



PFAS Updates (Abridged)

Carolina Air Pollution Control Association

October 23, , 2025

TRCCOMPANIES.COM





Today's Agenda

- North Carolina DEQ Regulatory Initiatives
 - DWR - Surface Water Discharge PFAS Monitoring and Minimization
 - DWR - Groundwater Interim Maximum Allowable Concentrations (IMACs)
 - DAQ - Permit Conditions
- South Carolina DES Regulatory Update
- Other State Overview
- Federal Updates (Time Permitting)
 - Safe Drinking Water Act (SDWA): PFAS Maximum Contaminant Levels (MCLs)
 - Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): PFOA/PFOS Hazardous Substance Designation
 - Toxics Release Inventory (TRI)

NC Surface Water PFAS Monitoring and Minimization Rule





15A NCAC 02B .0512 and 02H .0923 PFOS, PFOA, and Gen X (PFAS) Monitoring and Minimization

- Characterize the presence of PFOS, PFOA, and GenX in discharges from industrial NPDES dischargers and indirect dischargers (i.e., SIUs going to POTWs with pretreatment programs), and
- Require “affected entities” (subset of industrial direct dischargers and SIUs) to develop minimization plans that identifies approaches to reduce PFOS, PFOA, and GenX (where applicable) discharges directly or indirectly to surface waters.



15A NCAC 02B .0512 and 02H .0923 PFOS, PFOA, and Gen X (PFAS) Monitoring and Minimization

PROPOSED RULE

- Rules focuses on three PFAS (Regulated PFAS)
 - PFOA - Perfluorooctanoic Acid, CAS No. 335-33 67-1
 - PFOS - Perfluorooctane Sulfonic Acid, CAS No. 1763-23-1;
 - Gen X - Hexafluoropropylene Oxide Dimer Acid (HFPO-DA), CAS No.13252-8 13-6;
- Use Method 1633 (no certification of data required until the promulgated in 40 CFR 136)
- Field Blanks are not required
- Use “Representative Grab Samples”, unless composite grab samples are approved



15A NCAC 02B .0512 (Direct Dischargers) 15A NCAC 02H .0923 (SIUs) Monitoring and Minimization

PROPOSED RULE – Impacted Entities

- Industrial Direct Dischargers (IDD) – Individual NPDES Permits EXCEPT
 - 100% domestic wastewater
 - Seafood packing, rinsing, or other aquatic animal operations
 - Water treatment plants;
- POTWs with approved local Pretreatment Program (Affected POTW)
 - Rules Essentially the same EXEPT
 - Control Authority is responsible for the program
 - Only Effluent sampling is required

15A NCAC 02B .0512 (Direct Dischargers) 15A NCAC 02H .0923 (SIUs) Monitoring and Minimization



PROPOSED RULE – Baseline Characterization

Initiate within
60 Days of
Promulgation

Quarterly
sampling of each
influent station
and effluent
station for one
calendar year

Analyze for
the regulated
PFAS

Report to the
lowest reporting
concentration for
all 40 PFAS from
Method 1633

15A NCAC 02B .0512 (Direct Dischargers) 15A NCAC 02H .0923 (SIUs) Monitoring and Minimization



PROPOSED RULE – Minimization Plans

- Require plans for facilities with any concentration above the lowest reporting concentration (i.e., not a non-detect) of any of the Regulated PFAS in any of the quarterly effluent station samples collected during the baseline characterization
- Submit the plan within one calendar year of being notified.
- Within 120 days of submittal will be notified of plan approval or deficiencies ;If deficient, correct and resubmit within 60 days
- Within 120 days of approved Plan, commence plan implementation



15A NCAC 02B .0512 (Direct Dischargers) 15A NCAC 02H .0923 (SIUs) Monitoring and Minimization

PROPOSED RULE – Minimization Plans

- The Director shall require annual reporting on the minimization plan for Regulated PFAS that include at a minimum:
 - A summary of the status of implementation of the minimization plan for the Regulated PFAS
 - Any observed increases or decreases in the Regulated PFAS concentrations in the samples collected before and after implementation of the minimization plan
- The minimization plan for Regulated PFAS shall be reviewed every two years after the Director's approval. If the reduction goals are not met, then an updated minimization plan must be developed for approval

15A NCAC 02B .0512 (Direct Dischargers)

15A NCAC 02H .0923 (SIUs) Monitoring and Minimization



PROPOSED RULE – Minimization Plans

Strategy to reduce or eliminate Regulated PFAS at the source before they are discharged into the environment. A minimization plan includes:

- Best management practices, such as:
 - preventative measures to control and reduce pollution,
 - pollution prevention,
 - good housekeeping practices (e.g., regular changing or cleaning of equipment and tanks),
 - identifying and eliminating Regulated PFAS in raw materials,
 - predicting process or operation generation of Regulated PFAS as byproducts;
 - improving operational efficiency to minimize the quantity waste generation;
 - product substitution to eliminate the introduction or generation for Regulated PFAS,
 - installing treatment technologies;
- A timeline for implementation;
- Estimated annual reductions from implementation;
- Reduction goals, such as a target concentration or % reduction

15A NCAC 02B .0512 (Direct Dischargers) Monitoring and Minimization



- How will existing “Monitor and Report” data be used in this rule?

