FACT SHEET

Per- and Poly-Fluoroalkyl Substances (PFAS)

Preliminary Assessment & Site Inspection – Joint Base Lewis-McChord, Washington

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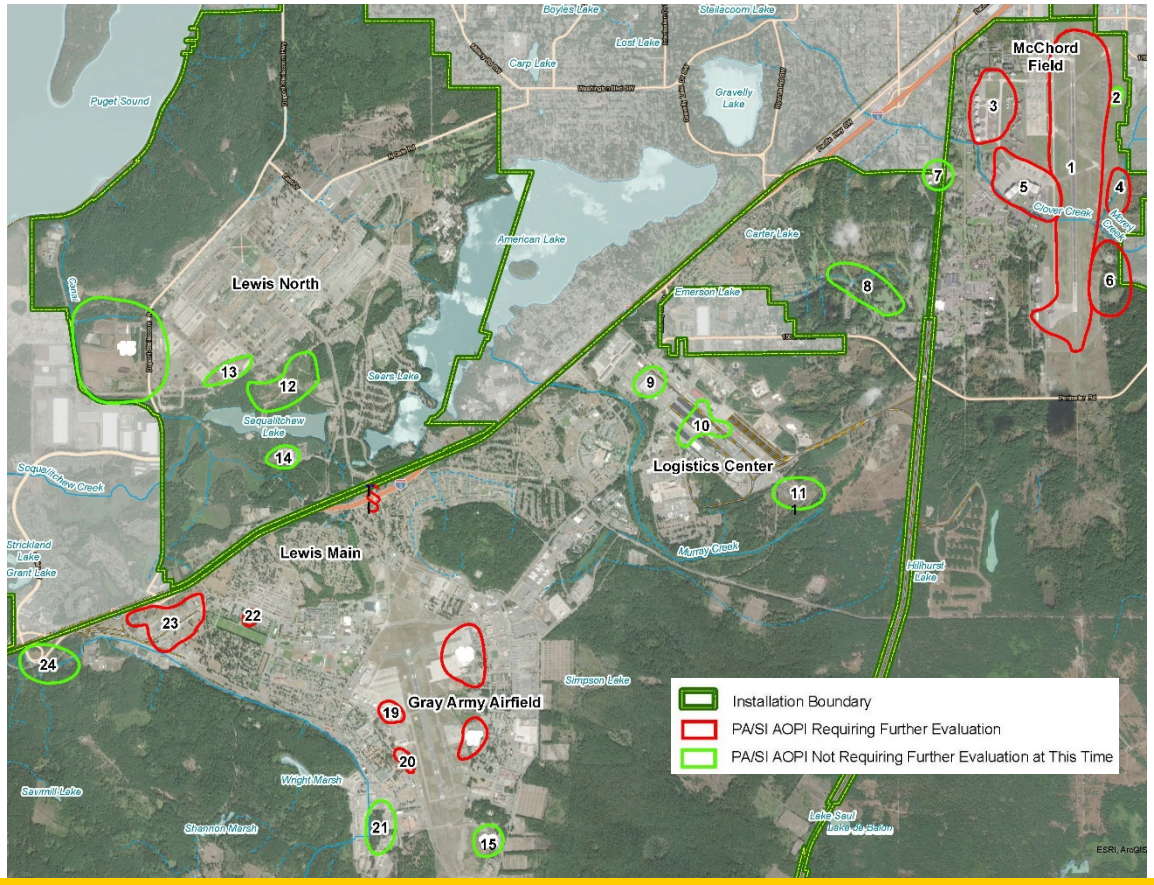
The United States (U.S.) Army is investigating potential releases of certain per- and poly- fluoroalkyl substances, commonly known as PFAS. These substances may be present in soil and/or groundwater at Army installations from PFAS-containing aqueous film forming foam (AFFF) or from other sources. Historical military use of AFFF began in the 1970s and was used most widely at installations equipped with airfields. The primary potential sources of Army PFAS releases are firefighting training areas where AFFF was used to train firefighters to respond to petroleum fires. Other potential Army uses of PFAS included use of PFAS in industrial processes, such as metal plating. However, there are also many potential non-Department of Defense (DoD) sources of PFAS. These chemicals may enter the environment through landfills and wastewater due to their presence in consumer products or as runoff to soil and water from other uses.

