

Federal and State Responses to PFAS Contamination

BACKGROUND

Per- and polyfluoroalkyl substances (PFAS) have been utilized for commercial purposes for over 80 years in the United States (US). As a major ingredient in nonstick and waterproof coatings, PFAS are present in a wide array of consumer products. In 2017, a Star News Online [article](#) sparked the ongoing public discussion on the presence of PFAS in North Carolina (NC) water supplies, leading the NC Department of Health and Human Services (DHHS) to set a provisional health advisory of 140 ppt for the PFAS GenX. This provisional health advisory was confirmed by the Secretaries Science Advisory Board in October 2018 with the additional recommendation for further review and refinement of the advisory as additional health effect studies became available.

In addition to the health advisory, the NC General Assembly passed legislation in 2018 that provided over 5 million dollars to the NC Policy Collaboratory to fund a multi-university PFAS research initiative called the PFAS Testing Network (PFAST Network). More information on the PFAST Network can be found at <https://ncpfastnetwork.com/>.

However, North Carolina is not the only state where PFAS contamination is a widespread issue. **Many actions addressing PFAS contamination have been taken on both federal and state levels, covering a wide variety of policies and programs.**

This document provides an overview of federal and state actions concerning PFAS, and provides multiple examples for state-level actions.

Federal Actions

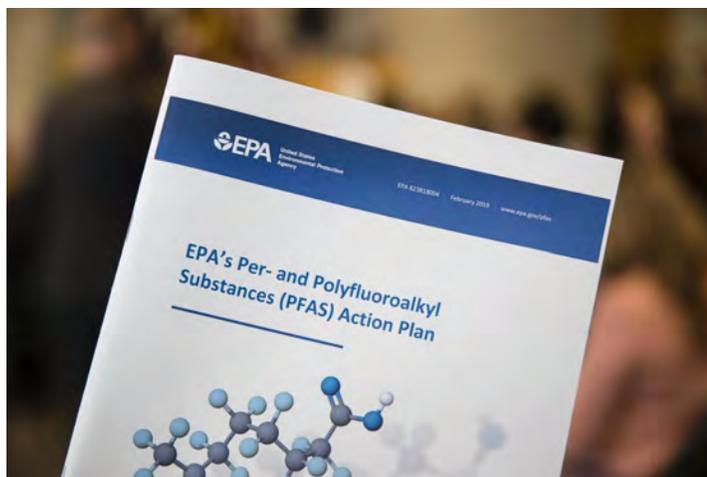
United States Environmental Protection Agency (EPA)

No Federal regulatory value currently exists for PFAS under the Safe Drinking Water Act (SDWA). However a health advisory level for combined concentrations of PFOA and PFOS was set at 70 ppt in 2016 by the EPA. While not enforceable, this value serves as an informational tool for state and local governments to enact appropriate protective measures within affected systems.

Even though the health advisory is only for PFOA and PFOS, the EPA currently monitors water supplies for six PFAS: PFOA, PFOS, PFNA, PFHxS, PFHpA and PFBS. Results from the monitoring of these chemicals will be used in the regulatory determination process under the SDWA.

Additionally, the EPA largely phased out the use of PFOA and PFOS in US commerce through the Toxic Substances Control Act (TSCA) by 2015. Under this same act, the EPA proposed a Significant New Use Rule in 2015 to address future commercial uses of PFAS and is considering the public comments from that proposal.

In February 2019, the EPA released its [Per- and Polyfluoroalkyl Substances \(PFAS\) Action Plan](#). This plan outlines five major goals that the EPA has to address the growing concerns of PFAS contamination:



Matt Rourke/AP Photo

- Examining the extent and risks associated with PFAS used in US commerce
- Developing recommendations and standards as they relate to PFAS toxicity
- Identifying and mitigating PFAS exposures through government collaborations
- Expanding the available scientific literature as it relates to PFAS
- Communicating PFAS-related information to the public effectively and engaging stakeholders

The National Defense Appropriations Act for the Fiscal Year 2020

The bill, [S. 1790](#), includes a provision for the phase-out of land use of firefighting foam containing greater than 1 ppb PFAS content. **No further purchase of PFAS foam would take place after October 1, 2022, and all existing stores of firefighting foam would be disposed of according to the Solid Waste Disposal Act by the following year.** Funds would also be provided for development of replacement non-fluorinated firefighting foams.

In addition, cooperation between the Department of Defense (DoD) and state governments is provided for at the request of the Governor or chief executive of the state. Activities covered by this cooperation



[State Archives of Florida](#)/McDonald

include testing, monitoring, removal, and remedial actions pertaining to contamination of the environment DoD facilities. Any efforts carried out must then meet the more stringent of enforceable state or federal PFAS standard.

