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PFAS DRINKING WATER STANDARDS: STATE-BY-STATE REGULATIONS

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SUMMARY

In the absence of an enforceable federal drinking water standard for per- and polyfluoroalkyl substances ("PFAS") – for the time being anyway - many states have regulated PFAS compounds in drinking water. The result is a patchwork of regulations and standards of varying levels, which presents significant operational and compliance challenges to impacted industries. This client alert surveys the maximum contaminant levels ("MCLs"), as well as guidance and notification levels, for PFAS compounds – typically perfluorooctane sulfonate ("PFOS") and perfluorooctanoic acid ("PFOA") – in drinking water across the United States.

FEDERAL ACTIONS

EPA took two significant actions in 2023 to move towards establishing drinking water limits for certain PFAS substances. Additionally, there is one proposed action that the Federal Government intends to enact in 2024.

MAXIMUM CONTAMINANT LEVELS

According to the PFAS Strategic Roadmap, the United States Environmental Protection Agency ("EPA") originally planned to issue proposed MCLs for PFOA and PFOS in drinking water by the end of 2022. At this time, the regulation states that the final rule will be issued in January of 2024, but it is unclear whether this date will be pushed back. Not surprisingly, EPA received extensive public comments in response to the proposal, so it may be some time before it finalizes the rule.

On March 14, 2023, EPA proposed a National Primary Drinking Water Regulation for six PFAS compounds, going beyond the two compounds that were originally contemplated by the Roadmap. Specifically, EPA proposed in the Federal Register the following MCLs and Maximum Contaminant Level Goals ("MCLGs") for the six compounds:

PFOA

Proposed MCLG

Zero

Proposed MCL (enforceable levels)

4.0 parts per trillion (also expressed as ng/L)

4.0 ppt

PFOS

Proposed MCLG

Zero

Proposed MCL (enforceable levels)

4.0 parts per trillion (also expressed as ng/L)

4.0 ppt

PFNA

Proposed MCLG

1.0 (unitless)

Hazard Index

Proposed MCL (enforceable levels)

1.0 (unitless)

Hazard Index

PFHXS

Proposed MCLG

1.0 (unitless)

Hazard Index

Proposed MCL (enforceable levels)

1.0 (unitless)

Hazard Index

PFBS

Proposed MCLG

1.0 (unitless)

Hazard Index

Proposed MCL (enforceable levels)

1.0 (unitless)

Hazard Index

HFPO-DA (COMMONLY REFERRED TO AS GENX)

Proposed MCLG

1.0 (unitless)

Hazard Index

Proposed MCL (enforceable levels)

1.0 (unitless)

Hazard Index

As discussed in more detail in our BCLP alert regarding this proposal, there are three aspects that are particularly noteworthy:

1. EPA decided to include four additional PFAS compounds beyond PFOA and PFOS, demonstrating that the agency's focus extends beyond those two compounds.

2. EPA's 4 ppt MCLs for PFOA and PFOS are incredibly low, but the agency set the MCLGs for both compounds at zero and explained that EPA is allowing 4 ppt as the MCL because that is the lowest detection level that is generally achievable at commercial laboratories. EPA has indicated

that it will continue to reduce the MCLs for those two compounds as testing methodologies improve.

3. Rather than establish simple numeric concentration limits for the four new PFAS compounds, EPA implemented a Hazard Index ("HI") approach for all four compounds combined. EPA used the HI based on its conclusion that PFAS compounds are often commingled, and that can result in an additive health impact. While not unprecedented, this HI approach will create challenges as water systems try to implement testing and controls to try to meet these standards.

While EPA has yet to issue any final MCLs, their proposal clearly indicates that EPA intends to aggressively regulate these six compounds in drinking water.

UCMR 5 – DRINKING WATER SYSTEM DATA

The latest iteration of the UCMR rule requires public drinking water systems to collect samples for 29 PFAS substances and lithium, during a single 12-month period at any time from January 2023 through December 2025, and report that data to EPA. In October 2023, EPA released the second set of UCMR 5 data, representing approximately 15% of the total data that it expects to collect. EPA highlighted the following findings in its data summary:

- "PFOA and PFOS are two of the most widely studied PFAS, and each has an EPA Health Advisory (HA) level. One or each of these two PFAS was measured at or above the EPA's UCMR minimum reporting level (MRL), and therefore above the agency's HA levels, in the initial subset of sampling events for 13.6% of PWSs with results to date
  - Individually, PFOA and PFOS were measured above the EPA HA levels for 9.5% and 10.7% of PWSs, respectively.

