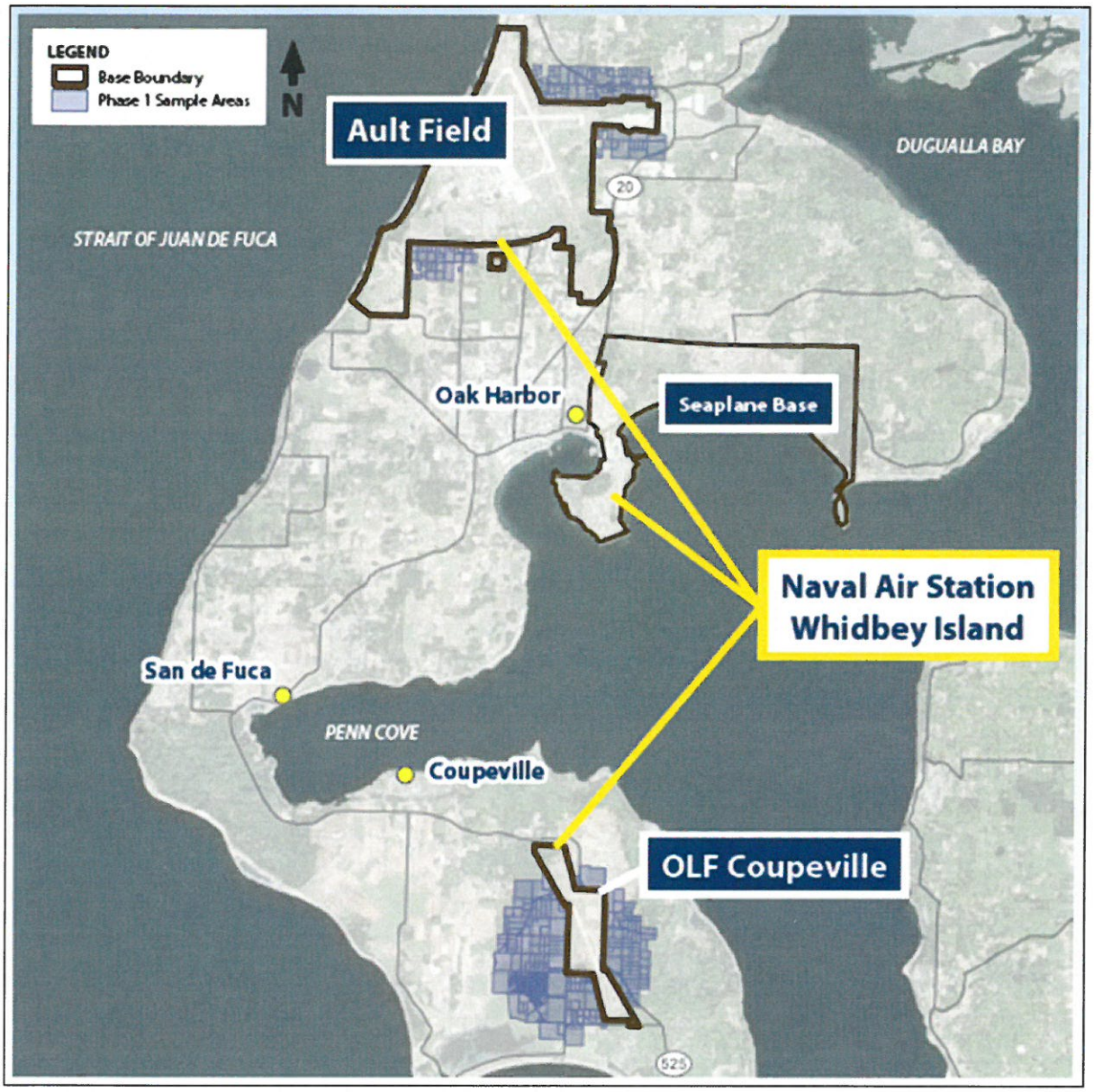

Figure 1. Phase 1 Sample Areas

