

Department of the Air Force PFAS Snapshot

Per- and polyfluoroalkyl substances (PFAS) are a group of synthetic fluorinated chemicals. Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA) are two organic chemicals within the PFAS group that were used in industrial and consumer products such as nonstick cookware, stain-resistant fabric and carpet, some food packaging and specialized foam.

In 1970, the Department of the Air Force (DAF) began using the firefighting agent Aqueous Film Forming Foam (AFFF) which contained PFOS and PFOA. AFFF is the most efficient extinguishing method for petroleum-based fires and is widely used across the firefighting industry, to include all commercial airports, to protect people and property. On May 19, 2016, the EPA established a lifetime Health Advisory or HA level of 70 parts per trillion for PFOS and/or PFOA in drinking water. The EPA HAs are non-regulatory and not enforceable; however, under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), DAF uses it to determine an action level for PFOS/PFOA in drinking water. The illustration depicts DAF progress through the CERCLA process.

IDENTIFY

204 Installations Require Preliminary Assessments (PAs)*

99% of PAs Complete

Of those 204, 191 Installations Planning a Site Inspection (SI)

83% of SIs Complete

BRAC: 30 of 30 SIs complete
ACTIVE/Reserve: 59 of 86 SIs complete
ANG: 69 of 75 SIs complete

Of those, 191 Installations Planning a Remedial Investigation (RI)

59% of RIs Awarded

BRAC: 16 RIs awarded: 1(FY19)4(FY20)7(FY21)4(FY23)
ACTIVE/Reserve: 76 RIs awarded: 1(FY19)29(FY20)18(FY21)28(FY22)
ANG: 21 RIs awarded: 1(FY15)1(FY19)10(FY20)3(FY21)6(FY22)

* PA numbers reflect AFFF sources only and does not include the current work AF is undertaking to identify non-AFFF PFAS sources.
*JB Elmendorf-Richardson radar locations still in the PA phase.

39 BRAC
90 Active/Reserve
75 ANG
30 BRAC
86 Active/Reserve
75 ANG
30 BRAC
86 Active/Reserve
75 ANG

RESPOND

Air Force Drinking Water Response Actions:

- Bottled water
- Point-of-use filtration
- Whole-house filtration
- Municipal Water Supply hookup
- Municipal Water Treatment
- New well drilling

BRAC
Castle
George
K.I. Sawyer
March
Mather
Pease
Plattsburgh
Reese
Wurtsmith

ACTIVE/RESERVE
Cannon
Dover
Eielson
Ellsworth
Fairchild
Goodfellow
Homestead
Hurlburt Field
JBER-Fort Yukon
JBMDL
JBSA Randolph

Little Rock
Luke
McConnell
Mountain Home
New Boston
Peterson
Scott
Shaw
Tinker
Travis
Wright-Patterson

ANG
Barnes
Biddle (formerly Horsham)
Gabreski
McEntire
Montana
Morris
Otis/JB Cape Cod
Shepherd Field (Martinsburg)
Toledo

40 Installations

PREVENT

PAST ACTIONS

100%

Installations transitioned to new C6 AFFF in stockpiles and fire trucks in 2017

979,000

Gallons of legacy AFFF disposed in 2017

\$10.8M

2017 Cost to date to replace and dispose of legacy AFFF in stockpiles and fire trucks

CURRENT ACTIONS

99%

AFFF systems locked out in Mar 2023 to prevent accidental releases

542,500

Total gallons of AFFF Concentrate in Facilities

445,800

Total gallons of AFFF Concentrate in Fire Vehicles/Storage

FUTURE ACTIONS

1 Oct 24

Target to complete facility AFFF disposal and vehicle AFFF replacement/disposal.

