

health. The bill would prohibit its interpretation to change or interfere with requirements imposed by the federal Water Pollution Control Act or the federal Safe Drinking Water Act.

In 2022, EPA established new or lowered existing health advisory limits (HALs) for 4 PFAS chemicals. The HAL for two PFAS chemicals (PFOA/PFOS), formerly set at 70 parts per trillion (70 ppt) in drinking water, were reduced to 0.004 ppt for PFOA and 0.02 ppt for PFOS. These are interim limits because they are still under review by the EPA Science Advisory Board; in addition, a new maximum contaminant level (MCL) in drinking water has been proposed for these chemicals.

A 2019 study conducted by the Kentucky Energy and Environment Cabinet, Department for Environmental Protection (DEP), based on a representative sampling of 81 public drinking water systems in Kentucky, revealed exceedances of those new health advisory levels. Final HALs for two new PFAS chemicals were established - for GenX chemicals (hexafluoropropylene oxide dimer acid and its ammonium salt) at 10 ppt and for PFBS (perfluorobutane and its potassium salt) at 2,000 ppt.

A 2021 DEP study of Kentucky drinking water source waters detected PFAS at 36 of the 40 monitoring stations, or 90%, and within each of the major river basins of Kentucky. Concentrations found were generally considered low, and 85% of the detections were less than 5 ppt; however, at three locations, near airports, the concentrations were above the HALs of 70 ppt. Importantly, all of the concentrations detected are above the new HALs. These results, combined with those from the previous drinking water study, are part of a limited evaluation of Kentucky's waters for PFAS occurrence. A fish tissue study conducted by the Kentucky Division of Water in September 2022 indicates widespread contamination of fish tissue by PFAS chemicals throughout the state.

In its 2019 PFAS Action Plan and 2021 PFAS Roadmap the EPA has announced it is working to establish Maximum Contaminant Levels for PFAS in drinking water and to establish PFAS effluent, or discharge, limits for wastewater discharges. EPA was expected to publish draft PFAS chemical limits for public comment by Fall 2022. That date has passed without publication of draft limits. EPA has also initiated a rulemaking for four specific PFAS chemicals as hazardous constituents pursuant to the Resource Conservation and Recovery Act (RCRA).

HB 197 would have a moderate to significant fiscal impact on publicly owned drinking water plants, and a significant fiscal impact on publicly owned wastewater treatment plants. The fiscal impact of HB 197 on publicly-owned drinking water facilities and wastewater treatment facilities is dependent on numerous factors, including the size/number of paying customers served, PFAS chemical limits promulgated, testing/monitoring requirements, and what sort of treatment technology will be required to meet the limits. Limits promulgated by EPA will have a fiscal impact on drinking water and wastewater treatment facilities regardless whether Kentucky promulgates its own limits.

According to the Kentucky Division of Water website there are 435 public water systems in Kentucky. The Kentucky Rural Water Association (KRWA), which represents approximately 94% of publicly owned water and wastewater utilities in Kentucky, was consulted for this analysis. KRWA believes it likely PFAS monitoring requirements for drinking water would be similar to those currently required for Synthetic Organic Compounds: initial sampling for 4 quarters; then, if no detection and serving a population under 3,300, 1 sample every 3 years; if no detection and population served is over 3,300, two samples in one year every 3 years would be required. If initial sampling detected PFAS further sampling would be required for 2 quarters for groundwater and 4 quarters for surface water systems. PFAS effluent limits in wastewater treatment plant discharge permits would apply to surface water discharges of drinking water plant backwash discharge permits (not all water plants discharge to surface water), possibly requiring monthly monitoring. Testing for PFAS chemicals would be in addition to testing already conducted by water and wastewater facilities. As an example of monitoring costs, testing for PFAS under EPA's Unregulated Contaminant Monitoring Rule which took place several years ago cost \$900 per sample.

KRWA identifies two treatment technologies to remove PFAS chemicals from drinking or wastewater: ion exchange resin and granulated active carbon (GAC) filtration. The cost for a typical ion exchange system has been estimated to range from \$0.30 to \$0.80 per 1,000 gallons treated. <https://www.theburningofrome.com/helpful-tips/how-much-does-an-ion-exchange-system-cost/>. The most widely used is the GAC filtration. There are numerous variations of GAC filtration systems available and the costs vary widely based on numerous factors, including gallons to be treated, level of contaminants to be removed, and whether a system is to be built from the ground up or will be a retro-fit of an existing treatment system.

Sources agree that HB 197 would have a **significant fiscal impact on wastewater treatment facilities**. Those facilities are not currently required to monitor for or remove PFAS chemicals from their wastewater discharge and the treatment technologies to remove PFAS chemicals from wastewater (ex. ion exchange, granulated activated carbon) would require major infrastructure investment.

Part III: Differences to Local Government Mandate Statement from Prior Versions

Part II applies to HB 197 as introduced. There is no earlier version for comparison.

Data Source(s): Kentucky Rural Water Association; Kentucky Department for Environmental Protection; LRC staff

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