

## ALASKA TAKES ACTION AGAINST PFAS

PFAS have been detected in Alaska groundwater. DEC has identified PFAS contamination in groundwater at the Fairbanks International Airport, City of Fairbanks Regional Fire Training Center, Eielson Air Force Base and Moose Creek, and at the Gustavus Airport. State agencies, including DEC and the Department of Health and Social Services (DHSS), are working with other state and federal agencies to protect people from exposure to levels of PFAS that may pose a concern. Some of the current actions include:

- DEC is overseeing the responsible parties' efforts to respond to PFAS contamination, which includes collecting water samples to figure out the boundaries of the contamination. Bottled water is being provided to residents in areas where PFAS have been found at concentrations above health advisory levels established by EPA and will be expanded to areas that are above DEC's action levels.
- DHSS evaluates possible hazards from exposure to these chemicals and has developed site specific fact sheets for the affected communities. These fact sheets include practical safety information on use of affected well water. Fact sheets can be found on their website at: [dhss.alaska.gov/dph/Epi/eph/Pages/default.aspx](http://dhss.alaska.gov/dph/Epi/eph/Pages/default.aspx).
- DEC and DHSS are working together to keep the communities impacted by contamination informed through open houses, printed material such as this fact sheet, and maintaining a web-based information source at: [dec.alaska.gov/spar/csp/pfas-contaminants/](http://dec.alaska.gov/spar/csp/pfas-contaminants/).

These state agencies also work closely with other state and national agencies on PFAS issues. DEC staff participate in the Interstate Technology and Regulatory Council's PFAS working group, in which a national group of experts collaborate to develop science-based guidance. In addition, Alaska health and environmental officials are communicating with other states and EPA as the science on these chemicals continues to evolve.

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### STATE OF ALASKA CONTACTS

**Assessment and Cleanup  
DEC, Contaminated Sites Program  
Division of Spill Prevention and Response**  
John Halverson  
Environmental Program Manager  
907-269-7545

**Public Water Systems  
DEC, Drinking Water Program  
Division of Environmental Health**  
Cindy Christian  
Program Manager, Field Operations  
907-451-2138

**Health Related Information  
DHSS Division of Public Health,  
Environmental Public Health Program**  
Kristin Bridges  
Public Health Scientist  
907-269-8028

### To learn more, visit:

**DEC's PFAS website:**  
[dec.alaska.gov/spar/csp/pfas-contaminants/](http://dec.alaska.gov/spar/csp/pfas-contaminants/)

**ATSDR fact sheet:**  
[www.atsdr.cdc.gov/pfc/docs/pfas\\_fact\\_sheet.pdf](http://www.atsdr.cdc.gov/pfc/docs/pfas_fact_sheet.pdf)

**EPA FAQs:**  
[www.epa.gov/pfas](http://www.epa.gov/pfas)



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## Raising Awareness of PFAS Chemicals In Alaska



### WHAT ARE PFAS?

This fact sheet provides information about a group of chemicals called per- and polyfluoroalkyl substances (PFAS, pronounced "PEA-fass") that have been detected in some drinking water supplies in communities in Alaska, and that have become a complex issue that health and environmental agencies are facing in Alaska and across the nation.

PFAS are an extensive family of more than 3,000 human-made substances that have commercially useful properties: they resist heat, oil, stains, grease, and water. PFAS have been used since the 1950s in a wide range of products, including firefighting materials, non-stick cookware, stain resistant products for furniture and carpets, waterproofing for clothes and mattresses, food packaging, and personal care products. People regularly come into contact with these chemicals because of their everyday use.

Perfluorooctanesulfonic acid (PFOS, pronounced "PEA-foss") and perfluorooctanoic acid (PFOA, pronounced "PEA-fo-ah") were once the most commonly produced types of PFAS, and so scientists know the most about these two compounds. Because PFOS and PFOA don't break down in the environment and are a potential health concern, their production has been discontinued in the US. They have since been replaced by other PFAS compounds that don't accumulate to such high levels in wildlife and humans.