\$1.56B total force expenditures PFAS ACTIONS TO DATE investigations | response actions | prevention

Installations Status Update*

Active/Reserve Installations

Cannon AFB, NM: 3 off-base drinking water sources above EPA HA; BWP, FSI at 3, sampling completed. Engineering Evaluation Cost Analysis–Pilot Study May '21

Dover AFB, DE: 9 off-base private wells above EPA HA; 9 FSI, sampling ongoing

Eielson AFB, AK: GAC system installed at on-base water treatment plant; AF signed interim record of decision to connect residents to municipal water. 93% of all eligible properties have been connected to municipal water by Oct. '22

Ellsworth AFB, SD: 23 off-base residential wells above EPA HA; 1 well connected to base water supply, 3 wells connected to city water; FSI at 15 wells, 1 ion exchange system installed at a mobile home park, BWP to 3 residences, sampling completed

Fairchild AFB, WA: 2 municipal wells above EPA HA; FSI and 1 well is non-active. 107 off-base residential wells above EPA HA; 88 FSI, 4 residences connected to city water, BWP to 12 residences

Goodfellow AFB, TX: 33 residential wells above EPA HA, BWP, sampling completed, 6 residents connected to municipal source, POETS installation complete for 20 off-base wells, 5 POETS pending installation

Homestead ARB, FL: Sampling completed; POETS operating at 3 off-base private wells above EPA HA; BWP at 2 additional locations while monitoring continues to evaluate a one-time EPA HA exceedance

Hurlburt Field, FL: 2 wells above EPA HA; BWP, sampling completed

JBER-Fort Yukon LRRS, AK: 1 on-base well above EPA HA, BWP, filtration system planned

JB McGuire-Dix-Lakehurst, NJ: 2 on-base wells above EPA HA; FSI; wells/FSI decommissioned. New deep well and public water system constructed; began operation 1 Apr '23. 6 off-base wells above EPA HA; 6 connected to municipal water. Well head treatment on 1 municipal well based on NJ MCL

JBSA Randolph, TX: 5 residential wells above EPA HA, 1 of 5 wells abandoned; BWP; sampling completed, POETS installation in-progress at 3 wells, 1 well connected to public water supply in-progress

Little Rock AFB, AR: 4 off-base residential wells above EPA HA, 2 of the 4 on POETS, 2 BWP, sampling completed

Luke AFB, AZ: 3 off-base residential wells above EPA HA; all connected to municipal water. 3 public utility wells and 2 distribution points above EPA HA; FSI and community of ~1,630 residences transitioned off BW, sampling completed

McConnell AFB, KS: 3 residential wells above EPA HA; 1 location connected to municipal water supply; BWP; sampling completed

Mountain Home AFB, ID: 2 on-base drinking water wells above EPA HA; one well taken offline and replaced by another well below EPA HA; second well decommissioned and facility connected to base drinking water supply system below EPA HA. Off-base sampling completed

New Boston SFS, NH: 1 on-base drinking water well above EPA HA; FSI; off-base sampling not recommended at this time. On-base drinking water wells are sampled on an annual basis and are below state MCLs

Peterson SFB, CO: 42 municipal wells with FSI, 21 private wells with FSI (servicing 30 residences), 2 private wells with FSI at a mobile home park, 2 private wells connected to city and BWP at one 1 private well; sampling completed

Scott AFB, IL: 1 off-base residential well above EPA HA; FSI; sampling completed

Shaw AFB, SC: 3 public water systems, 3 business and 33 residential wells above EPA HA, BWP to 245 residences and 3 businesses; sampling ECD Mar '24

Tinker AFB, OK: 7 off-base private wells above EPA HA; BWP; sampling completed; POETS installation complete at 2 wells, 4 are connected to municipal water with 1 estimated to be connected to municipal water by Dec '23

Travis AFB, CA: Three off-base residential wells above EPA HA; FSI. System effluent samples are below EPA HA. BW discontinued Dec '21. O&M sampling conducted in Oct '22; systems' effluent remains below HA

Wright-Patterson AFB, OH: 2 on-base wells above EPA HA, GAC system installed. Off-base drinking water well sampling completed, no private drinking water wells above EPA HA, one off-base storm water outfall discharge exceeds EPA HA.