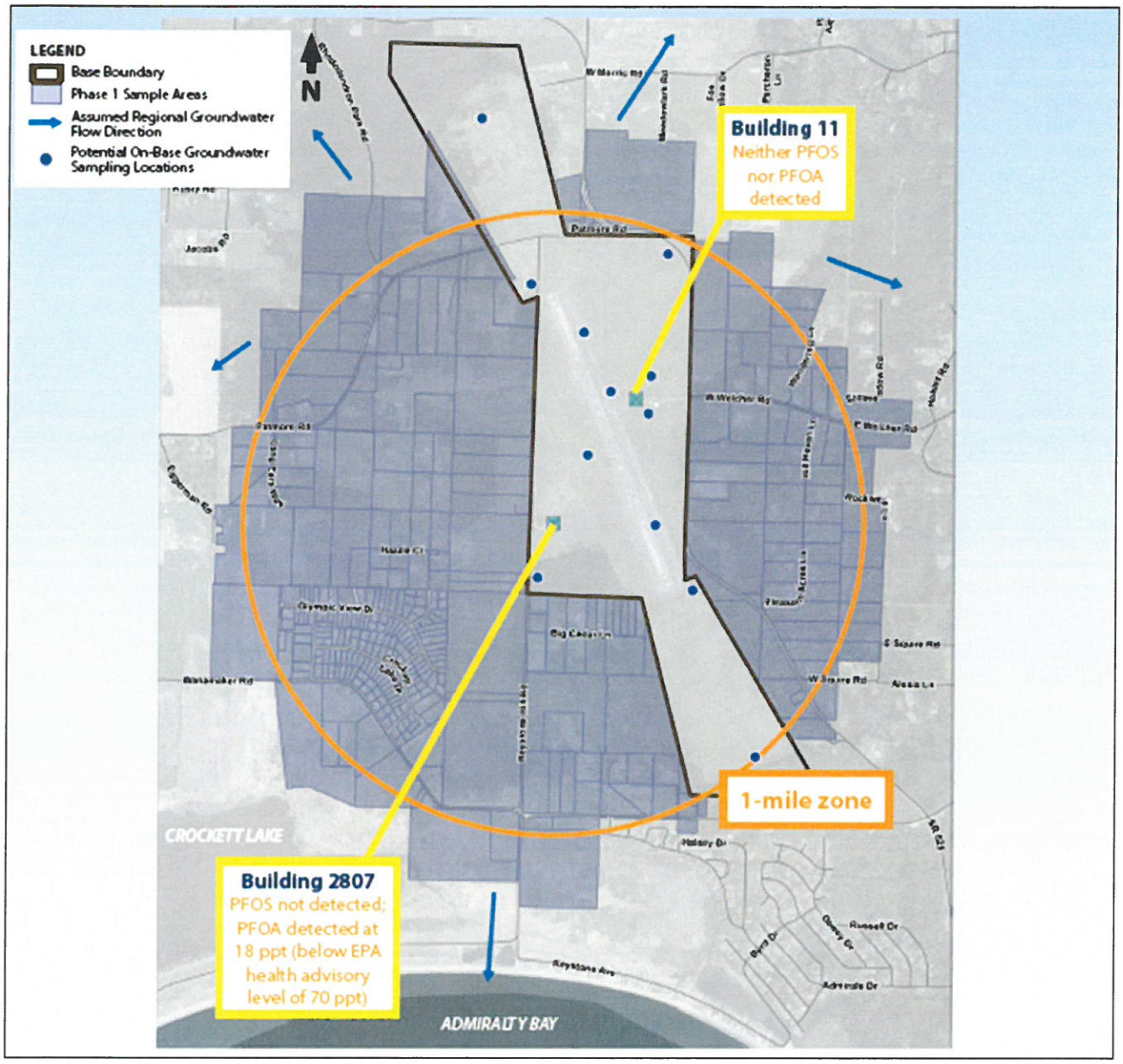

Figure 2. Phase 1 Sample Area near OLF Coupeville