## PFAS AND HEALTH

PFAS chemicals have a range of toxicities and are globally distributed. Studies in the U.S. and worldwide have found small amounts of PFAS in blood samples from the general human population and in wildlife. The Centers for Disease Control (CDC) is treating PFAS contamination as a public health concern.

Some animal studies show health effects from PFAS exposure, but human health studies are less conclusive. Some studies in humans have shown that PFAS at high levels may increase cholesterol levels; decrease how well the body responds to vaccines; increase the risk of thyroid disease; decrease fertility in women; increase the risk of serious conditions like high blood pressure and preeclampsia in pregnant women; and lower infant birth weights.

The Alaska DEC, DHSS, and other state and federal agencies are working together, coordinating with EPA and other national efforts to protect the public from exposure to PFAS contamination in Alaska.

Studies do not clearly show whether PFAS cause cancer in people. Animal studies have shown PFOA and PFOS can cause cancer in the liver, testes, pancreas, and thyroid. However, the toxic effects of chemicals are not always the same across species, so the results of these studies may not accurately reflect effects of PFAS on humans. Further studies are needed to better understand the human health effects.

## PFAS AND DRINKING WATER

When PFAS are released into the environment (by spills or even through intended uses, such as fighting fires with PFAS-containing foams), they can enter rivers and groundwater that may be used as drinking water sources. These chemicals degrade very slowly, if at all, in the environment.

In 2013-15, monitoring of large U.S. public water systems detected PFAS in 194 public water supplies. The U.S. Environmental Protection Agency (EPA) required this monitoring under the Unregulated Contaminant Monitoring Rule 3 (UCMR3). This rule requires large public water systems to periodically collect samples for selected unregulated substances in drinking water sources. UCMR3 was the third UCMR event and included six PFAS:

- PFOS
- PFOA
- perfluorononanoic acid (PFNA)
- perfluorohexanesulfonic acid (PFHxS)
- perfluoroheptanoic acid (PFHpA)
- perfluorobutanesulfonic acid (PFBS)

## WHAT HAPPENS WHEN PFAS GET INTO THE ENVIRONMENT?

Because of their stable chemical structure, PFAS do not easily break down. They travel rapidly to groundwater where they can spread both vertically and laterally. PFAS tend to build up in the food chain and have been found throughout the Arctic, in both animals and plant life, and are suspected to have migrated there through the ocean and the air.

## WHAT SHOULD I DO TO LIMIT MY EXPOSURE?

It is nearly impossible to eliminate all exposure to PFAS since they are found at low levels in the environment, in consumer products, and food packaging. The Alaska Department of Health and Social Services recommends the following if PFAS contamination above EPA's Lifetime Health Advisory Level has been detected in your drinking water:

- Use a clean/alternative water source for drinking and preparing baby formula.
- Use a clean water source for washing food and cooking.
- Find an alternative water source to give to pets/animals.
- It is safe to shower/bathe in your tap water (your skin does not readily absorb PFAS).
- It is safe to clean your clothes and dishes with your tap water.

## STATE AND FEDERAL PFAS STANDARDS

**ADEC:** In August of 2018, the state set action levels for the six PFAS listed in the UCMR3 and determined they are hazardous substances under state law. These levels determine when treatment or alternative water supply is necessary to protect human health. The state is setting a summed action level of 70 parts per trillion (ppt) (sometimes presented as 0.07 parts per billion) for five of the six compounds to include: PFOS, PFOA, PFNA, PFHxS, and PFHpA if any or all are detected. For PFBS, the state is applying an action level of 2000 ppt.

**EPA:** In May 2016, the agency established a Lifetime Health Advisory Level (LHA) for PFOS and PFOA in drinking water of 70ppt for each, or if both are present, a total of 70ppt for PFOS plus PFOA. The LHA is not a legally enforceable federal standard and is subject to change as new information becomes available. Drinking water at a level above EPA's LHA does not necessarily mean that health risks are expected. The LHA is based on a level expected to be safe for all people to consume throughout their lifetime, including sensitive populations.