



*The Department of Defense
and the National Issue of PFAS*

*Deborah Morefield
Office of Deputy Assistant Secretary for Defense,
Environment
June 10, 2019*





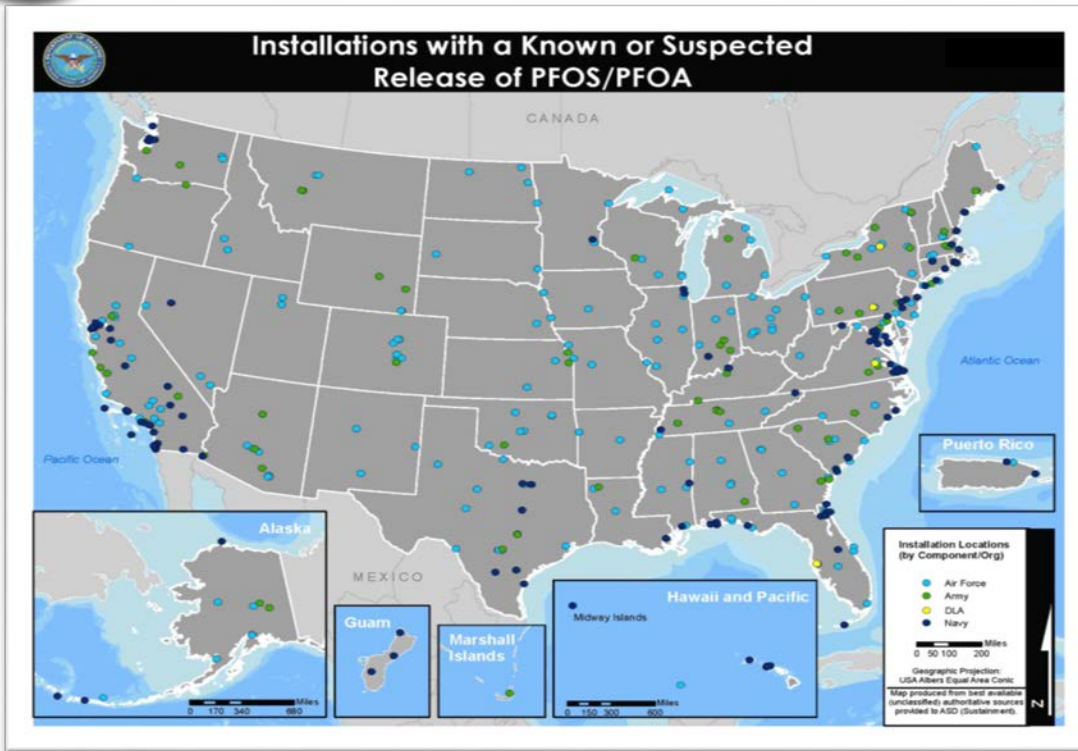
How and Why DoD Uses AFFF

- **ASD(EI&E) issued a policy in January 2016 requiring the Military Departments to:**
 - Prevent uncontrolled land-based AFFF releases during maintenance, testing, and training activities, except for shipboard use where practical
 - Remove and properly dispose of PFOS-based AFFF from the local supplies
- **AFFF is only used today in real fire emergencies**
 - It is treated as HazMat and releases are contained, cleaned up and treated
- **Each of the Military Departments is taking actions to remove the AFFF containing PFOS from the supply system**
- **Why does DoD continue to use AFFF?**
 - Ships, hangars and defense installations pose unique challenges
 - The combination of people, fuel and munitions in close proximity requires a fast response to save lives and equipment





The DoD Clean Up Strategy



- DoD has proactively addressed PFOS and PFOA and follows the federal cleanup law.
- DoD's priority is to quickly address PFOS and PFOA in drinking water from known DoD sources.
- DoD is testing wells and water sources around installations with known or suspected releases. We are treating and monitoring drinking water to ensure it is protective of human health.
- This is a long-term effort.



How Congress Can Help Fund Clean Up

Defense Environmental Restoration Account (DERA)

	FY2019		FY2020
	PRESIDENT'S BUDGET (\$M)	APPROPRIATED (\$M)	PRESIDENT'S BUDGET (\$M)
Army	\$203.4	\$235.8	\$207.5
Navy	\$329.3	\$365.9	\$335.9
Air Force	\$296.8	\$365.8	\$302.7
Formerly Used Defense Sites	\$212.3	\$248.7	\$216.5
Defense-wide	\$9.0	\$19.0	\$9.1
Total	\$1,050.8	\$1,235.2	\$1,071.8

Base Realignment and Closure (BRAC)

Army	\$54.2	\$54.2	\$55.0
Navy	\$141.5	\$202.0	\$148.4
Air Force	\$49.0	\$63.1	\$50.3
Total	\$244.7	\$319.3	\$254.7



DoD Funded PFAS Research

DoD funds environmental research across academia, defense labs, EPA, and others. The programs are guided by the needs of the DoD and our communities.

Environmental Restoration: Understanding PFAS in the Environment

- >80 current projects
- Covers analysis, remediation, ecotoxicology, fate and transport and more

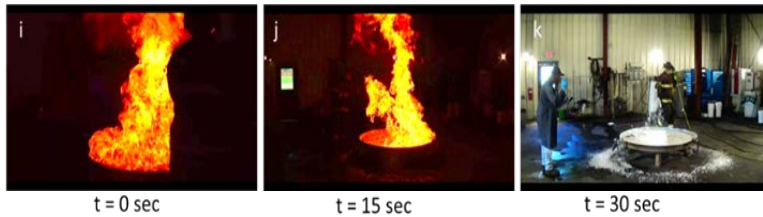
Weapons Systems & Platforms: AFFF Alternatives

- Partnering with Federal Aviation Administration
- Dual track approach funding: 1 year pilot projects, and then full scale projects for those with promising results. Larger projects require toxicology to be assessed
- Demonstration/validation: testing currently available fluorine free foams

Reference

AFFF

Ext = 30 seconds



Test

Formulation

Ext = 51 seconds



Testing Fluorine Free Foams: Performance improving, still lag behind AFFF



Developing Next Generation Remediation Reactors



Resources

PFAS and AFFF Reports to Congress

- <https://www.denix.osd.mil/derp/home/documents/>

Each of the Military Departments' PFAS Web Sites:

- Army: <https://www.denix.osd.mil/army-pfas/home/>
- Navy: <http://www.secnave.navy.mil/eie/pages/pfc-pfas.aspx>
- Air Force: <https://www.afcec.af.mil/WhatWeDo/Environment/Perfluorinated-Compounds/>

Strategic Environmental Research and Development (SERDP) and Environmental Security Technology Certification (ESTCP) Projects:

- <https://www.serdp-estcp.org/Featured-Initiatives/Per-and-Polyfluoroalkyl-Substances-PFASs>

Questions?



December 3-5, 2019 Washington DC