


Addressing PFAS in North Carolina

Federal Standards

In April, EPA announced final standards for six PFAS compounds for public water systems:

- EPA set enforceable Maximum Contaminant Levels (MCLs) for PFOA and PFOS, at 4 parts per trillion, a level that can be reliably measured by most labs.
- Final MCLs for GenX chemicals, PFHxS, and PFNA are set at 10 ppt each.
- The rule also regulates GenX chemicals, PFNA, PFHxS and/or PFBS using a Hazard Index calculation to determine if the combined levels of these PFAS pose a potential risk to human health.
- Public water systems have five years to meet the MCLs.

Understanding PFAS

NORTH CAROLINA Department of Environmental Quality

What are PFAS, or per- and polyfluoroalkyl substances?

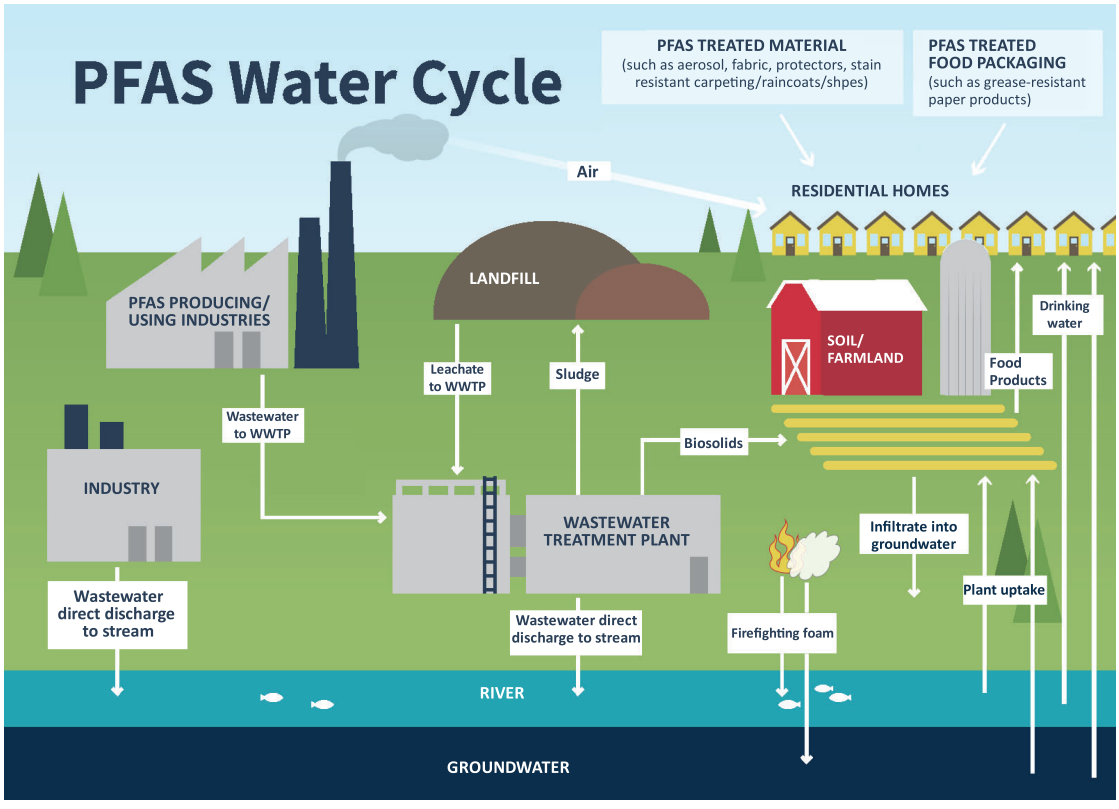
PFAS refers to a group of man-made chemicals. They are widely used in commercial and consumer products such as food packaging, water- and stain-repellent fabrics, nonstick products and firefighting foams. They are also commonly used in industrial processes and manufacturing. Because of their widespread use, these compounds are present in household and industrial waste, air emissions and discharges.

PFAS are often called “forever chemicals” because they don’t break down in the environment and can build up, or bioaccumulate, in humans and animals.

Health Impacts and Exposure

Scientific studies have shown that exposure to certain levels of PFAS have been linked to multiple health issues including reproductive effects, developmental effects or delays in children, increased risk of some cancers, reduced ability of the body’s immune system to fight infections, including reduced vaccine response, interference with the body’s natural hormones; and increased cholesterol levels and/or risk of obesity.

