



Naval Air Station Oceana Ongoing PFAS Investigation and Response

August 2019

THE DRINKING WATER PROVIDED BY THE CITY OF VIRGINIA BEACH HAS BEEN TESTED; PFOS AND PFOA WERE NOT DETECTED. SAMPLING OF PROPERTIES RECEIVING WATER SUPPLIED BY THE CITY IS NOT NECESSARY.

BACKGROUND

Per- and polyfluoroalkyl substances (PFAS) are man-made chemicals that have been used since the 1950s in many household and industrial products because of their stain- and water-repellant properties. PFAS are also found in a common firefighting foam known as aqueous film forming foam, or AFFF. PFAS are present virtually everywhere in the world because of the large amounts that have been manufactured and used. Once these compounds are released to the environment, they break down very slowly.

PFAS are classified as contaminants of emerging concern, which have no Safe Drinking Water Act regulatory standards or routine water quality testing requirements. The U.S. Environmental Protection Agency (EPA) is studying PFAS to determine if regulation is needed. In May 2016, the EPA released the lifetime health advisory levels for two PFAS, specifically perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). Health advisory levels are not regulatory standards, which means they are not mandatory or enforceable. They are health-based concentrations which offer a margin of protection for all Americans given a lifetime of exposure to PFOS and PFOA in drinking water. The EPA health advisory level for lifetime exposure is 70 parts per trillion (ppt) for PFOS and 70 ppt for PFOA. When both PFOS and PFOA are found in drinking water, the combined concentration should not exceed 70 ppt.

HISTORY

The Navy developed several policies in 2016 to assess potentially impacted drinking water and eliminate exposure to PFOS and/or PFOA near installations where there were known or suspected releases of PFAS to the environment. In response to Navy policy, the following actions have been completed to address PFAS contamination in private drinking water wells in the community surrounding NAS Oceana:

MAY 2016

- ◆ EPA established lifetime health advisory (70 ppt) for PFOS and PFOA.

OCTOBER 2016

- ◆ On-Base monitoring well samples collected.

FEBRUARY 2017

- ◆ Off-Base property owners with private drinking water wells notified of results. No results were above the EPA lifetime health advisory.
- ◆ Additional on-Base monitoring wells installed and sampled to assess potential migration of PFAS; no additional parcels identified to be sampled.

NOVEMBER 2018

- ◆ Notification of validated resampling results provided to residents.
- ◆ Sampling area expanded due to an exceedance of the EPA lifetime health advisory in initial sampling area.

APRIL 2019

- ◆ Notification of validated sampling results provided to residents. No results were above the EPA lifetime health advisory.

OCTOBER 2019

- ◆ Results for additional on-Base sampling anticipated. Off-Base sampling area to be expanded, as necessary, based on on-Base exceedances of the EPA lifetime health advisory.
- ◆ Voluntary resampling of all parcels within designated sampling area.

JUNE 2016

- ◆ Navy policy issued to identify PFOS and PFOA releases to determine the need for investigation.

DECEMBER 2016

- ◆ Results for on-Base sampling received: some groundwater monitoring wells were above the EPA lifetime health advisory.
- ◆ Public information session held and off-Base private drinking water wells were sampled with permission from property owners.

OCTOBER 2018

- ◆ Voluntary resampling of all parcels within designated sampling area conducted.
- ◆ Bottled water provided for one property where drinking water concentrations were greater than the EPA lifetime health advisory.

FEBRUARY 2019

- ◆ Voluntary resampling of all parcels within designated sampling area conducted.
- ◆ Navy voluntary sampling of private drinking water wells at all properties in the designated area near NAS Oceana will continue twice yearly.

JUNE-JULY 2019

- ◆ Additional on-Base monitoring wells installed and sampled to assess potential migration of PFAS. Soil, surface water, and sediment samples collected to assess PFAS concentrations.

