

# Navy Continues to Proactively Address Potential PFAS Drinking Water Exposures

## Policy Includes Regulatory Status, Current Actions & the Path Forward

**THE DEPARTMENT OF** the Navy (DON) continues to demonstrate its commitment to identifying, evaluating and where appropriate, remediating contamination resulting from its activities that used chemicals containing per- and polyfluoroalkyl substances (PFAS) that have emerged as a public health concern primarily in drinking water systems.

### PFAS Regulatory Status

PFASs are “emerging contaminants” which are chemicals or materials characterized by a perceived, potential, or real threat to human health or the environment and by a lack of published health standards. PFASs have no Safe Drinking Water Act regulatory standards or routine water quality testing requirements.

The U.S. Environmental Protection Agency (EPA) is currently studying PFASs to determine if regulation is needed. In May 2016, EPA announced lifetime health advisory

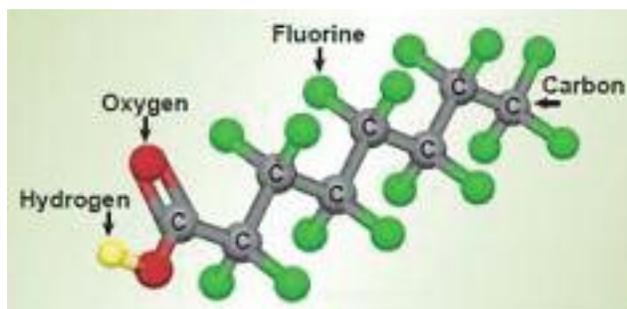
(LHA) levels for two PFASs, specifically perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA).

According to EPA, *health advisory levels are not regulatory standards.*

*They are health-based concentrations which should offer a margin of protection for all Americans throughout their life from adverse health effects resulting from 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 PFOA individually or combined. (Note: Where a compound is not detected, the value for that compound is considered zero.) Similarly, detected results of

other PFAS compounds should not be added and compared to these levels, since EPA has not set advisory or regulatory levels for any other compounds at this time.



PFAS Molecular Structure.

### DON PFAS Policy

The DON has developed a policy to address past releases of PFASs in its firefighting and other activities. These substances may be present in the soil and/or groundwater at Navy and Marine Corps sites. If PFASs are in the groundwater, there is the potential for

If PFASs are in the groundwater, there is the potential for these substances to migrate to public or private drinking water wells.





Sailors conduct firefighting exercises using AFFF during a drill aboard the aircraft carrier USS Theodore Roosevelt (CVN 71). The use of AFFF for testing, training, firefighting and other emergency responses is the most common DON activity that results in the release of PFASs to the environment.  
*MCS3 Alex Perlman*

### For More Information

FOR MORE INFORMATION about the Navy's PFAS policy, general information and additional resources, visit [www.secnav.navy.mil/eie/pages/pfc-pfas.aspx](http://www.secnav.navy.mil/eie/pages/pfc-pfas.aspx).



levels is occurring. This sampling is to proceed even if a full investigation following Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) protocol has not begun.

In response to this policy memo in 2016, DON performed desktop preliminary assessments of approximately 127 active and Base Realignment and Closure (BRAC) installations across the United States. These desktop evaluations were conducted to identify potential PFAS sites and areas of concern (AOC) and prioritize further actions at those with the greatest potential to impact off-installation drinking water resources. The policy memo directed that drinking water sources within a mile of known or suspected PFAS releases be investigated for current drinking water exposure within fiscal year 2017. These efforts are being performed, per the policy memo flow chart, and additional investigations will continue based on the potential for additional off-installation drinking water exposures.