- The other two PFAS with EPA HA levels are HFPO-DA ("GenX chemicals") and PFBS. HFPO-DA was measured above its HA level by 0.03% of PWSs (1 of 3,073). PFBS was not found above its HA level.

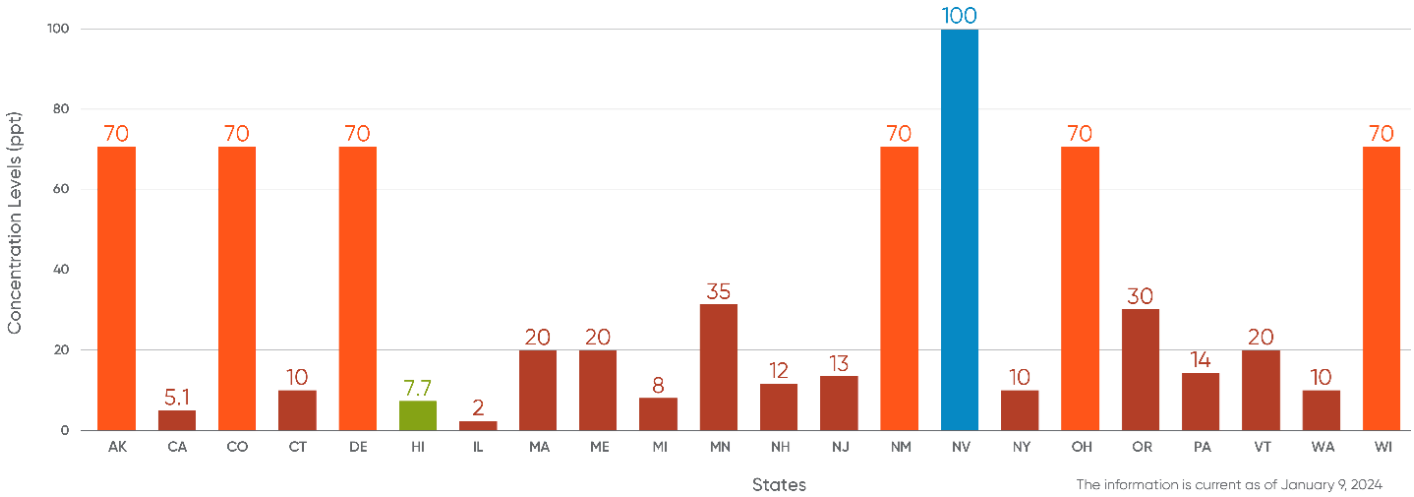
- HA levels have not been established for the other 25 PFAS that are part of UCMR 5.
  - Fourteen of these 25 PFAS were measured at or above their respective UCMR MRL by at least one PWS.

  - For the other 11 PFAS, no PWSs have reported results at or above their respective UCMR MRLs."

While more data will be released as reporting continues, the findings thus far suggest that some public water systems will face compliance challenges as both EPA and states implement and enforce drinking water standards.