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For More Information

The Navy, EPA, Virginia Department of Environmental Quality, and City of Virginia Beach federal-state-local partnership continues to focus on PFAS presence in groundwater near NAS Oceana. The agencies are committed to ongoing public awareness and engagement throughout each step of the PFAS investigation. If you have any questions, please contact **757-433-3132**. The Navy has also established a website at www.cnmc.navy.mil/oceana_water_info, which will be updated as more information becomes available.

The majority of properties in the vicinity of NAS Oceana consume City of Virginia Beach drinking water and do not have private drinking water wells. Because of this, no sampling is needed on these properties. The drinking water provided by the City of Virginia Beach has been tested, and PFOS and PFOA were not detected. Additional information is available at <https://www.vbgov.com/waterquality>.

OFF-BASE DRINKING WATER SAMPLING

Beginning in February 2019, the Navy began voluntary twice-yearly sampling of private drinking water wells at all properties in the designated area near NAS Oceana to confirm drinking water in the area remains below the EPA lifetime health advisory level established for PFOS and/or PFOA. The next sampling event is planned for October 2019. All sampling will be performed at no cost to property owners and will only be conducted with the property owner's permission.

The sampling process will take approximately 30 minutes and will involve a team of two technicians collecting a sample from the closest spigot to the well, preferably from a spigot that does not receive any in-home treatment. If there is no outside access, the sample will be collected from a faucet in the home. The technicians will need to let the water run for approximately five minutes before the sample can be collected. Prior to collecting the sample, the technicians will review the homeowner questionnaire provided with the sampling notification packet.

ACTIONS BASED ON RESULTS

Upon receipt of the validated analytical results, approximately eight weeks after sample collection, the Navy will notify residents of their personal drinking water sample results, as well as any follow-on actions needed for their home. The Navy will share a summary of results and our next steps of the investigation with the public.

The Navy will continue to use the data collected to further refine the ongoing groundwater investigation. Additionally, the Navy is working with EPA and Virginia Department of Environmental Quality to identify and evaluate long-term solutions to PFAS in groundwater.

Total PFOS/PFOA Concentration*	Action Based on Results
greater than 70 ppt	The Navy will provide bottled water for drinking and cooking at no cost to these residents until a long-term solution can be put in place.
less than or equal to 70 ppt	The Navy will continue to monitor private drinking water twice per year. No other action will be taken.

