

absence of PFAS at each area. Areas found to contain PFAS will be recommended for more comprehensive sampling in the Remedial Investigation, which is the third step in the CERCLA process. The Preliminary Assessment Report is available to the public on the Environmental Restoration Program website (<https://go.usa.gov/xnBga>). The final Site Inspection and Remedial Investigation documents will be available on the website as well upon completion.

**PFAS AND DRINKING WATER TESTING**

Once released to the environment, PFAS can move easily into and with groundwater. People can be exposed to PFAS in their drinking water if contaminated groundwater is used as their drinking water source. There are no Safe Drinking Water Act standards for PFAS, but the EPA is currently studying PFAS to determine if national regulation is needed. NAS Patuxent River provides drinking water via its own system to base personnel and housing residents. The water is derived from wells on base and Navy personnel conduct routine testing to ensure it meets all federal and state quality standards. The drinking water wells on NAS Patuxent River were sampled for PFAS in December 2014 as part of EPA’s efforts to gather information on the prevalence of PFAS in drinking water systems across the country. The sampling effort is officially known as Third Unregulated Contaminant Monitoring Rule or UCMR3 sampling. **PFAS was not detected in any of the drinking water samples taken on base.**

The EPA issued a drinking water lifetime health advisory in 2016 for two commonly used and studied PFAS, PFOA (perfluorooctanoic acid) and PFOS (perfluorooctane sulfonate). Health advisories provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. EPA’s health advisories are non-enforceable and non-regulatory and provide technical information to states agencies and other public health officials so they can take the appropriate actions to protect their residents. The EPA’s health advisory level for lifetime exposure to drinking water is 70 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.

The Navy’s first priority with PFAS investigations is to ensure people are not being exposed to PFOA and/or PFOS in their drinking water at concentrations exceeding the EPA’s lifetime health advisory as a result of a Navy PFAS release. When a known or suspected release of PFAS is identified on a Navy installation, a potential sampling area is established 1-mile in the direction the groundwater flows away from a release site. To ensure protectiveness, the Navy offers sampling to all residents whose drinking water is supplied by private wells (i.e., not on public water) in these designated areas. **For NAS Patuxent River, hydrogeology and groundwater data indicate that off-base drinking water sampling for PFAS is not needed.** The groundwater on base flows towards the Chesapeake Bay (see Figure 2), so our neighbors near our fence line are “up-gradient” of the potential PFAS release areas on base. Groundwater is flowing onto the base from fence line areas; it is not flowing off-base towards our neighbors.

**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’s lifetime health advisory.**

**FOR MORE INFORMATION**

<https://go.usa.gov/xnBga>

**If you have specific questions, contact the Navy Public Affairs office at: 310-757-3343 or [PAO\\_Feedback@navy.mil](mailto:PAO_Feedback@navy.mil)**

PFAS are a family of thousands of different man-made chemicals which have been widely used in industrial and consumer products since the 1950s because of their unique water- and oil-repelling properties. They have been used in such products as carpeting, apparel, food packaging, and non-stick cookware to make them more stain-resistant, waterproof, and/or non-stick. Additionally, PFAS are key components in firefighting foam (specifically aqueous film forming foam or AFFF), which is used by fire departments across the country to fight fuel fires.

The Navy developed a proactive policy in 2016 to address past releases of PFAS at installations nationwide, as several PFAS are now of emerging public health concern. The most common Navy activities that have resulted in the release of PFAS to the environment are testing, training, firefighting, and other life-saving emergency response using firefighting foam. The Department of Defense is currently studying fluorine-free firefighting foam alternatives to replace AFFF and prevent future PFAS release. In the interim, AFFF is no longer used in training at NAS Patuxent River and is limited to emergency response actions only.

Additionally in response to the Navy policy, NAS Patuxent River has conducted a base-wide PFAS Preliminary Assessment under the environmental restoration program. The assessment identified 18 areas on base where firefighting foam or other PFAS containing industrial materials may have been released to the environment. This fact sheet provides information on the potential PFAS release areas on NAS Patuxent River, plans for further PFAS investigation, and information on drinking water testing.

In addition to these 18 identified areas in the Preliminary Assessment, Environmental Restoration Site 34 is the only known site that has had PFAS sampled and detected in the shallow groundwater. The PFAS concentrations range from 0 to 1,100 parts per trillion (ppt). The Navy is planning more investigating at this site, but the PFAS does appear to be limited to the site boundary.

**POTENTIAL PFAS RELEASE AREAS**

The Preliminary Assessment was the first step in the Navy’s PFAS investigation conducted in compliance with the Comprehensive



Figure 1 – NAS Patuxent River

Environmental Response, Compensation and Liability Act (CERCLA). It included a comprehensive review of records and interviews with base personnel to determine locations across the base where firefighting foam was used and where PFAS may have been released to the environment. The assessment also looked for areas where electroplating was conducted as PFAS can also be released if plating waste is released during the chrome plating process.

The 18 potential PFAS release areas identified on NAS Patuxent River are shown on Figure 2. In summary:

- Six were buildings or areas used by the fire department including training and demonstration areas, the current and former fire stations, and a crash truck equipment inspection area.
- Seven are hangars or other buildings which use foam in their fire suppression systems.
- Three are emergency response locations where foam was used to extinguish a fire on base.
- Two are landfills where AFFF storage containers or materials may have been disposed.

Limited sampling will be conducted at each of these areas as part of a Site Inspection which is planned for early 2020. The Site Inspection is the second step in the CERCLA process with the sampling plan designed to confirm the presence or





Figure 2 – Known and Suspected PFAS Release Areas