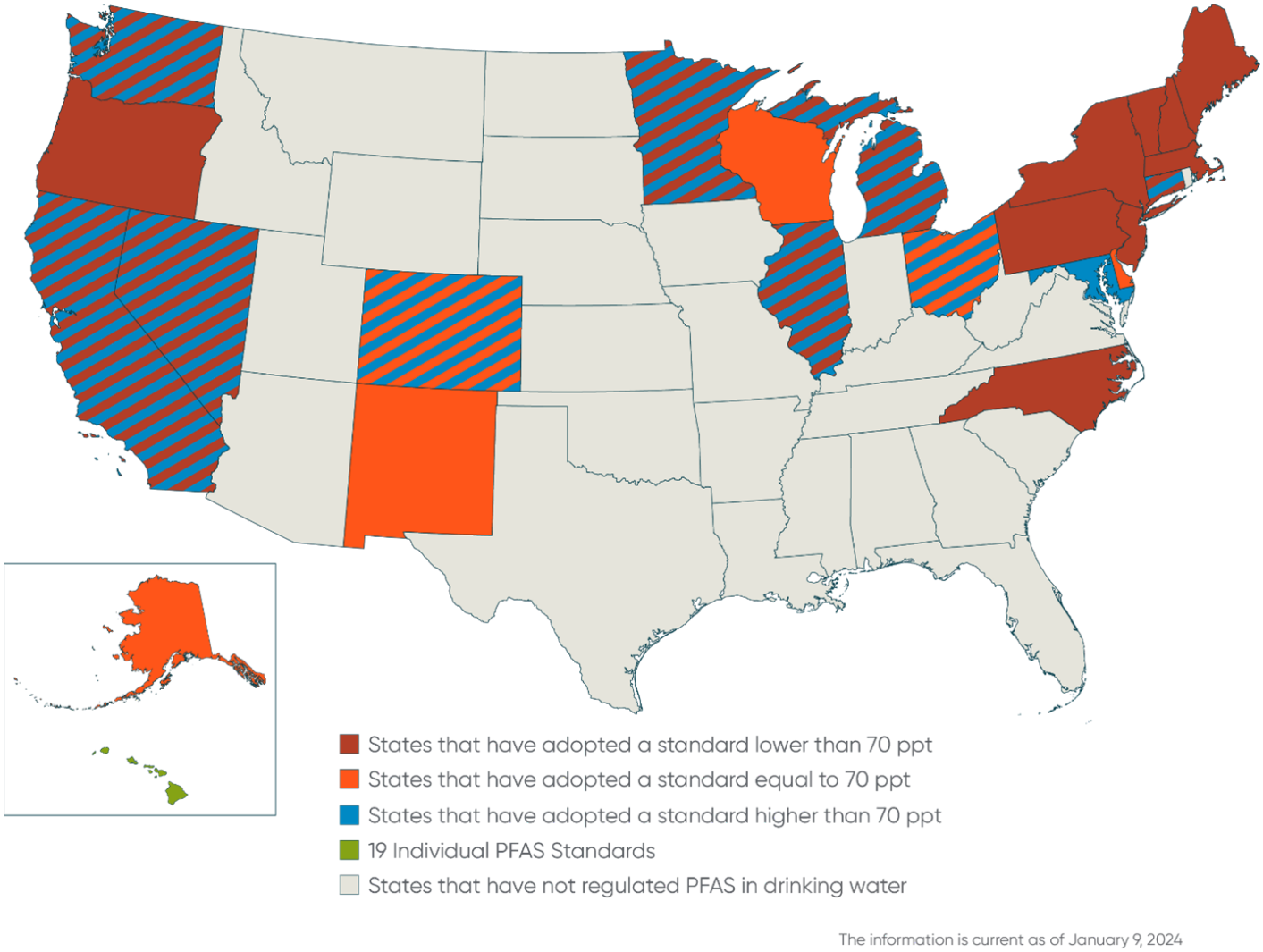
STATE REGULATIONS

Until the federal government finalizes its proposed MCLs for six PFAS compounds, the regulatory landscape for PFAS compounds in drinking water consists of an array of widely varying state-promulgated standards and regulations. For example, concentrations range from 2 ppt (Illinois; PFOA only) to 400,000 ppt (Michigan; PFHxA only), depending on the PFAS compounds, the nature of the regulation, and the state's view on which levels may result in health effects. The chart below illustrates the discrepancies between the regulatory levels for PFOA and/or PFOS.



The map and chart are current as of **January 8, 2023**, but this is a very active regulatory space, and additional state action is anticipated soon. For example, Delaware, Maine, and Virginia have enacted legislation to establish MCLs for PFAS compounds for drinking water, so implementing regulations in those jurisdictions may be forthcoming. Additionally, several states, including Indiana, Kentucky, Minnesota, North Carolina I, North Carolina II, South Carolina, and Vermont, have proposed, but not yet promulgated, various types of drinking water regulations for PFAS. Notably, proposed bills have been introduced in Maine and New York mandating the testing of drinking water in private wells (including numerous PFAS substances) during property transactions.

