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Insights

PFAS UPDATE: STATE-BY-STATE REGULATION OF PFAS SUBSTANCES IN GROUNDWATER

Apr 22, 2022

In the absence of federal cleanup standards for per- and polyfluoroalkyl substances ("PFAS") in groundwater, several states have started the process of regulating PFAS in groundwater themselves. As a result, states have adopted a patchwork of regulations and guidance standards which presents significant compliance challenges to impacted industries. This client alert explores the current landscape of state regulations regarding the guidance, notification, and cleanup levels for PFAS – typically perfluorooctane sulfonic acid ("PFOS") and perfluorooctanoic acid ("PFOA") – in groundwater.

I. Federal Health Recommendations and Advisory

Although no legally binding standards have been issued at the federal level, the United States Environmental Protection Agency ("EPA") has issued two influential documents: (1) Interim Recommendations to Address Groundwater Contaminated with PFOA and PFOS; and (2) a Lifetime Drinking Water Health Advisory ("HA") of 70 ppt for PFOS and PFOA.

With respect to the former document, we wanted to address some fundamental details:

- Date: Implemented on December 19, 2019.
- Sites: All locations that are currently undergoing federal cleanup actions.
- Requirements:
  - Apply a screening level of 40 ppt to determine if PFOA and/or PFOS is present at a site and may justify additional actions.
  - Apply EPA's HA as the preliminary remediation goal for contaminated groundwater that is a current or potential source of drinking water.
- Clean Up: Advisory, non-binding standards that may be used for remediation activities.

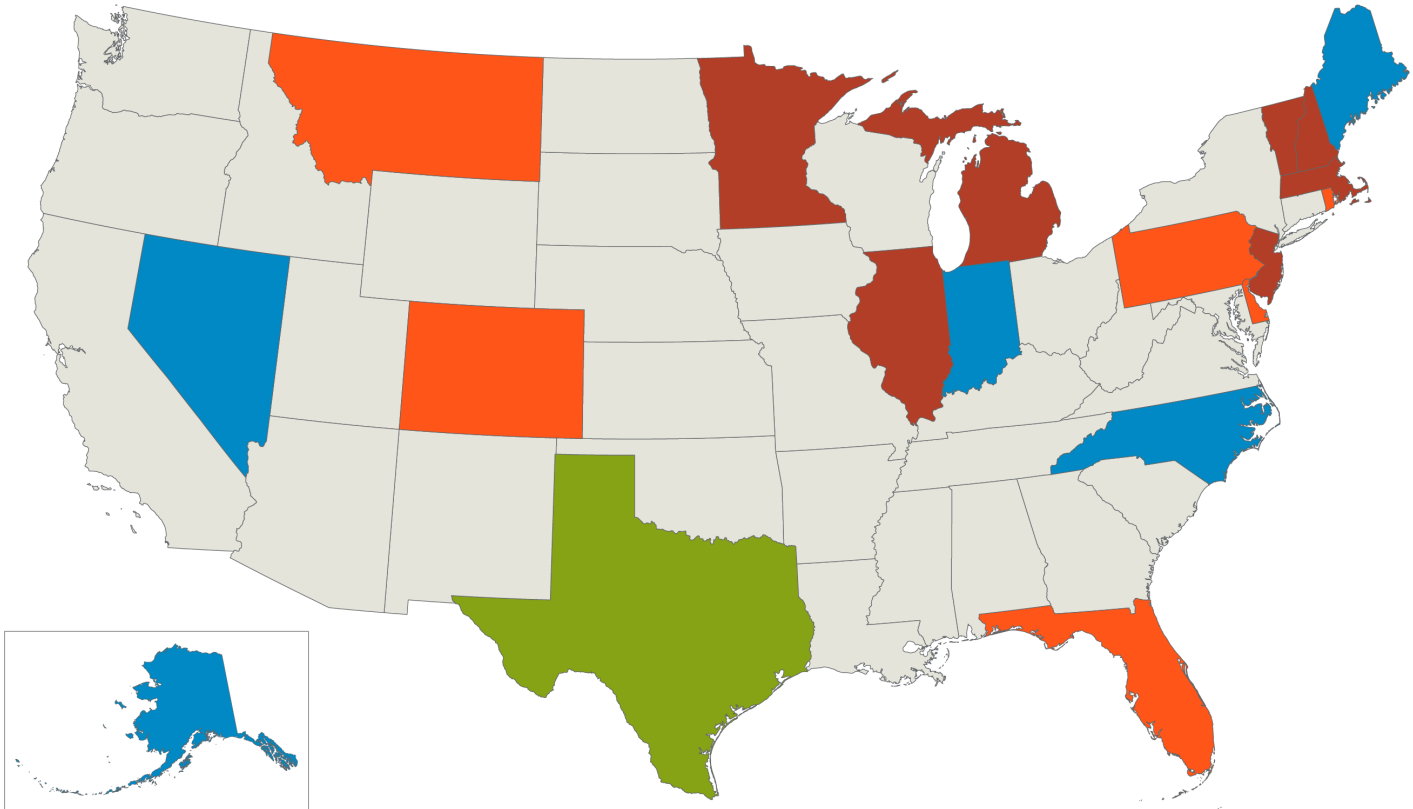
While EPA's health advisory level is not legally enforceable, and it is primarily intended to address drinking water contamination, several states have nevertheless used EPA's recommended 70 ppt as a baseline for establishing groundwater limits. Fortunately, this creates regulatory consistency between some states.