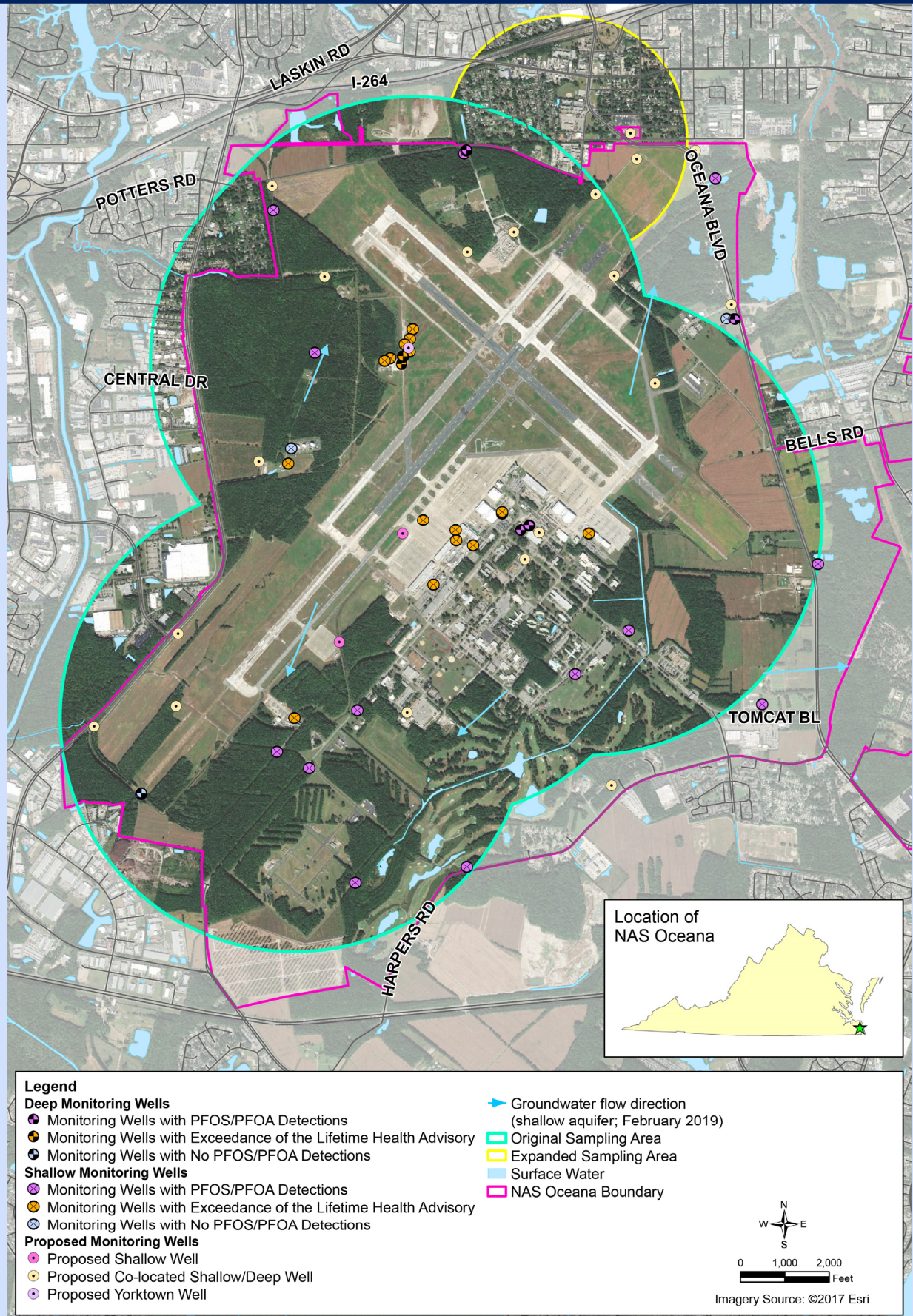
* The Navy will test and provide results for 18 PFAS; however, only two PFAS (PFOS and PFOA) have EPA lifetime health advisory levels.