Funding would also be provided for blood testing of firefighters to determine the extent of PFAS exposure related to firefighting foam and provision of an uncontaminated agricultural water source to producers experiencing contamination or suspected contamination by DoD activities.

The Senate passed an amended version of the bill that requires the EPA to set a drinking water standard for at least PFOA and PFOS within two years of the bill's passing. These chemicals would also be added to the toxics release inventory under the *Emergency Planning and Community Right-To-Know Act of 1986* once the EPA has reviewed their toxicity.

As of the publication of this document, the Senate approved bill has not yet been considered by the House of Representatives.

State Actions

PFAS contamination is widespread in the US, with some states being more affected than others. As such, these states have enacted policies in an attempt to better understand the effects of exposure on both their populations and the environment, as well as reduce exposure altogether.

Monitoring and Research

The extent and effect of PFAS contamination is still largely unknown. **In an effort to fill this gap, Michigan, Minnesota and North Carolina have reached out to public institutions to organize research on topics such as exposure risk, effects on wildlife and human health effects.**

In 2018, the state of Michigan began a process to sample water supplies that serviced the majority of the population. For those that contained measurable amounts of PFAS, a quarterly monitoring process was established. Furthermore, the state is in the process of organizing another round of sampling for sites that were not testing in the first round.

The Michigan Department of Natural Resources is also offering \$383,000 to interested parties or universities to study specific projects concerning aquatic life within the state.

In Minnesota, funds have been appropriated for research on the exposure of raptors to PFAS to the Hawk Ridge Bird Observatory, and is currently reviewing a potential collaboration effort with the University of Minnesota to review current evidence and report on several PFAS related concerns and exposures.

As mentioned previously, the PFAST Network is a research initiative funded by the NC General Assembly in order to better understand the PFAS issue within the state. The PFAST Network's goals include sampling every public water source in the state and performing an extensive array of research on topics such as:

- Well Water Risk Modeling
- PFAS Removal Performance Testing
- Air Emissions and Atmospheric Deposition
- Immunotoxicological Effects
- Exposure of North Carolina Wildlife

Commercial Product Regulations

A wide range of consumer products utilize PFAS, including outdoor gear, water-resistant clothing, carpeting, cosmetics, food packaging, firefighting foam, upholstery, and many others. The following have been explicitly targeted by state legislatures:

- Firefighting Foam
- Food Packaging
- Children's Products, Textiles and Furniture



Commercial products that utilize PFAS. <https://www.sixclasses.org/videos/pfas>

Firefighting Foam

In addition to the federal focus on firefighting foam, some states have passed or are considering legislation to limit or fully prohibit the use of PFAS. These states and bills include:

- Arizona – [Senate Bill 1526](#)
- Colorado – [House Bill 19-1279](#)
- Michigan – [House Bill 4390](#)
- Minnesota – [HF 359](#)
- New York – [A00445](#)
- Washington – [Senate Bill 6413](#)

Food Packaging

Many paper products used in the food industry are coated with PFAS for water and grease resistance purposes. **To limit exposure to PFAS from these sources, the elimination of PFAS from food packaging is currently underway.**

Washington passed legislation in 2018 that would ban the use of PFAS in food wrappers by 2022 if a safer alternative was identified by 2020. Meanwhile, Minnesota and New York have bills currently under consideration that would unconditionally ban PFAS from all food packaging within the state. California is also reviewing the safety of PFAS-treated food packaging in its Consumer Products 2018-20 Work Plan.

Children's Products, Textiles, and Furniture

While firefighting foam and food packaging are the focus of most consumer product regulations, Minnesota has passed legislation that bans manufacture or sale of children's products, textiles, upholstered furniture or mattresses that contain greater than 1,000 ppm of any halogenated, phosphorous-based, nitrogen-based and nanoscale flame retardants by July 1, 2020, including PFAS.

Advisories and Limits

Several states have proposed or developed standards for PFOA and PFOS and extended regulations to cover PFAS not included in the EPA's health advisory. The following table summarizes the existing standards at the state level across the US.

