



For decades, per- and polyfluoroalkyl substances (PFAS) were widely used in the manufacture of commercial and consumer products and have emerged as a major source of concern among the public and regulators. PFAS are unlike any other water contaminant—the same properties that make them durable and water-, heat- and oil-resistant also make them extremely persistent and widespread in the environment.

Although the use of PFAS has been discontinued in many industries, a number of facilities may have continuing sources of impacts and the potential for contamination in their process water or wastewater. Many state regulatory agencies have been asking facilities to sample for PFAS in their discharge. Some facilities may need to evaluate and implement PFAS water treatment depending on the concentrations and their potential impact on the environment.

Due to its durability, PFAS can be difficult to treat—many traditional treatment technologies are not very effective. Fortunately, Barr is a leader in evaluating water treatment options for contaminants of emerging concern like PFAS. Our water and wastewater engineers help clients evaluate PFAS impacts in their groundwater, process wastewater, and other sources; work with them to navigate treatment and non-treatment options; and provide support for emergency-response PFAS water-treatment system design and implementation.

treating challenging contaminants

Barr has helped numerous clients evaluate and treat water impacted by difficult-to-treat compounds, including PFAS. Our work often begins by preparing initial evaluation of water treatment options and providing preliminary recommendations and information to our client. We can then design and complete bench- or pilot-scale tests to evaluate the water treatment approaches and their effect on our client's water-quality and treatment goals. After testing the technology, Barr designs and implements full-scale water treatment systems, including pre- and post-treatment, and also provides start-up and operations assistance.

At several active and former manufacturing facilities in the eastern United States, Barr has assisted in the evaluation of multiple treatment options for PFAS. Our work has included accelerated column testing and pilot testing for granular activated carbon and bench testing and pilot-test design and implementation of a coagulation and flocculation treatment process ahead of PFAS water treatment.

To help a municipal client address contamination from the use of PFAS-containing fire-fighting foam at a regional airport, Barr provided a water quality evaluation, facilitated accelerated column testing for granular activated carbon treatment and pilot testing for ion-exchange treatment, and provided well siting for additional well capacity to provide water from a non-PFAS-impacted groundwater source.