Health Information

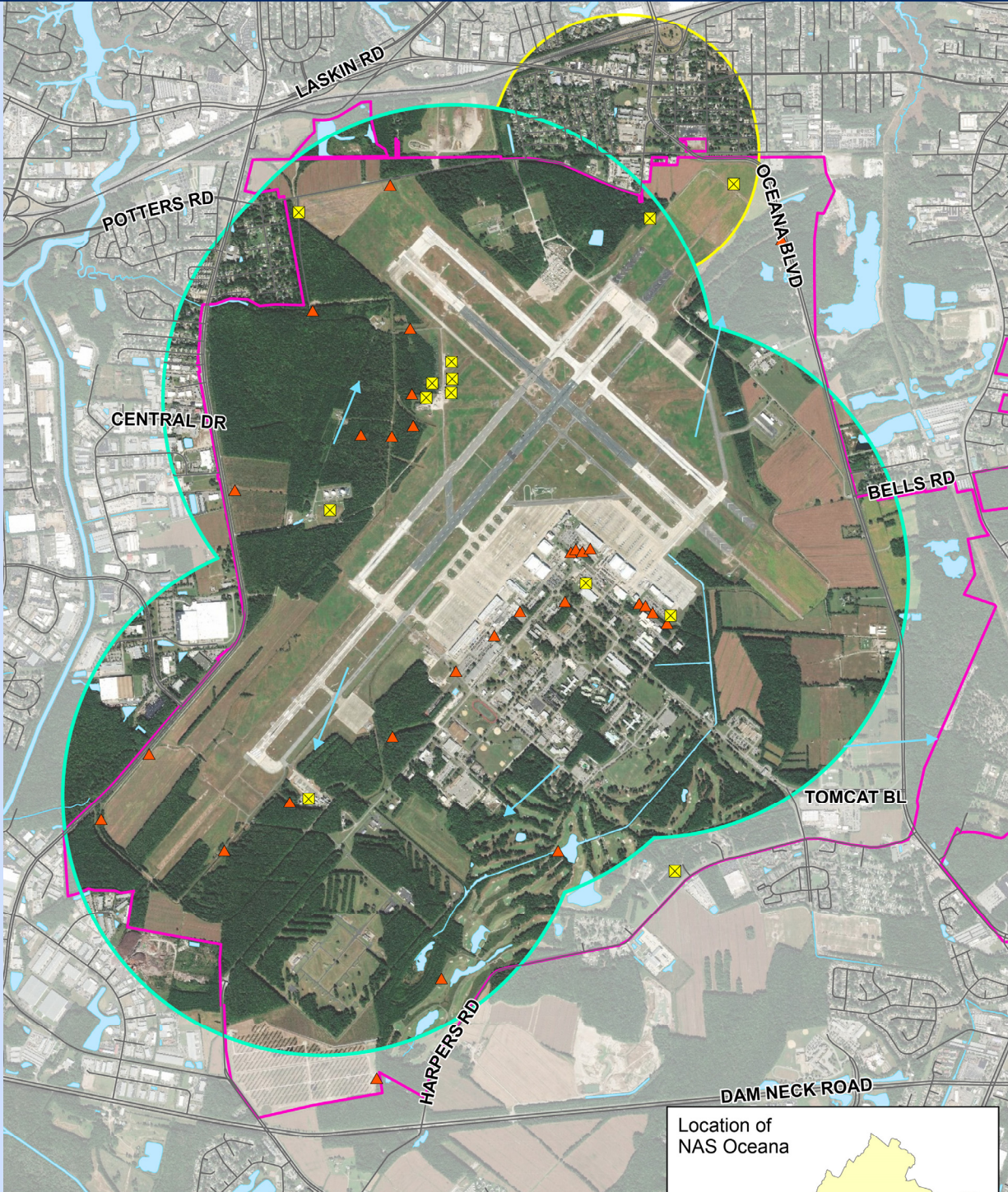
Exposure to PFOS and PFOA appears to be global. Studies have found both compounds in the blood samples of the general human population. Studies on exposed human populations indicate PFOS and/or PFOA may cause elevated cholesterol levels, immune system changes, decreased fertility, altered hormone function, increased risk of certain types of cancer, and changes in growth, learning, and behavior of the developing unborn baby and child. Animals exposed to high levels of PFOS and PFOA had changes in liver, thyroid, and pancreas function, altered hormone levels, and increased rates of certain cancers.

Health effects from exposure to low levels of PFOS and PFOA are not well known, and studies are continuing. Blood tests are available, 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 PFOS and PFOA, the EPA recommends people not use water that contains PFOS and/or PFOA above the lifetime health advisory levels for drinking or cooking.**

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There are no EPA lifetime health advisory levels for PFAS in soil, surface water, or sediment; therefore, the off-Base drinking water sampling area will be based on results for two PFAS (PFOS and PFOA) in groundwater only.

Legend

Proposed Monitoring Wells

- ▲ Proposed Surface Water and Sediment Sample Location
- ⊠ Proposed Surface Soil and Subsurface Soil Sample Location

- Groundwater flow direction (shallow aquifer; February 2019)
- Original Sampling Area
- Expanded Sampling Area
- Surface Water
- NAS Oceana Boundary