According to the PFAS Strategic Roadmap, EPA expects to issue proposed drinking water limits for PFOA and PFOS in 2023, but not limits for groundwater. It is unclear how drinking water regulations will affect groundwater regulations at this time.

II. State Regulations

The snapshot provided below is current as of April 20, 2022, but it is important to note that this is a rapidly developing regulatory space. Some states, such as Illinois, North Carolina, and Rhode Island, have proposed additional groundwater regulations for various PFAS substances which may take effect soon. Businesses should consider whether they currently use or discharge any PFAS compounds, and if so, evaluate if any state regulations apply, particularly if they operate in any of the below-listed jurisdictions. In addition, owners of property with legacy PFAS use, and prospective purchasers of commercial and industrial properties, should review the most current groundwater quality standards as part of the due diligence process.

PFAS GROUNDWATER REGULATIONS



The information is current as of April 20, 2022

Participating States	Concentration Level	Type of Regulation	Adoption Status
Illinois	2 ppt (stated by the Illinois Pollution Control Agency as 2 ng/L)	PFOA (Guidance)	Health Advisory and Related Information
New Jersey	2 ppt (stated by the regulation as 0.002 µg/L)	Chloroperfluoropolyether carbonates [1] (Clean Up)	Regulation and Related Information
Michigan	6 ppt	PFNA (Clean Up)	Regulation and Related Information

Michigan	8 ppt	PFOA (Clean Up)	Regulation and Related Information
New Hampshire	11 ppt	PFNA (Clean Up)	Regulation and Related Information
New Hampshire	12 ppt	PFOA (Clean Up)	Regulation and Related Information
New Jersey	13 ppt	PFNA and PFOS (Clean Up)	Regulation and Related Information
Illinois	14 ppt (stated by the Illinois Pollution Control Agency as 14 ng/L)	PFOS (Guidance)	Health Advisory and Related Information
New Jersey	14 ppt	PFOA (Clean Up)	Regulation and Related Information
New Hampshire	15 ppt	PFOS (Clean Up)	Regulation and Related Information
Minnesota	15 ppt	PFOS (Guidance)	Health Advisory Level
Michigan	16 ppt	PFOS (Clean Up)	Regulation and Related Information
New Hampshire	18 ppt	PFHxS (Clean Up)	Regulation and Related Information
Massachusetts	20 ppt (stated in the regulation as .02 ppb)	6 PFAS Substances combined : PFOA, PFOS, PFHxS, PFNA, PFHpA, and PFDA (Clean Up)	Regulation and Related Information
Vermont	20 ppt (stated in the regulation as .02 µg/L)	5 PFAS substances combined: PFHpA, PFHxS, PFNA, PFOS and PFOA (Notification)	Regulation and Related Information
Illinois	21 ppt (stated by the Illinois Pollution Control Agency as 21 ng/L)	PFNA (Guidance)	Health Advisory and Related Information

Minnesota	35 ppt	PFOA (Guidance)	Health Advisory Level (see page 181)
Hawaii	40 ppt, etc.[2]	PFOA and PFOS; 16 other PFAS substances (Advisory)	Environmental Action Levels (pg. 44)
Minnesota	47 ppt	PFHxS (Guidance)	Health Advisory Level (see page 180)
Michigan	51 ppt	PFHxS (Clean Up)	Regulation and Related Information
Colorado	70 ppt	Site-specific Standard for PFOA and PFOS (Clean Up)	Site-Specific Groundwater Quality Standard
Delaware, Florida, Montana, Pennsylvania, and Rhode Island	70 ppt	Follow the EPA Health Advisory Level: PFOS and PFOA combined (Clean Up, Guidance and Notification)	Delaware: Guidance Policy Florida: Guidance Plan (stated as 70 ng/L). Montana: Guidance Standard Pennsylvania: Medium-Specific Concentration Cleanup Standards Rhode Island: Notification Standard
Illinois	140 ppt (stated by the Illinois Pollution Control Agency as 140 ng/L)	PFHxS (Guidance)	Health Advisory and Related Information
Texas	290 ppt, etc.[3]	PFOA; 15 other PFAS Substances (Clean Up)	Protective Concentration Levels (see March 2022 Tier 1 PCL Table)