PFAS DRINKING WATER REGULATIONS



The information is current as of January 9, 2024

STATES THAT HAVE ADOPTED A STANDARD LOWER THAN 70 PPT

CALIFORNIA

Concentration level

3 ppt (stated by the California Water Boards as 3 ng/L)

Chemical(s) and type of regulation

PFHxS (Notification)

Regulatory information

Regulation and related information

Concentration level

5.1 ppt (stated by the California Water Boards as 0.0000051 mg/L)

Chemical(s) and type of regulation

PFOA (Notification)

Regulatory information

Regulation and related information

Concentration level

6.5 ppt (stated by the California Water Boards as 0.0000065 mg/L)

Chemical(s) and type of regulation

PFOS (Notification)

Regulatory information

Regulation and related information

CONNECTICUT

Concentration level

2 ppt

Chemical(s) and type of regulation

6:2 chloropolyfluoroether sulfonic acid (Notification)

9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid

Regulatory information

Action Level and related information

Concentration level

5 ppt

Chemical(s) and type of regulation

8:2 chloropolyfluoroether sulfonic acid (Notification)

11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid

Regulatory information

Action Level and related information

Concentration level

10 ppt

Chemical(s) and type of regulation

PFOS (Notification)

Regulatory information

Action Level and related information

Concentration level

12 ppt

Chemical(s) and type of regulation

PFNA (Notification)

Regulatory information

Action Level and related information

Concentration level

16 ppt

Chemical(s) and type of regulation

PFOA (Notification)

Regulatory information

Action Level and related information

Concentration level

19 ppt

Chemical(s) and type of regulation

Gen X or HFPO-DA (Notification)

Regulatory information

Action Level and related information

Concentration level

49 ppt

Chemical(s) and type of regulation

PFHxS (Notification)

Regulatory information

Action Level and related information

ILLINOIS

Concentration level

2 ppt (stated by the Illinois Environmental Pollution Control Agency as 2 ng/L)

Chemical(s) and type of regulation

PFOA (Guidance)

Regulatory information

Regulation and related information

Concentration level

14 ppt (stated by the Illinois Environmental Pollution Control Agency as 14 ng/L)

Chemical(s) and type of regulation

PFOS (Guidance)

Regulatory information

Regulation and related information

Concentration level

21 ppt (stated by the Illinois Environmental Pollution Control Agency as 21 ng/L)

Chemical(s) and type of regulation

PFNA (Guidance)

Regulatory information

Regulation and related information

MAINE

Concentration level

20 ppt (stated in the Interim Drinking Water Standard as 20 ng/L)

Chemical(s) and type of regulation

6 PFAS substances combined: PFOA, PFOS, PFHxS, PFNA, PFHpA, and PFDA (Notification)

Regulatory information

Interim Drinking Water Standard and related information

MASSACHUSETTS

Concentration level

20 ppt (stated in the regulation as 20 ng/L)

Chemical(s) and type of regulation

6 PFAS substances combined: PFOA, PFOS, PFHxS, PFNA, PFHpA, and PFDA (MCL)

Regulatory information

Regulation and related information

MICHIGAN

Concentration level

6 ppt

Chemical(s) and type of regulation

PFNA (MCL)

Regulatory information

Regulation and related information

Concentration level

8 ppt

Chemical(s) and type of regulation

PFOA (MCL)

Regulatory information

Regulation and related information

Concentration level

16 ppt

Chemical(s) and type of regulation

PFOS (MCL)

Regulatory information

Regulation and related information

Concentration level

51 ppt

Chemical(s) and type of regulation

PFHxS (MCL)

Regulatory information

Regulation and related information

MINNESOTA

Concentration level

15 ppt

Chemical(s) and type of regulation

PFOS (Guidance)

Regulatory information

Health Advisory and related information

Concentration level

35 ppt

Chemical(s) and type of regulation

PFOA (Guidance)

Regulatory information

Health Advisory and related information

Concentration level

47 ppt

Chemical(s) and type of regulation

PFHxS (Guidance)

