



## Information Sheet on Per- and Polyfluoroalkyl Substances (PFAS) Environmental Testing At NASA's Wallops Flight Facility

Current as of May 23, 2017

This update is part of NASA Wallops' ongoing communication regarding testing for Per- and Polyfluoroalkyl substances.

### Background

NASA, in collaboration with local, state, and federal agencies, has been conducting testing of the facility's groundwater monitoring and drinking water wells and the Town of Chincoteague's drinking water wells for the presence of per- and polyfluoroalkyl substances (PFAS). These tests were done because of historic firefighting activities located on the north-central portion of Wallops mainbase. Firefighters conducted training with a commonly-used firefighting foam that contains PFAS compounds. The firefighting foam was also used to extinguish fires from two aircraft crashes that occurred on Wallops' runways.

The Environmental Protection Agency has not established drinking water standards for PFAS. While not regulated, the EPA has been increasingly sampling for PFAS. Since 2013, the EPA has detected PFAS in numerous public water supplies serving 16 million people across 33 states. In May 2016, the EPA issued updated lifetime Health Advisory (HA) level guidelines for two of the PFAS compounds, perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) because they have been more widely studied. According to the EPA and Agency for Toxic Substances and Disease Registry (ATSDR), there is not enough information to evaluate the health effects of exposures to the other PFAS or mixtures of PFAS. PFOS and PFOA are the focus of NASA Wallops' PFAS testing.

### What We Have Done and What We Know

All tests results of the Wallops drinking water and Town of Chincoteague's drinking water show that the water is safe to drink. These tests were done using an independent laboratory for analysis and reviewed by state and federal health agencies.

The Town of Chincoteague has seven wells, three shallow and four deep, on Wallops' property to produce drinking water. Initial tests from sampling the Town of Chincoteague's wells in April showed PFOS and PFOA at a combined level above the EPA's Lifetime Health Advisory in two of three shallow wells and in an adjacent deep water well. Results showed PFOS and PFOA in the Town of Chincoteague's third shallow well, but at a combined level below the Lifetime Health Advisory. According to the EPA, the Lifetime Health Advisory is set to be protective of all individuals, including the most sensitive populations. The three other Town of Chincoteague deep water wells did not have any detections of PFOS or PFOA. Initial results from the Town's finished water also showed very low levels of PFAS other than PFOA or PFOS. Federal and State health experts do not believe these very low levels pose a risk to health. Subsequent testing did not detect these substances.

The Town of Chincoteague is not using its shallow wells to produce finished drinking water for the town and has stopped using the adjacent deep water well. NASA has conducted additional testing of the Town of Chincoteague's drinking water wells and finished water.

The latest tests of the three deep water wells providing drinking water to the Town of Chincoteague and of the Town's finished drinking water show no detections of PFOS, PFOA, or other PFAS. In addition, test results of Wallops' deep water drinking wells and drinking water did not detect PFOS, PFOA, or other PFAS.

In addition to the sampling of water wells and drinking water, NASA has also conducted sampling of the shallow groundwater on the west side of the facility across Mosquito Creek away from the known areas where the firefighting foam had been used. Test results did not detect PFOS or PFOA. Test results of the shallow groundwater on the south side of the facility also did not detect PFOS or PFOA. Very low levels of other PFAS were found, but do not present a health concern. As an additional precaution, NASA sampled known drinking water wells located north of the facility's boundary, to include the two deep and one shallow water wells servicing the Trails End Association. Test results of these samples did not detect PFOS, PFOA, or other PFAS.

Taken together, these sampling results help to define the extent to which PFOS and PFOA, or other PFAS, is located in Wallops' shallow groundwater.

### What Else is NASA Doing

NASA will continue to monitor drinking water supplies. NASA has also connected a water supply line to the Town of Chincoteague system to supplement the Town's water supply, since the shallow wells are no longer in use.

NASA, in coordination with federal and state agencies, will also install monitoring wells (not for drinking water) to conduct ongoing observation of the shallow and deep groundwater along the perimeter of the facility to ensure a full understanding of the groundwater quality at those locations.

NASA will continue to share all sampling results and will continue to communicate with local officials, EPA, Virginia Department of Environmental Quality (VDEQ) and the Virginia Department of Health (VDH) to discuss results and develop any additional actions and provide information to the public including on our website and in fact sheets.

For Wallops' updates on PFAS Testing, see:  
<https://www.nasa.gov/content/information-on-wallops-pfas-testing>

For more information on NASA's efforts, contact Jeremy Eggers, Wallops Office of Communications, at 757-824-2958 or via email at [Jeremy.l.eggers@nasa.gov](mailto:Jeremy.l.eggers@nasa.gov).

## Factsheets on PFAS

PFAS are manmade compounds used extensively in a wide variety of consumer products and are also related to the use of a firefighting foam. At a former firefighter training area located on the north-central side of the Wallops mainbase, firefighters conducted training with a commonly-used firefighting foam that contains PFAS compounds.

For more information on the EPA's Health Advisory, see:

[https://www.epa.gov/sites/production/files/2016-06/documents/drinkingwaterhealthadvisories\\_pfoa\\_pfos\\_updated\\_5.31.16.pdf](https://www.epa.gov/sites/production/files/2016-06/documents/drinkingwaterhealthadvisories_pfoa_pfos_updated_5.31.16.pdf).

For more information on PFAS, see:

[https://www.atsdr.cdc.gov/pfc/docs/pfas\\_fact\\_sheet.pdf](https://www.atsdr.cdc.gov/pfc/docs/pfas_fact_sheet.pdf)

For information about health effects of PFAS, contact:

- Dr. Karl Markiewicz, Senior Toxicologist, Agency for Toxic Substances and Disease Registry, Philadelphia, PA, at 215-814-3149 or via email at [kvm4@cdc.gov](mailto:kvm4@cdc.gov)
- Dr. Dwight Flammia, Virginia Department of Health, Division of Environmental Epidemiology, at (804) 864-8127 or via email at [Dwight.Flammia@vdh.virginia.gov](mailto:Dwight.Flammia@vdh.virginia.gov)
- Dr. David Matson, Director, Eastern Shore Health District, Virginia Department of Health, at 757-647-7670, or via email at [David.Matson@vdh.virginia.gov](mailto:David.Matson@vdh.virginia.gov)