Michigan	370 ppt	HFPO-DA (Clean Up)	Regulation and Related Information
Alaska	400 ppt (stated in the regulation as 0.4 µg/L)	PFOA and PFOS separately (Clean Up)	Regulation (18 AAC 25) and Related Information
Maine	400 ppt (stated in the regulation as 0.4 ppb)	PFOA and PFOS combined (Guidance) Note: Maine has both Residential and Construction Standards	Maximum Exposure Guideline (pg. 60)
Michigan	420 ppt	PFBS (Clean Up)	Regulation and Related Information
Nevada	667 ppt (stated in the regulation as .667 µg/L)	PFOA and PFOS (Guidance)	Basic Comparison Levels
Minnesota	2,000 ppt	PFBS (Guidance)	Health Advisory Level (see page 180)
North Carolina	2,000 ppt	PFOA (Guidance)	Regulation and Related Information
Illinois	2,100 ppt (stated by the Illinois Pollution Control Agency as 2,100 ng/L)	PFBS (Guidance)	Health Advisory and Related Information
Minnesota	7,000 ppt	PFBA (Guidance)	Health Advisory Level (see page 180)
Pennsylvania	10,000 ppt (stated in the regulation as 10 µg/L)	PFBS; Residential Property (Clean Up)	Medium-Specific Concentration Standards and Related Information
Pennsylvania	29,000 ppt (stated in the regulation as 29 µg/L)	PFBS; Non-residential Property (Clean Up)	Medium-Specific Concentration

			Standards and Related Information
Michigan	400,000 ppt	PFHxA (Clean Up)	Regulation and Related Information
Maine	400,000 ppt (stated in the regulation as 400 ppb)	PFBS (Guidance) Note: Maine has both Residential and Construction Standards	Maximum Exposure Guideline (pg. 60)
Illinois	560,000 ppt (stated by the Illinois Pollution Control Agency as 560,000 ng/L)	PFHxA (Guidance)	Health Advisory and Related Information
Indiana	400,000 ppt (stated in the regulation as 400 µg/L)	PFBS (Guidance)	Screening Levels
Nevada	667,000 ppt (stated in the regulation as 667 µg/L)	PFBS (Guidance)	Basic Comparison Levels

No regulations:

Alabama, Arizona, Arkansas, California, Connecticut, Georgia, Idaho, Iowa, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Missouri, Nebraska, New Mexico, New York, North Dakota, Oklahoma, Oregon, Ohio, South Carolina, South Dakota, Tennessee, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming

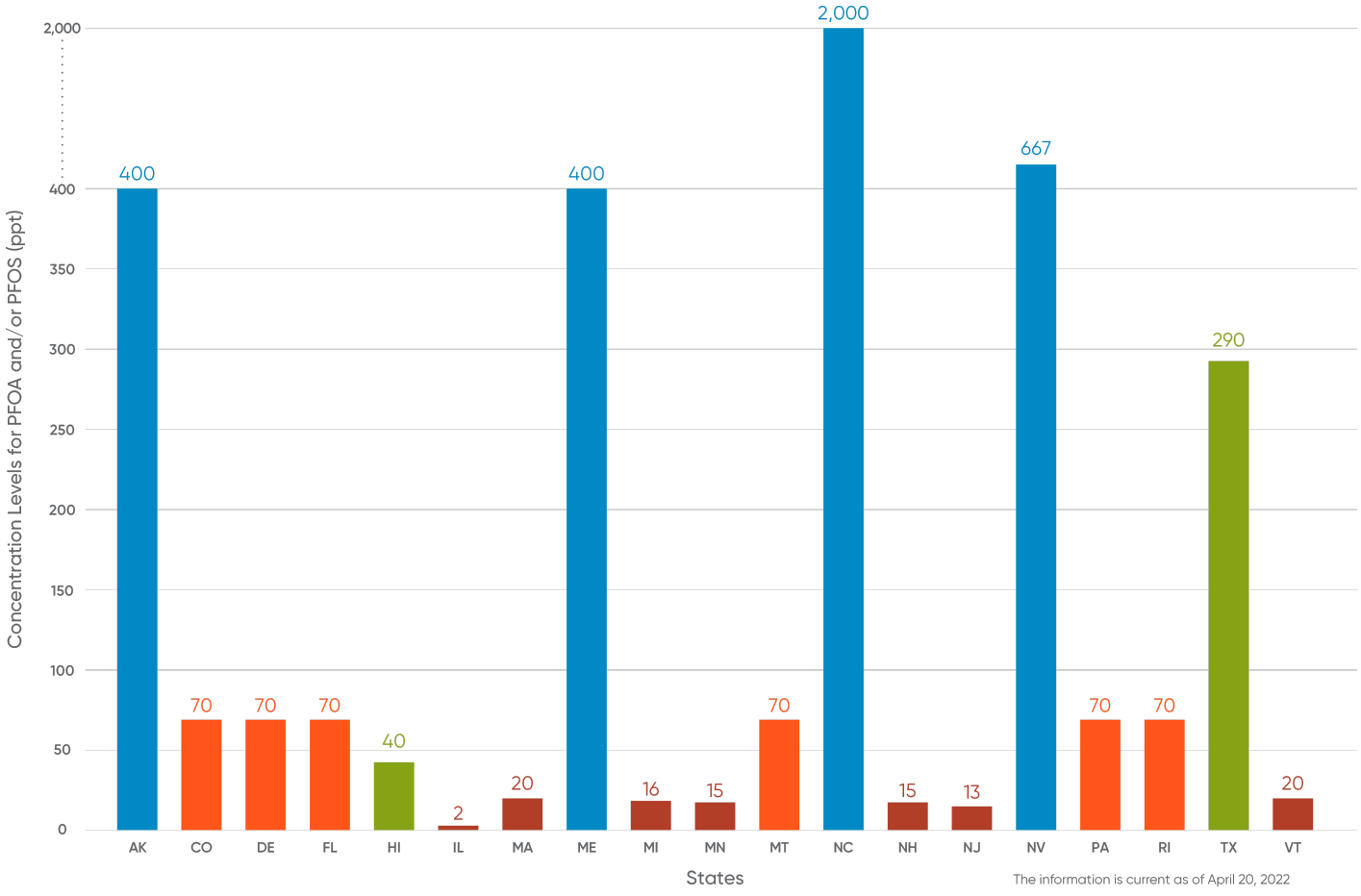
Key:

Notification	A corporate representative must inform the appropriate state official that the groundwater amount is above the stated limit.
Guidance	These levels are not binding limits, and no notification or other action is usually required if concentrations exceed the recommended concentrations. However, these limits can serve as useful tools for due diligence and risk assessment, and may be used by state agencies as the basis for cleanup actions.

Clean Up	Investigation and remediation is usually required when concentration levels exceed the clean-up threshold. Clean up standards are usually expressed by groundwater quality values that identify specific clean-up criteria.

III. Additional Information

The variation in the different groundwater standards that the states have adopted is remarkable. The most restrictive concentration is 2 ppt (Illinois; PFOA only), and the most lenient concentration is 667,000 ppt (Nevada; PFBS only). For additional detail, the following chart only illustrates the discrepancies among the states in the concentration levels for PFOS and/or PFOA.



IV. Conclusion

Businesses operating in the states that have already enacted some form of regulation should consider whether they currently use or discharge any of the regulated PFAS compounds. In addition, owners of property with legacy PFAS use, and prospective purchasers of commercial and industrial properties in these jurisdictions, will increasingly need to incorporate the groundwater quality standards as part of their due diligence processes.

For more information on PFAS chemicals, and the regulatory and litigation risks that they pose, please visit our PFAS webpage. If you have a question about how to manage PFAS risk in any jurisdiction, contact Tom Lee, John Kindschuh, Emma Cormier, or any other member of our PFAS team at Bryan Cave Leighton Paisner LLP.

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[1] Chloroperfluoropolyether carbonates ("ClPFPECAs") have been used as processing aids, usually in food processing equipment or food contact articles. Additional information regarding ClPFPECAs can be found at a publication from the New Jersey Department of Environmental Protection.

[2] Hawaii has 16 additional regulations, including the following: PFNA and PFDA (.004 µg/L); PFUnDA (.01 µg/L); PFDoDA and PFTrDA (.013 µg/L); PFHxS (.019 µg/L); PFHpS and PFDS (.02 µg/L); PFOSA (.024 µg/L); PFTeDA (.13 µg/L); HFPO-DA (.16 µg/L); PFHpA (0.4 µg/L); PFBS (.6 µg/L); PFPeA (.8 µg/L); PFHxA (4.0 µg/L); and PFBA (7.6 µg/L).

[3] Texas has 15 additional regulations, including the following: PFHxS, PFHxA, and PFPeA (93 ppt); PFNA, PFDS, PFUnA, PFOSA, PFTrDA, PFTeA, and PFDoA (290 ppt); PFDA (370 ppt); PFOS and PFHpA (560 ppt); PFBS (34,000 ppt); and PFBA (71,000 ppt). A reader-friendly summary of these limitations can be found at a publication from the Reese Air Force Base.

RELATED PRACTICE AREAS

- Environment
- PFAS Team

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