

are enforced by the federal Environmental Protection Administration (EPA), and by many states.

The EPA to date has established a health advisory level at 70 parts per trillion (70 ng/L) for two PFAS chemicals in drinking water. A 2019 study conducted by the Kentucky Energy and Environment Cabinet, Department for Environmental Protection (DEP), and based on a representative sampling of 81 public drinking water systems in Kentucky, revealed no exceedances of those health advisory levels. A 2021 DEP study of Kentucky source waters detected PFAS at 36 of the 40 (90%) monitoring stations, and within each of the major river basins of Kentucky. Concentrations were generally low, and 85% of the detections were less than 5 ng/L; however, there were three locations, near airports, where concentrations were above the health advisory level. These results, combined with those from the previous drinking water study, are part of a limited evaluation of Kentucky's waters for PFAS occurrence.

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 PFAS effluent, or discharge, limits for wastewater discharges. It is expected EPA will publish draft limits for public comment by Fall 2022. EPA has also initiated a rulemaking for four specific PFAS chemicals as hazardous constituents pursuant to the Resource Conservation and Recovery Act (RCRA).

HB 338 would have a moderate to significant fiscal impact on publicly owned drinking water and wastewater treatment plants. The fiscal impact of HB 338 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 that 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 to an existing treatment system.

Sources agree that HB 338 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

Par II applies to HB 388 as introduced. There is no prior version for comparison.

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

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