## Common Uses of PFASs

### Consumer Products

- Cookware (e.g., Teflon®, non-stick)
- Food containers/packaging such as French fry boxes, pizza boxes and microwave popcorn bags



### Industrial Uses

- Medical devices
- AFFF
- Insect baits
- Oil production
- Paper and packaging
- Rubber and plastics
- Printer and copy machine parts



- Personal care products (e.g., shampoo, dental floss)
- Cosmetics (e.g., nail polish, eye makeup)
- Paints and varnishes
- Stain-resistant chemicals (e.g., Scotchguard®)



- Water-resistant apparel (e.g., Gore-Tex®)
- Cleaning products
- Electronics



- Engineering coatings
- Textiles, upholstery, apparel and carpets

## DON's Actions Based on Results

DON is proactively taking actions based on preliminary, unvalidated analytical results from drinking water samples as they are received from the laboratories. Although there is some risk in acting on unvalidated results, the DON does not want to wait for validated results to provide a protective response for its neighbors. If the unvalidated results indicate that the level for PFOS and/or PFOA exceeds 70 ppt, then the DON provides bottled water or an alternate water supply for drinking and cooking until a long-term solution is implemented. To date, actions taken by DON based on unvalidated results have been supported by the validated results.

The DON respects the privacy concerns of private well owners and has, therefore, only provided notification to each property owner of their personal drinking water

results. The DON will continue to keep the results private to the greatest extent possible.

## Resources

To promote consistency in executing the DON policy at installations where there is potential drinking water exposure off-base, the DON has found it valuable to partner with other agencies such as local EPA (this often includes the Office of Water, which project teams may not already be partnered with), Agency for Toxic Substances and Disease Registry (ATSDR), state and county/local health departments, and local public water suppliers. If other sites are identified, it will be important for project teams to coordinate with these other partners so that the public has non-DON partners from which to obtain impartial information regarding the EPA's health advisory and potential impacts from PFAS exposure.



CLOCKWISE FROM TOP LEFT: Microwave popcorn bags and French fry boxes can contain PFCs; Carpeting and the chemicals applied to them that resist staining are among the more common uses of PFCs; PFCs are also contained in the rubber used to make hoses; Pizza boxes and other food containers and packaging can also contain PFCs.

Since several installations have already completed off-site drinking water sampling, there are resources that may be helpful to Remedial Project Managers (RPM) that may need to initiate these activities at their installation. These include sampling and analysis plans, fact sheets, public meeting posters, notification letters, risk communication plans and press releases.

### For More Information

For additional information, contact the following individuals.

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### Site Tracking

Naval Facilities Engineering Command (NAVFAC) Headquarters (HQ) is closely tracking progress at Navy and Marine Corps PFAS sites/AOCs with potential drinking water exposures, along with tracking schedules, cost and technical attributes for each PFAS site/AOC as noted in the 20 June 2016 memo. In addition to tracking the number of impacted wells, NAVFAC HQ must report weekly to Assistant Secretary of

**THIS ARTICLE ORIGINALLY** appeared in the June 2017 issue of *The ERB Garden*. It has been updated and expanded upon for the purposes of this *Currents* article. To submit articles or subscribe to *The ERB Garden* newsletter, contact Joyce Patterson at 805-982-5575 and joyce.patterson2@navy.mil. *The ERB Garden* welcomes your success stories, technology updates or other information that would be beneficial to share with the environmental restoration and BRAC communities.



the Navy (ASN), Office of Legislative Affairs, Chief of Naval Operations, Commander, Navy Installations Command (CNIC) HQ and Marine Corps HQ on the following dates:

- Notification of DON “partners” (e.g., department of health, regional EPA and ATSDR)
- Congressional delegation (CODEL) notification
- Local community notification
- Public meeting (if applicable)
- Drinking water sampling start date

As new sites/AOCs are identified that require off-installation public or private drinking water sampling, RPMs will update NAVFAC HQ weekly with this information.

### Next Steps

At installations with known or likely PFAS releases (regardless of drinking water impacts), it is expected that project teams will start to plan for and fund base-wide Preliminary Assessments/Site Inspections (PA/SI) to investigate environmental

releases of these chemicals. For some locations, these processes have been initiated and will provide valuable lessons learned as they proceed. Since these PA/SIs may identify additional sites/AOCs with the potential to have current drinking water exposure, RPMs should be aware that in the future they may need to proceed off-base to sample drinking water. The DON will conduct investigations at each affected site/AOC to determine the nature and extent of contamination and, subsequently, develop and implement long-term solutions on a site-specific basis in consideration of existing infrastructure, aquifer characteristics, extent of impact, and other factors. ↴

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