



## Outlying Landing Field Barin Foley, Alabama Drinking Water Investigation Results

June 2022

**The Navy has conducted sampling of drinking water wells within a designated area near Outlying Landing Field (OLF) Barin for certain per- and polyfluoroalkyl substances, commonly known as PFAS. There were detections of PFOA and/or PFOS above the health advisory within the sampling area, and short- and long-term solutions have been implemented.**

PFAS are a family of thousands of different chemicals which have been widely used in industrial and consumer products since the 1950s. 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 drinking water health advisory ("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 at OLF Barin (Figure 1) is the use of firefighting foam (specifically aqueous film-forming foam, or AFFF) for testing, training, firefighting, and other life-saving emergency responses. Because of this historical use, PFOA, PFOS, and other PFAS may be present in the soil and/or groundwater on-base, and they may also be present in nearby off-base drinking water wells located in the direction that groundwater flows away from the OLF within the sampling area (Figure 2).

Records indicate that many residents in the sampling area purchase their drinking water from Riviera Utilities. The Navy did not ask to sample water provided by Riviera Utilities.

PFAS are chemicals of emerging concern, which have no Safe Drinking Water Act regulatory standards or routine water quality testing requirements. EPA lifetime health advisories are non-enforceable and non-regulatory. They are informal technical guidance to assist federal, state, and local officials, along with managers of public or community water systems, in protecting public health as needed.

In 2020, a comprehensive Preliminary Assessment (PA) was completed at the OLFs associated with NAS Whiting Field. It identified potential historical releases of firefighting foam to the environment during activities such as testing, training, firefighting, and other life-saving emergency responses. The PA confirmed that firefighting foam was released to the environment at Site 24B (a firefighting training area), four Foam Check and Aircraft Mishap Response Areas, and the Firehouse/Blockhouse. At each of these sites, PFAS may be present in groundwater, and may have migrated off-base to nearby drinking water wells (Figure 2).

There is no legal requirement to conduct this drinking water testing. The Navy is performing this voluntary testing because it is important that our neighbors in the sampling area are not drinking water with PFOA and/or PFOS concentrations above the health



Figure 1 – OLF Barin

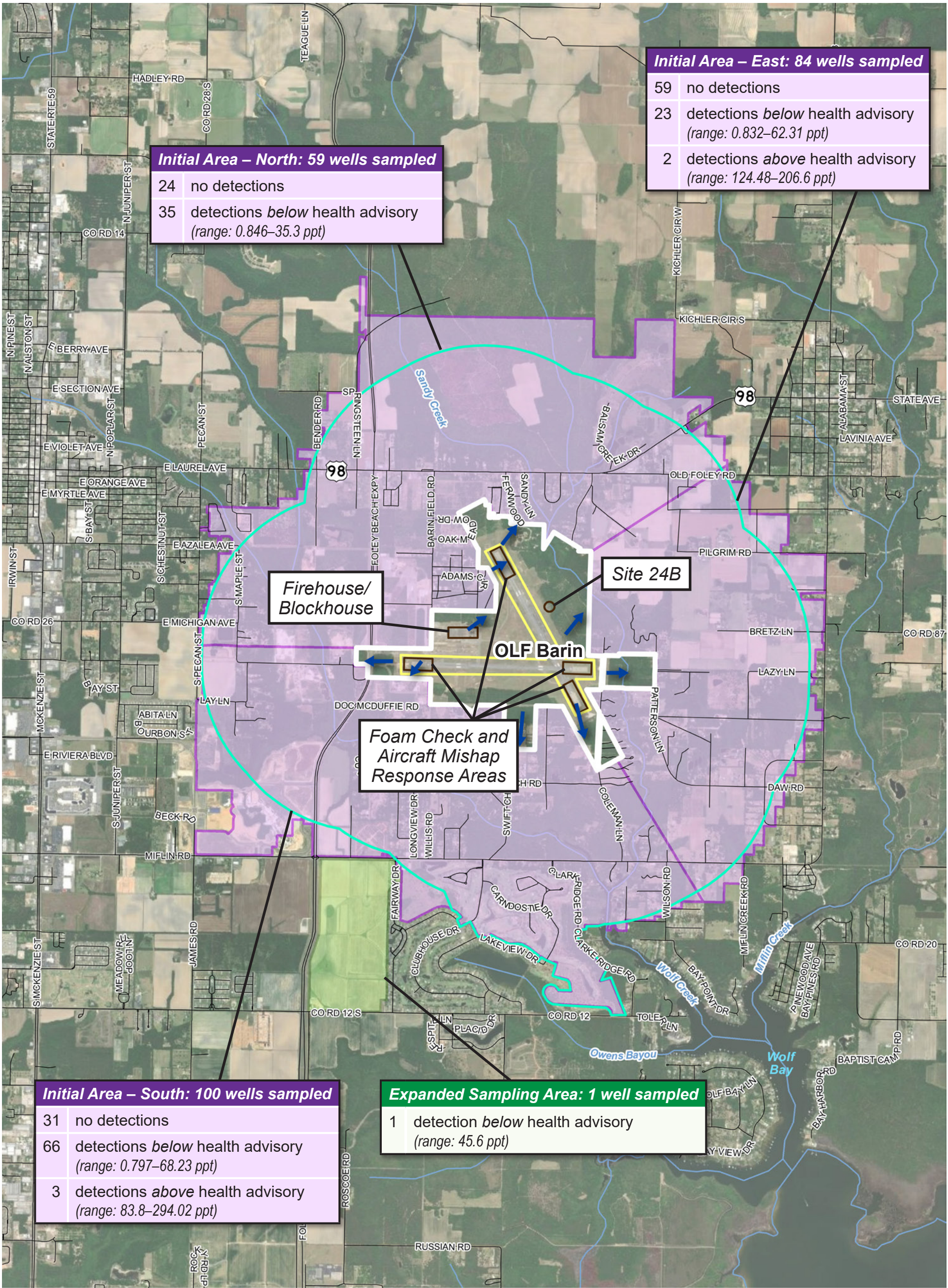
advisory as a result of confirmed releases of PFAS from OLF Barin. The Navy is conducting the investigation in collaboration with the Agency for Toxic Substances and Disease Registry, the Alabama Department of Environmental Management, and the Alabama Department of Public Health.

