Testing PFAS in Minnesota Drinking Water

BACKGROUND

The Minnesota Department of Health (MDH) is responsible for ensuring safe drinking water for all Minnesotans. MDH protects drinking water through regular testing of community water systems (CWSs) for contaminants. MDH has a goal to test all CWSs in Minnesota for perfluoroalkyl substances (PFAS) and expects to reach this goal in 2023. Through this effort, MDH is evaluating whether Minnesotans are exposed to PFAS at levels above guidance values in drinking water. This project was made possible by funding from U.S. Environmental Protection Agency and Clean Water Fund as well as the support of CWSs that are participating in this voluntary project.

STATEWIDE PFAS MONITORING PROJECT

MDH began the Statewide PFAS Monitoring Project in 2020. After Phase II of the Statewide PFAS Monitoring Project is completed in spring 2022, approximately 4.1 million people, or 91% of the population served by CWSs, will be covered under MDH’s PFAS testing. CWSs that remain for sampling are less vulnerable to PFAS contamination based on their geology, nearby land use, and nearby industries.

About PFAS

PFAS are a family of manmade chemicals that have been widely used for decades. PFAS are extremely stable and do not break down in the environment. PFAS have been released to the environment through spills and disposal in the past.

What is a CWS?

CWSs serve at least 25 people or 15 service connections (i.e. 15 buildings served) year-round. CWSs include municipalities (cities) as well as some manufactured home parks, college campuses, prisons, and long-term care facilities.

After Phase II of the project, about 4.1 million Minnesotans will be covered under MDH’s PFAS monitoring program.

Preliminary PFAS testing results

Preliminary findings from the Statewide PFAS Monitoring Project show that some PFAS are commonly found at low levels in Minnesota drinking water. MDH has detected at least one PFAS at 176 of the 262 CWSs tested so far in this project (67% of tested CWSs). PFAS are typically found at levels below health-based guidance values in drinking water. Of the 262 systems tested so far, only three have had results that exceed PFAS guidance values (1% of tested CWSs). The project has rarely found elevated PFAS in drinking water outside of communities with contaminated sites. There is little to no health risk from drinking water with PFAS levels at or below guidance values.

Interactive dashboard on PFAS testing

Our interactive web dashboard has maps showing the status and results of PFAS testing. In the maps (right), you can see which CWSs have been tested so far and view each system’s PFAS testing results.

Sampling approach for PFAS testing

MDH’s sampling approach for the Statewide PFAS Monitoring Project is to collect samples that represent what customers drink from the tap as closely as possible. All entry points at the system are sampled. The entry point is where finished drinking water enters the distribution system. Systems run as many wells as possible during sample collection, so long as it reflects typical usage. When all wells cannot be run for the entry point sample, source samples are collected at the remaining wells.

EPA actions on PFAS

EPA has announced that it will develop federal standards, called Maximum Contaminant Levels (MCLs) for two PFAS. EPA will release their proposed MCLs for PFOS and PFOA in fall 2022 and final MCLs in fall 2023.

The announcement about upcoming MCLs for PFOA and PFOS reinforces the importance of testing drinking water for PFAS. Proactive testing protects the health of public water system customers. Through the Statewide PFAS Monitoring Project, Minnesota’s CWSs will be well-prepared for the new drinking water standards.

Past PFAS monitoring in CWSs

MDH has been monitoring systems with PFAS detections since 2006 in the East Metro and near sites where aqueous film-forming foam was used. Additionally, MDH has sampled other CWSs for PFAS in conjunction with their routine monitoring schedules. MDH has also sampled for PFAS through the third round of the Unregulated Contaminant Monitoring Rule (UCMR 3) and the Unregulated Contaminant Monitoring Project (UCMP). UCMR 5 will begin in 2023 and is expected to include PFAS sampling.

MDH has conducted sampling for PFAS under other projects like UCMR 3, but is considering systems ‘complete’ for PFAS testing when they have all entry points sampled. MDH collects follow-up samples at systems where elevated levels of PFAS are detected to evaluate PFAS exposure.

Contact us with questions at health.drinkingwater@state.mn.us or 651-201-4700