

Whitmore Ravine PFAS

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of human-made chemicals. They have been used in many consumer and household products since the 1940s, including cookware, food packaging, and stain repellants, as well as some firefighting foams used at airports, fire training areas, emergency response locations and military installations. PFAS are sometimes called “forever chemicals” because they do not easily break down and can stay in the environment for long periods of time.

What has DEQ done at Whitmore Ravine?

DEQ is proactively working to assess the prevalence of PFAS in Montana’s water bodies. This is one part of implementing the Montana PFAS Action Plan that was adopted in June of 2020. In late summer and early fall of 2021 DEQ’s Monitoring and Assessment Section conducted a water quality monitoring project to screen for PFAS around the state.

During preliminary review of results, DEQ found high PFAS concentrations in samples taken at Whitmore Ravine in Great Falls. Definitive sources of all the PFAS compounds found at Whitmore Ravine have not been identified at this time.

The nearby Malmstrom Air Force Base (MAFB) is already investigating whether it could be a contributor to the PFAS concentrations at Whitmore Ravine. In 2016/2017, MAFB contractors performed an investigation that identified areas of potential PFAS contamination on base. As a result, MAFB is developing a work plan to determine the extent and magnitude of PFAS contamination on- and off-base. DEQ is consulting with its federal partners and will review the draft work plan.

What do we mean by high concentrations of PFAS?

In 2019, DEQ adopted a Human Health Standard standard for the two most studied PFAS compounds, PFOA and PFOS, (individually or combined) for groundwater at 70 parts per trillion (ppt). This standard is based on a lifetime Health Advisory Level for drinking water set by the EPA. There currently is no standard for PFAS in surface water so this monitoring project used the groundwater standard as a screening level for surface water samples. The combined concentration of PFOS and PFOA in Whitmore Ravine surface water was 1,188 ppt. A total of 28 PFAS compounds were analyzed by the lab and the total PFAS concentration was 12,920 ppt.

Is there any immediate threat to health or safety?

There is currently no immediate threat to human health, however DEQ recommends the water in Whitmore Ravine not be consumed by people or animals without proper water treatment.

DEQ has worked with state and local stakeholders to notify nearby landowners and trail users of the situation.

What are the potential health risks associated with PFAS?

Only a few of the thousands of PFAS have been studied for their potential to affect people's health. Research is ongoing and we will learn more over time. Studies that have occurred suggest that exposure to certain PFAS may lead to health problems including changes in the liver, cardiovascular effects, reproductive effects in women, immunological and developmental effects in infants and children, and an increased risk of kidney or testicular cancer.

Where can I find additional information on PFAS?

Montana Department of Environmental Quality:
deq.mt.gov/cleanupandrec/programs/pfas

Environmental Protection Agency:
www.epa.gov/pfas

Agency for Toxic Substances and Disease Registry:
www.atsdr.cdc.gov/pfas