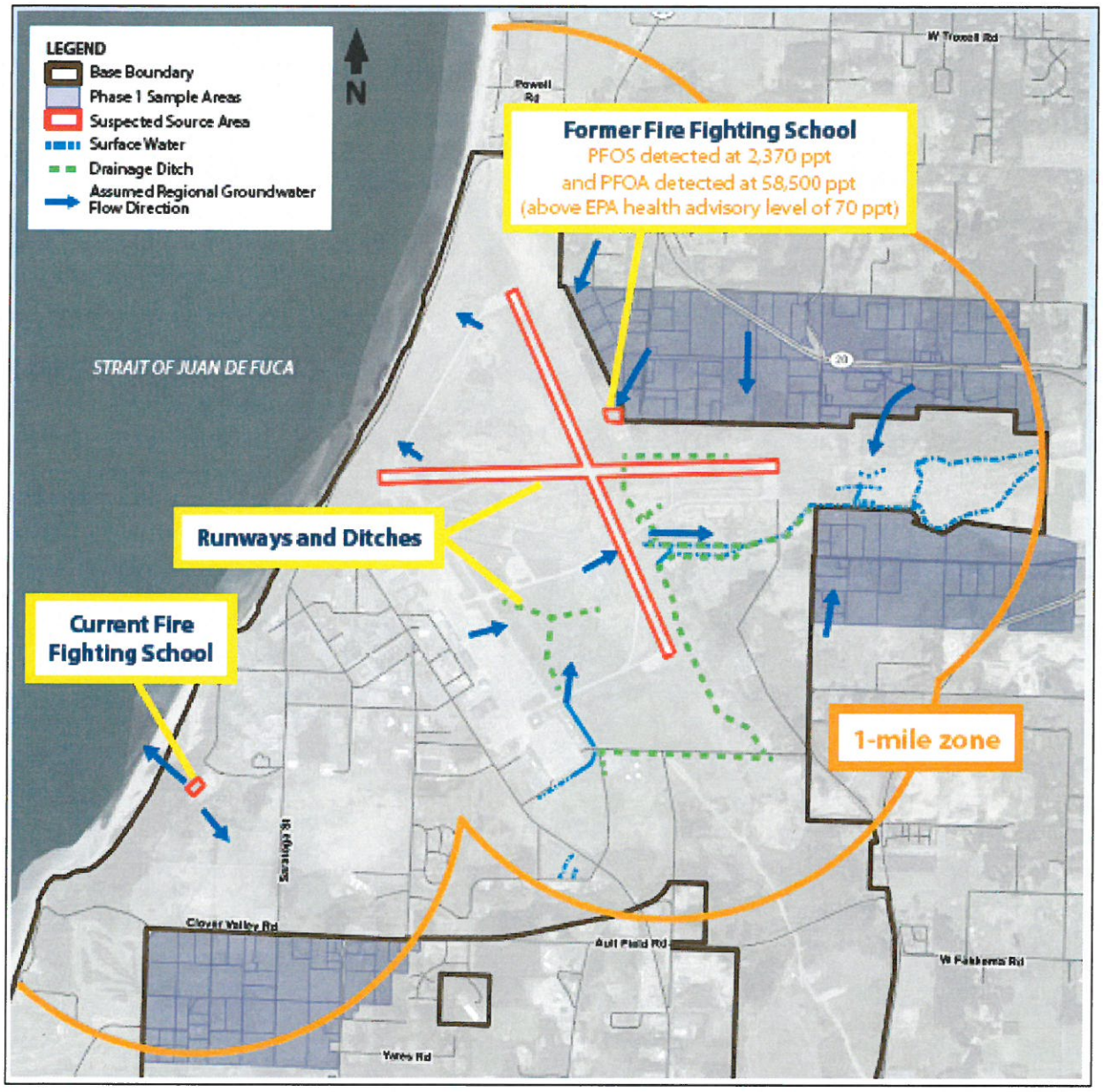

Figure 3. Phase 1 Sample Area near Ault Field