Regulatory information

Health Advisory and related information

NEVADA

Concentration level

6.67 ppt (stated by the Nevada Division of Environmental Protection as .0667 µg/L)

Chemical(s) and type of regulation

PFSA (Guidance)

Regulatory information

Basic Comparison Levels

Related information

Concentration level

10 ppt (stated by the Nevada Division of Environmental Protection as .1 µg/L)

Chemical(s) and type of regulation

PFOA (Guidance)

Regulatory information

Basic Comparison Levels

Related information

NEW HAMPSHIRE

Concentration level

11 ppt

Chemical(s) and type of regulation

PFNA (MCL)

Regulatory information

Regulation and related information

Concentration level

12 ppt

Chemical(s) and type of regulation

PFOA (MCL)

Regulatory information

Regulation and related information

Concentration level

15 ppt

Chemical(s) and type of regulation

PFOS (MCL)

Regulatory information

Regulation and related information

Concentration level

18 ppt

Chemical(s) and type of regulation

PFHxS (MCL)

Regulatory information

Regulation and related information

NEW JERSEY

Concentration level

13 ppt

Chemical(s) and type of regulation

PFNA and PFOS (MCL)

Regulatory information

Regulation and related information

Concentration level

14 ppt

Chemical(s) and type of regulation

PFOA (MCL)

Regulatory information

Regulation and related information

NEW YORK

Concentration level

10 ppt

Chemical(s) and type of regulation

PFOA and PFAS (MCL)

Regulatory information

Regulation and related information

NORTH CAROLINA

Concentration level

10 ppt

Chemical(s) and type of regulation

GenX or HFPO-DA (Guidance)

Regulatory information

Health Advisory and related information

OHIO

Concentration level

21 ppt

Chemical(s) and type of regulation

PFNA (Guidance)

Regulatory information

Statewide PFAS Action Plan and related information

Concentration level

21 ppt

Chemical(s) and type of regulation

Gen X or HFPO-DA (Guidance)

Regulatory information

Statewide PFAS Action Plan and related information

OREGON

Concentration level

30 ppt

Chemical(s) and type of regulation

4 PFAS substances combined: PFOS, PFOA PFHxS, and PFNA (Guidance)

Regulatory information

Health Advisory and related information

PENNSYLVANIA

Concentration level

14 ppt

Chemical(s) and type of regulation

PFOA (MCL)

Regulatory information

Regulation and related information

Concentration level

18 ppt

Chemical(s) and type of regulation

PFOS (MCL)

Regulatory information

Regulation and related information

RHODE ISLAND

Concentration level

20 ppt

Chemical(s) and type of regulation

6 PFAS substances combined: PFOA, PFOS, PFHxS, PFNA, PFHpA, and PFDA (Notification)

Regulatory information

Interim Drinking Water Standard and related information

VERMONT

Concentration level

20 ppt (stated in the regulation as 0.000002 mg/L)

Chemical(s) and type of regulation

5 PFAS substances combined: PFOA, PFOS, PFHpA, PFHxS, and PFNA (MCL)

Regulatory information

Regulation and related information

WASHINGTON

Concentration level

9 ppt

Chemical(s) and type of regulation

PFNA (Notification)

Regulatory information

Code and related information

Concentration level

10 ppt

Chemical(s) and type of regulation

PFOA (Notification)

Regulatory information

Code and related information

Concentration level

15 ppt

Chemical(s) and type of regulation

PFOS (Notification)

Regulatory information

Code and related information

Concentration level

65 ppt

Chemical(s) and type of regulation

PFHxS (Notification)

Regulatory information

Code and related information

STATES THAT HAVE ADOPTED A STANDARD EQUAL TO 70 PPT

ALASKA

Concentration level

70 ppt

Chemical(s) and type of regulation

5 PFAS substances combined: PFOS, PFOA, PFNA, PFHxS, and PFHpA (Guidance)

Regulatory information

Action Level and related information

COLORADO

Concentration level

70 ppt (stated in the regulation as 70 ng/L)