### PFAS

PFAS are man-made chemicals that have been used since the 1950s 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 will provide bottled water for drinking and cooking to any resident in the sampling area whose well contains drinking water with PFOA and/or PFOS above the health advisory.  
The Navy will provide bottled water until a long-term solution is implemented.**

Figure 2 – Sampling Area



LEGEND

- PFAS release area

Runways

Base boundary

Surface water

Estimated groundwater flow direction

Downgradient 1-mile PFAS release buffer

Initial sampling area

Expanded sampling area

**Note:** Results shown are the sum of PFOA and PFOS detections.  
ppt = part(s) per trillion

0 0.25 0.5

mile

The EPA is currently studying PFAS to determine if national regulation is needed. The health advisory provides Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and/or PFOS in drinking water. The health advisory for 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.

#### NAVY POLICY

Until a decision for regulating PFAS is made, the Navy has proactively developed a policy to conduct investigations at installations where there has been a confirmed or potential release of PFAS to the environment. The Navy's first priority with these investigations is to ensure people are not being exposed to PFOA and/or PFOS in their drinking water at concentrations exceeding the health advisory as a result of a Navy PFAS release. When a confirmed or potential release of PFAS is identified on a Navy installation, a sampling area is designated 1 mile in the direction that groundwater flows away from a release site. To be protective, the Navy offers sampling to all residents whose drinking water is supplied by groundwater wells in these designated areas. Once any potential exposure from drinking water has been addressed, the Navy will then complete the full investigation to determine the extent of these compounds on our installations.

#### INITIAL DRINKING WATER RESULTS

In June 2021, the Navy began off-base drinking water sampling near OLF Barin. Table 1 and Figure 2 summarize the sampling results.

Table 1: Initial Drinking Water Results near OLF Barin for PFOA and/or PFOS	
WELLS SAMPLED	243
No detections	114
Detections <i>below</i> the health advisory	124
Detections <i>above</i> the health advisory	5

Of the 243 wells sampled, PFOA and/or PFOS were detected in 129 samples. PFOA and/or PFOS were detected above the health advisory in five wells located to the south and east of OLF Barin. The Navy has provided bottled water for drinking and cooking to the properties in the sampling area whose wells contained PFOA and/or PFOS above the health advisory. The Navy will continue to provide bottled water until a long-term solution is implemented. The Navy is still offering to sample drinking water wells within the initial area that have not previously been tested.

#### EXPANDED DRINKING WATER RESULTS

In November 2021, the Navy expanded the off-base drinking water sampling south of OLF Barin based on initial detections of PFOA and/or PFOS above the health advisory. Table 2 and Figure 2 summarize the results of the 2021 expanded sampling.

Table 2: Expanded Drinking Water Results near OLF Barin for PFOA and/or PFOS	
WELLS SAMPLED	1
No detections	0
Detections <i>below</i> the health advisory	1
Detections <i>above</i> the health advisory	0

One well was sampled, and PFOA and/or PFOS were detected below the health advisory to the south of OLF Barin. The Navy is still offering to sample drinking water wells within the expanded sampling area that have not previously been tested.

#### ACTIONS BASED ON RESULTS

The Navy provided verbal and written notification of results to property owners. Results have been kept confidential to the best ability of the Navy and to the extent permitted by law. The Navy initially provided an alternate water source for drinking and cooking to the residents within the sampling area with detections of PFOA and/or PFOS above the health advisory. The Navy will continue to provide the alternate water until a long-term solution is implemented. At some locations, a long-term solution is already in place, as residents have been connected to the public water supply where readily available.

Property owners with drinking water wells that have not yet been sampled can still request sampling by contacting us at 844-NASWFLD (844-627-9353).

#### 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 lifetime health advisory.

#### FOR MORE INFORMATION

<http://go.usa.gov/xAEQF>

If you have any questions, please call  
844-NASWFLD (844-627-9353) or email  
[whgt\\_naswf\\_pao.fct@navy.mil](mailto:whgt_naswf_pao.fct@navy.mil)