State	Covered PFAS Chemicals	Level (ppt)	Drinking Water Action	Status [†]
California	PFOA	14	Notification Levels	Approved
	PFOS	13		
Connecticut	Sum of PFOA, PFOS, PFNA, PFHxS, PFHpA	70	Action Level	Approved
Massachusetts	Sum of PFOA, PFOS, PFNA, PFHxS, PFHpA, PFDA	20	Groundwater Clean-up Standard and Drinking Water MCL*	Proposed and Under Review
Michigan	GenX	370	Drinking Water MCLs	Proposed and Under Review
	PFBS	420		
	PFHxA	400,000		
	PFHxS	51		
	PFNA	6		
	PFOA	8		
	PFOS	16		
Minnesota	PFBA	2000	Technical guidance standards	Approved
	PFBS	3000		
	PFHxS	47		
	PFOS	15	Drinking Water MCLs	
	PFOA	35		
	PFOS and salts	300		
New Hampshire	PFOA	12	Drinking Water MCLs and AGQS**	Final Rulemaking Proposal
	PFOS	15		
	PFHxS	18		
	PFNA	11		
New Jersey	PFNA	13	Drinking Water MCLs	Approved
	PFOA	14		Pending Adoption
	PFOS	13		
	PFOA	10	Interim Ground Water Quality Standards	Proposed
	PFOS	10		
North Carolina	GenX	140	Drinking Water Health Advisory	Approved
Vermont	Sum of PFOA, PFOS, PFNA, PFHxS, PFHpA	20	Drinking Water Health Advisory	Approved

[†]Status of regulation is current as of the publication of this document

*Maximum Contaminant Level – standard with enforcement authority

**Ambient Groundwater Quality Standards – maximum level allowed in groundwater

Liability

During the 2019-2020 legislative session, Pennsylvania introduced a bill that would allow the Infrastructure Investment Authority to recover funds from parties responsible for PFAS pollution. **This legislation would hold polluters responsible for the remediation of the affected sites even though the contaminant is unregulated.**

On February 26, 2019, the Chemours Company entered into a consent order with the NC Department of Environmental Quality concerning the Fayetteville facility's role in releasing PFAS into the environment. This voluntary agreement requires the facility to:

- Reduce annual air emissions of PFAS by 99% and control emissions at 99.99% efficiency
- Capture process wastewater for off-site disposal unless/until an NPDES Permit is issued
- Abate and remediate groundwater contamination in the area
- Provide alternative drinking water supplies to affected communities

Also, without enacting legislation, New Hampshire and Vermont have filed suits against PFAS manufacturers like DuPont and 3M for damages associated with the contamination of water sources and other environmental effects.

Conclusion

Primarily, the focus of both the federal and state governments has been to address the public's exposure to PFAS through water supply contamination. **In general, states are relying on the EPA's ongoing efforts to set regulatory standards for these supplies and establish mitigation procedures for contaminated sources.**



Adam Lister/Getty Images

However, states in New England have been forerunners in setting state regulatory limits on PFAS and several states across the country are focused on eliminating firefighting foam as a potential contamination source.

The widespread nature of the PFAS issue has led states toward a multifaceted approach to reducing exposure and preventing further contamination. It is important to note that no state fully represents the nation's response to PFAS contamination.

This document was authored by Cory Cook of the NC Policy Collaboratory. He graduated from UNC-CH in 2018 with a B.S. in Biochemistry and is currently a student in the Masters of Public Health Environmental Sciences and Engineering program at UNC-CH.

Appendix A – Additional Resources for Monitoring and Research

Michigan

- <https://www.michigan.gov/pfasresponse/>

Minnesota

- <https://www.health.state.mn.us/communities/environment/hazardous/topics/pfcs.html>

North Carolina

- <https://deq.nc.gov/news/key-issues/genx-investigation/health-related-resources-about-genx-pfoa-and-pfas>
- <https://ncpfastnetwork.com/>

Appendix B – Regulatory Standard References

California

- https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/PFOA_PFOS.html

Connecticut

- <https://portal.ct.gov/DPH/Drinking-Water/DWS/Per--and-Polyfluoroalkyl-Substances>

Massachusetts

- <https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas>

Michigan

- https://www.michigan.gov/egle/0,9429,7-135-3308_3323-500772--,00.html

Minnesota

- <https://www.health.state.mn.us/news/pressrel/2019/water040319.html>

New Hampshire

- <https://www.des.nh.gov/media/pr/2019/20190628-pfas-standards.htm>

New Jersey

- <https://www.nj.gov/dep/srp/emerging-contaminants/>

North Carolina

- <https://files.nc.gov/ncdeq/GenX/GenX%20factsheet%20FINAL%2013Sep2017.pdf>

Vermont

- <https://www.healthvermont.gov/environment/drinking-water/perfluoroalkyl-and-polyfluoroalkyl-substances-pfas-drinking-water>