Conducting a NTCRA to select remedy to capture and treat PFAS-impacted water

BRAC Installations

Former Castle AFB, CA: 3 private wells above EPA HA, FSI at 3

Former George AFB, CA: 1 private well above EPA HA; FSI

Former K.I. Sawyer AFB, MI: 1 private well above EPA HA; FSI

Former March AFB, CA: 1 public well above EPA HA; treatment system on-line, cooperative agreement in place. 2 private wells above EPA HA; connected to public water supply

Former Mather AFB, CA: 2 private and 2 public wells above EPA HA; BWP for the private wells. FSI and O&M of system by purveyor for one public well. Air Force refurbished existing alternate well for replacement of the other public well

Former Pease AFB, NH: 2 public wells above EPA HA; both treatment systems on line, cooperative agreement in place. 5 private wells above EPA HA, 2 connected to public water supply, 2 FSI, 1 shutdown. 6 private drinking water wells above NH MCLs, 1 connected to public water supply by NH, 1 FSI by NH, 2 BWP provided by AF per OSD guidance, 2 FSI by well owners

Former Plattsburgh AFB, NY: 4 private wells above EPA HA; 3 FSI, 1 BWP. 3 private wells above NY levels, FSI by NY for the 3 wells

Former Reese AFB, TX: 269 private wells and 4 public wells above the EPA HA and/or Texas PCLs; 1 public well replaced by connection to City of Lubbock supply, 256 FSI, remaining BWP

Former Wurtsmith AFB, MI: 1 private well above EPA HA; connected to public water supply

ANG Installations

Barnes ANGB, MA: 2 municipal wells above EPA HA; treatment system online

Biddle ANGB (Formerly Horsham), PA: Under Administrative Order. 2 on-base drinking water wells above EPA HA; temporary FSI and BWP. 67 off-base private wells above EPA HA; 66 private wells connected to municipal water; 1 connection declined by owner. 5 municipal wells above EPA HA; providing alternate water source while municipal GAC filtration systems are constructed

Gabreski ANGB, NY: 2 municipal wells above EPA HA, FSI on both; all residential wells hooked up to municipal water

McEntire ANGB, SC: 2 off-base private wells above EPA HA; BWP

Montana ANGB, MT: 1 off-base residential well above EPA HA; FSI

Morris ANGB, AZ: 3 off-base residential wells above EPA HA; all connected to municipal water

Otis ANGB (JB Cape Cod), MA: No residential wells above EPA HA, 123 municipal water connections completed (112 based on HA; 11 based on MA MCL). Wellhead treatment on 2 municipal wells (1 based on HA; 1 based on MA MCL). Periodic sampling of private wells. Based on MA MCL: 2 additional public water wells impacted (wellhead treatment underway) and 2 private wells impacted (BWP)

Shepherd Field (Martinsburg) ANGB, WV: 1 municipal well above EPA HA. GAC system installed and functioning since December '17

Toledo ANGB, OH: 1 off-base residential well above EPA HA; residence connected to municipal water supply; well closed

Non-AF led Drinking Water Responses

Barnes ANGB, MA

Harrisburg IAP, PA

Joe Foss Field, SD

Luke AFB, AZ

New Castle ANG, DE

Stewart ANGB, NY

*State MCL data included in updates in accordance with the [Dec 2021 OSD Memorandum](#) regarding use of promulgated state drinking water standards for PFAS

Key

BWP = Bottled Water Provided
ECD = Estimated Completion Date
EPA HA = 2016 Environmental Protection Agency
lifetime Health Advisory

FSI = Filtration System Installed
GAC = Granular Activated Carbon
MCL = Maximum Contaminant Levels
OSD = Office of the Secretary of Defense

O&M = Operations & Maintenance
PCL = Protective Concentration Limit
POETS = Point of Entry Treatment System
NTCRA = Non-time Critical Removal Action