Chemical(s) and type of regulation

3 PFAS substances combined: PFOS, PFOA, and PFNA (Guidance)

Regulatory information

Translation Level and related information

DELAWARE

Concentration level

70 ppt

Chemical(s) and type of regulation

Adopted the EPA Standard: PFOS and PFOA combined (Notification)

Regulatory information

Notification Policy

NEW MEXICO

Concentration level

70 ppt

Chemical(s) and type of regulation

Adopted the EPA Standard: PFOS and PFOA combined (Notification)

Regulatory information

Toxic Pollutant Standard

OHIO

Concentration level

70 ppt

Chemical(s) and type of regulation

Adopted the EPA Standard: PFOS and PFOA combined (Guidance)

Regulatory information

Statewide PFAS Action Level and related information

WISCONSIN

Concentration level

70 ppt

Chemical(s) and type of regulation

PFOS and PFOA combined (MCL)

Regulatory information

Regulation and related information

STATES THAT HAVE ADOPTED A STANDARD HIGHER THAN 70 PPT

CALIFORNIA

Concentration level

500 ppt (stated (stated by the California Water Boards as as 0.0005 mg/L)

Chemical(s) and type of regulation

PFBS (Notification)

Regulatory information

Regulation and related information

COLORADO

Concentration level

700 ppt (stated in the regulation as 700 ng/L)

Chemical(s) and type of regulation

PFHxS (Guidance)

Regulatory information

Translation Level and related information

Concentration level

400,000 ppt (stated in the regulation as 400,000 ng/L)

Chemical(s) and type of regulation

PFBS (Guidance)

Regulatory information

Translation Level and related information

CONNECTICUT

Concentration level

240 ppt

Chemical(s) and type of regulation

PFHxA (Notification)

Regulatory information

Action Level and related information

Concentration level

760 ppt

Chemical(s) and type of regulation

PFBS (Notification)

Regulatory information

Action Level and related information

Concentration level

1,800 ppt

Chemical(s) and type of regulation

PFBA (Notification)

Regulatory information

Action Level and related information

ILLINOIS

Concentration level

140 ppt (stated by the Illinois Environmental Pollution Control Agency as 140 ng/L)

Chemical(s) and type of regulation

PFHxS (Guidance)

Regulatory information

Regulation and related information

Concentration level

2,100 ppt (stated by the Illinois Environmental Pollution Control Agency as 2,100 ng/L)

Chemical(s) and type of regulation

PFBS (Guidance)

Regulatory information

Regulation and related information

Concentration level

3,500 ppt (stated by the Illinois Environmental Pollution Control Agency as 3,500 ng/L)

Chemical(s) and type of regulation

PFHxA (Guidance)

Regulatory information

Regulation and related information

MARYLAND

Concentration level

140 ppt

Chemical(s) and type of regulation

PFHxS (Guidance)

Regulatory information

Health Advisory

MICHIGAN

Concentration level

370 ppt

Chemical(s) and type of regulation

Gen X or HFPO-DA (MCL)

Regulatory information

Regulation and related information

Concentration level

420 ppt

Chemical(s) and type of regulation

PFBS (MCL)

Regulatory information

Regulation and related information

Concentration level

400,000 ppt

Chemical(s) and type of regulation

PFHxA (MCL)

Regulatory information

Regulation and related information

MINNESOTA

Concentration level

100 ppt

Chemical(s) and type of regulation

PFBS (Guidance)

Regulatory information

Health Advisory and related information

Concentration level

200 ppt

Chemical(s) and type of regulation

PFHxA (Guidance)

Regulatory information

Health Advisory and related information

Concentration level

7,000 ppt

Chemical(s) and type of regulation

PFBA (Guidance)

Regulatory information

Health Advisory and related information

NEVADA

Concentration level

10,000 ppt (stated by the Nevada Division of Environmental Protection as 10 µg/L)

Chemical(s) and type of regulation

PFBS (Guidance)

Regulatory information

Basic Comparison Levels

Related information

OHIO

Concentration level

140 ppt

Chemical(s) and type of regulation

PFHxS (Guidance)

Regulatory information

Statewide PFAS Action Plan and related information

Concentration level

140,000 ppt

Chemical(s) and type of regulation

PFBS (Guidance)