PFAS Background

- PFAS refers to a class of approximately 600 man-made chemicals in commerce, including Perfluoro-octane sulfonate (PFOS), Perfluorooctanoic acid (PFOA), and Perfluorobutanesulfonic acid (PFBS).
- PFOA and PFOS are the most extensively studied and historically, the most widely-used throughout the United States (U.S.)
- Beginning in the 1950s, common uses of these substances included numerous heat-, stain-, grease- and water-resistant products, such as carpets, clothing, upholstery fabrics, paper packaging for food, and cookware.
- In May 2016, the United States Environmental Protection Agency (USEPA) established lifetime health advisory levels for PFOS and PFOA in drinking water. Health advisory levels are concentrations that should offer a margin of protection for all Americans throughout their life from adverse health effects resulting from exposure to PFOS and PFOA.
- In October 2019, a memorandum issued by the Office of the Secretary of Defense (OSD) established risk screening levels for PFOS, PFOA, and PFBS. The OSD risk screening levels were established for the Army to determine if further investigation in the Remedial Investigation (RI) phase is warranted or if a site can proceed to Site Closeout.
- The Army's priority is to address PFOS and PFOA in drinking water from Army activities and to address releases of PFOS and PFOA under the Federal cleanup law (i.e., the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [CERCLA]). Army follows the CERCLA process to fully investigate releases, prioritize responses, and determine appropriate cleanup actions based on risk.
- The CERCLA process, as provided in 42 United States Code Chapter 103, includes multiple phases: Preliminary Assessment, Site Inspection, Remedial Investigation, Feasibility Study, Remedial Design/Remedial Action, Remedial Action-Construction/Remedial Action-Operations, and Long-Term Management. Each of these phases can take several years to complete. The first two phases are described below.
- **Preliminary Assessment (PA).** The PA is an initial review and analysis of available information to determine whether a release may have occurred and the potential sources and type of release(s). It includes an evaluation of a site's relative risk and recommendations on need for subsequent phases in the cleanup process or no further action.
- **Site Inspection (SI).** The SI characterizes the site and sources; determines likelihood of release of PFOS/PFOA/PFBS to environmental media; estimates the receptors actually or potentially exposed; and determines what CERCLA action, if any, is appropriate.

Army PFAS Activities at Joint Base Lewis-McChord, Washington

- The Army conducted a PA/SI at Joint Base Lewis-McChord (JBLM) to determine whether a release of PFAS may have occurred and to identify potential sources and types of release.
- The PA identified 24 generalized Areas of Potential Interest (AOPIs), containing at least 52 known/potential PFAS use, storage or disposal operations were identified.
- A total of 20 AOPIs were investigated during the SI which was conducted in three phases beginning in June 2018 and concluding in May 2019. A total of 77 groundwater samples were collected and analyzed for 14 PFAS compounds. These samples were collected from existing and newly installed groundwater monitoring wells, operating remediation systems, and surface water bodies located. During the SI sampling effort, PFOS was detected at levels above the OSD risk screening levels in 23 of 77 groundwater samples and PFOA was detected in 12 of 77 groundwater samples at levels exceeding the OSD risk screening levels. PFBS was not detected at levels above the OSD risk screening levels.
- In addition to the on-post groundwater sampling, 13 water samples were collected from off-base production wells operated by publicly owned entities or cities. The sum of PFOS and PFOA detected did not exceed the USEPA Health Advisory Level in any of the off-base samples.



Army's Next Steps

Based on a comparison of SI sampling results to the OSD risk screening levels, there are 11 AOPIs requiring further evaluation during the upcoming Remedial Investigation stage of the CERCLA process as shown on the figure. Additional investigation will be completed to evaluate the nature and extent of PFOS, PFOA, and PFBS in soil, groundwater, and potentially other media at these locations.

Other PFAS Actions

- The Army has tested its drinking water systems multiple times since 2013 to determine whether drinking water contained PFOS/PFOA above the EPA lifetime Health Advisory level. Based on sampling and actions taken to date, no one is drinking water with levels of PFOS/PFOA above the lifetime Health Advisory level at the installation. The Army will continue to regularly test its drinking water systems.
- The Army will continue to identify and dispose of old formulations of AFFF containing PFOA/PFOS at Army installations throughout the country, and no longer uses AFFF for maintenance, testing, or training. AFFF is now only used for firefighting emergencies.

WHERE TO GO FOR MORE INFORMATION

Installation website: https://home.army.mil/lewis-mcchord
Army PFAS website: https://www.denix.osd.mil/army-pfas/home/