Most Americans have been exposed to PFAS. Scientists have identified ingestion through drinking water as the primary pathway for PFAS exposure in humans. Most standard municipal drinking water treatment systems are not built to filter out PFAS and until recently, testing labs were not able to detect them at lower levels.



PFOA/PFOS Detections above 4ppt

42
SYSTEMS SERVING NEARLY
3 MILLION*
*2.7 MILLION WITH SOME SYSTEM POPULATIONS NOT AVAILABLE

MORE THAN
775 MILLION
GALLONS A DAY
(MGD DESIGN CAPACITY)

$661 MILLION
$1.3 TO BILLION
IN CAPITAL COSTS FOR TREATMENT

DEQ PFAS Sampling of Public Water Systems

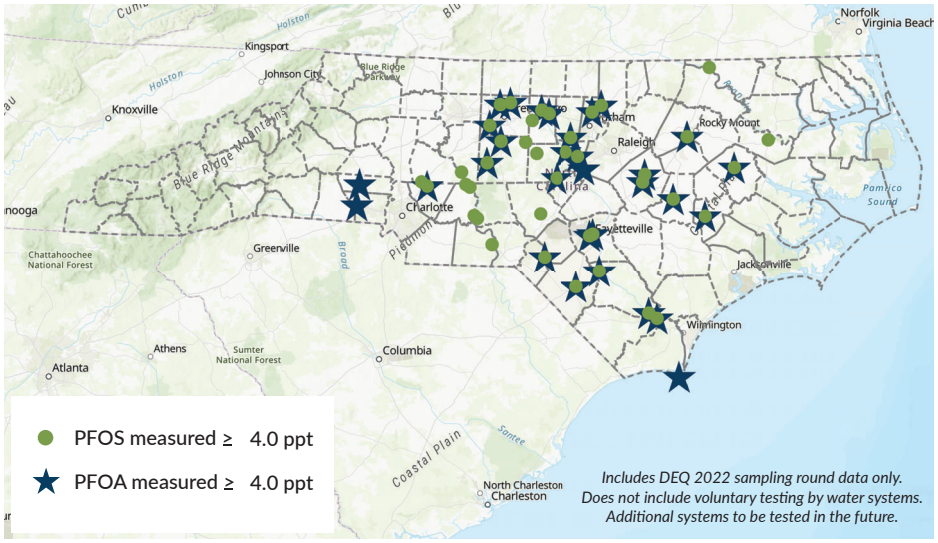
DEQ Action Strategy for PFAS

NORTH CAROLINA Department of Environmental Quality

North Carolina Impact

In North Carolina, we are proactively sampling water systems to determine the extent of PFAS contamination. In 2022, DEQ conducted a three-month sampling event at 50 municipal systems with previous detections above 4ppt. Of those, 42 systems currently have PFOA or PFOS above the proposed MCL. DEQ is actively working with the systems to determine options for treatment, reduction or alternate water sources.

PUBLIC WATER SUPPLY PFOA/PFOS SAMPLING IN NORTH CAROLINA



Based on cost factors from the treatment installation at Cape Fear Public Utilities and Brunswick County Water, DEQ estimates initial treatment system costs in the range of $661 million to $1.3 Billion for the municipal systems sampled. This estimate does not include costs of operation and maintenance, financing, or inflationary pressures.

Many water systems are voluntarily monitoring for PFAS, and DEQ has sampled hundreds of smaller water systems to better assess PFAS on a statewide basis. Based on all available data as of April 2024, more than 300 water systems in our state have PFAS levels that will exceed the new standards.

Beyond Drinking Water Treatment

Under the DEQ Action Strategy for PFAS, DEQ is taking a whole-of-department approach to protect communities by identifying, reducing, and remediating PFAS pollution. DEQ has taken a number of actions to better identify PFAS sources and reduce emissions and discharges:

- Requiring PFAS information from new facilities and industries and developing permit conditions as appropriate throughout the state
- Inventorying and prioritizing locations where these substances may have been manufactured, used, discharged or disposed for additional assessment
- Adding permit conditions as appropriate to address PFAS air emissions or wastewater discharges and require disclosure of data and additional monitoring
- Conducting groundwater testing and additional monitoring in areas with known PFAS contamination; and
- Requiring all solid waste sanitary landfills to include PFAS analyses of all regular groundwater, surface water and leachate samples.

DEQ continues to gather data to support setting regulatory standards and to provide technical assistance to facilities to reduce future PFAS pollution. DEQ's actions complement actions at the federal level to ensure we are protecting communities.