Regulatory information

Statewide PFAS Action Plan and related information

WASHINGTON

Concentration level

345 ppt

Chemical(s) and type of regulation

PFBS (Notification)

Regulatory information

Code and related information

INDIVIDUAL PFAS STANDARDS

HAWAII

Concentration level

7.7 ppt, etc. (stated by the Hawaii Department of Health as 0.0077 µg/L)

- Hawaii has 19 additional regulations, including the following: PFDA (7.7 ppt); PFOA, HFPO-DA, and PFNA (12 ppt); PFUnDA (19 ppt); PFDoDA and PFTrDA (26 ppt); PFHpS and PFDS (38 ppt); PFOSA (46 ppt); PFHpA and PFHxS (77 ppt); PFTeDA (260 ppt); ADONA (1,200 ppt); PFPeA and 6:2 FTS (1,500 ppt); PFBS (1,700 ppt); PFHxA (1,900 ppt); and PFBA (15,000 ppt).

Chemical(s) and type of regulation

PFOS and 19 other PFAS substances (Guidance)

Regulatory information

Environmental Action Levels (Table D-3a)

RELATED INFORMATION

NO PFAS DRINKING WATER REGULATIONS*

*as of date of publication

- Alabama
- Arizona
- Arkansas
- Florida
- Georgia
- Idaho
- Indiana
- Iowa
- Kansas

- Kentucky
- Louisiana
- Mississippi
- Missouri
- Montana
- Nebraska
- North Dakota
- Oklahoma
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Virginia
- West Virginia
- Wyoming

KEY

Notification

A corporate representative may have to inform an appropriate state official that a drinking water concentration in a water source owned or operated by the corporation (public well, supply tank, etc.) is above the limit. A water supply system also may have to inform its customers if there are any samples that exceed the PFAS values.

Guidance

The state establishes recommended concentration limits for one or more PFAS substances, but no notification or other action is required if concentrations exceed the recommended limits.

MCL

MCLs establish the maximum amount of a PFAS compound that can be present in drinking water. Treatment facilities that supply drinking water must ensure that these limits are met by treating and filtering the drinking water, and also by limiting the discharge of PFAS compounds through permits.

HOW DO THESE LIMITS IMPACT BUSINESSES?

MCLs set the maximum concentration of a given contaminant that can be present in drinking water. Drinking water systems are ultimately responsible for meeting the applicable MCLs and are required to ensure that drinking water distributed to the public meets these limits. State agencies often include limits for discharges to drinking water sources to ensure that the drinking water provider can comply with the MCLs.

Businesses that currently or historically have used PFAS compounds, or have reason to believe that they may be present in their effluent, should evaluate:

- Whether their wastewater discharges, either directly or following treatment by the POTW or other treatment facilities, are eventually released to sources that are used for drinking water;
- Whether their discharge contains any of the PFAS compounds that are regulated in their jurisdiction; and
- Whether they are likely to be subject to permit conditions limiting the allowable concentration of PFAS compounds in their wastewater discharges.

Acquiring this information will allow businesses to determine whether they need to modify their operations to reduce or eliminate PFAS substances from their waste stream to achieve compliance with an existing standard, or in anticipation of likely future permit conditions.

CONCLUSION

The regulation of PFAS substances in drinking water will continue to develop over the next year as additional research is conducted on potential health impacts, and as regulators at both the federal and state levels develop a deeper understanding of the prevalence of PFAS compounds in drinking water and the efficacy of different MCLs.

For more information on PFAS chemicals, and the regulatory and liability 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, Bryan Keyt, Emma Cormier, John Kindschuh, or any other member of our PFAS team at BCLP.

RELATED PRACTICE AREAS

- PFAS Team
- Environment

MEET THE TEAM

Thomas S. Lee

San Francisco

tom.lee@bclplaw.com
+1 415 675 3447

Bryan E. Keyt

Chicago

bryan.keyt@bclplaw.com
+1 312 602 5036

Emma R. Cormier

St. Louis

emma.cormier@bclplaw.com
+1 314 259 2160

John R. Kindschuh

St. Louis

john.kindschuh@bclplaw.com
+1 314 259 2313