“Facilities with historical data documenting PFOS, PFOA, and GenX above detection levels will move directly to developing a minimization plan and complete the started tasks approximately 18 months prior to the dates in Table 2.” (Fiscal Note: Sec II A Footnote to Table 2 (projected timeline table) Page 7)

- DEQ is requiring all the data from Test Method 1633 (40 PFAS) to be submitted (Not just PFOA, PFOS, and Gen X)

15A NCAC 02B .0512 (Direct Dischargers) 15A NCAC 02H .0923 (SIUs) Monitoring and Minimization



Exemption Criteria from Ongoing Monitoring and Minimizations Plans

- May request an exemption from the Ongoing Monitoring and Minimizations Plans from the Director if the Regulated PFAS concentrations meet the following criteria:
 - The Regulated PFAS of **all of** the quarterly effluent station samples is equal to or less than the associated Regulated PFAS concentration in all of the intake water station samples;
 - There is no increase in any of the Regulated PFAS due to site activities



15A NCAC 02B .0512 and 02H .0923 PFOS, PFOA, and Gen X (PFAS) Monitoring and Minimization

Rule Implementation Process Timeline

- Rule Effective Date April 2026
- Notification of Baseline Sampling (60 days from effective date) June 2026
- Start Baseline Monitoring (within 3 months of notification) Sept 2026
- End Baseline Monitoring (sample quarterly for one year) Sept 2027
- Control Authority receives all baseline monitoring data (within one month of last sample) Oct 2027
- Notification of Ongoing Monitoring and Minimization Plan requirement (within 120 days of receiving all baseline monitoring data) Jan 2028*
- Start Minimization Plan Development Jan 2028*
- Start Ongoing Monitoring (start within 3 months of notification; ongoing semi- annually) Apr 2028*
- Submit Minimization Plan for Review (within 365 days of notification) Jan 2029*
- Minimization Plan Approval (within 120 days of receipt of complete plan) April 2029
- Start Minimization Plan Implementation (within 120 days of plan approval) July 2029



Proposed Rule Status

- **May 7, 2025** - Rule Proposed to the EMC Water Quality Committee without an approved Fiscal Note
- **June 27, 2025** - Fiscal Note Approved (too late for July EMC Meeting)
- **September 10, 2025** - EMC Water Quality Committee Meeting committed to reviewing at November 12th meeting
- **November 12 & 13, 2025** - Anticipate approval by both the WQC and the Full EMC for approval and on to public comment



A. (10.) PFAS Monitoring In The Effluent [G.S. 143-215.1(b)]

- Monitoring of per- and polyfluoroalkyl substances (PFAS) shall be conducted using the EPA method 1633A (December 2024) and shall include all **target analytes** Monitoring takes effect the first full calendar quarter following three (3) months after the effective date of the permit (Month xx, 2025) and will be at a quarterly frequency.
- Includes the 40 parameters of Method 1633
- This approach to gather data from all IDD's would take over 5 years.

NC Surface Air Permitting PFAS Questionnaire

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Addressing Emerging Contaminants Screening Questions

1. Will your facility use any material or products in your operations that contain **fluorinated chemicals**? If so, please identify such materials or products and the fluorinated chemicals they contain.
2. Will your facility formulate/create products or byproducts (directly or indirectly) containing **fluorinated chemicals** (across multiple media)? If so, please identify such products or byproducts and the fluorinated chemicals they contain.
3. Will your facility generate solid, liquid, or gaseous related emissions, discharges, or wastes/products containing **fluorinated chemicals**? If so, please identify such waste streams or materials and the fluorinated chemicals they contain.
4. Do your facility's processes or operations use equipment, material, or components that contain **fluorinated chemicals** (e.g., surface coating, clean room applications, solvents, lubricants, fittings, tubing, processing tools, packaging, facility infrastructure, air pollution control units)? Could these processes or operations directly or indirectly (e.g., through leaching, chemical process, heat treatment, pressurization, etc.) result in the release of fluorinated chemicals into the environment?



Three US states call on environmental agency to regulate PFAS air emissions

August 29, 2024

North Carolina, New Jersey and New Mexico petitioned regulators to classify some PFAS as hazardous air pollutants

PFOA
PFOS
GenX
PFNA

North Carolina Interim Maximum Allowable Concentrations Groundwater Standards



North Carolina Interim Maximum Allowable Concentrations (IMACs)



PFAS IMACs

- October 15, 2024, NC DEQ DWR implemented IMACs on 8 PFAS Compounds
- Within 12 months of establishing an IMAC pursuant to this Paragraph, the Director of the Division of Water Resources shall make a recommendation to the Commission whether:
 - a new groundwater standard in place of the IMAC should be established pursuant to this Rule; or
 - the IMAC should expire.
- At the September Full EMC Meeting it was proposed to implement 2L (Groundwater standards) for PFOA, PFOS, and Gen X
- By Rule: The other 5 compounds (PFBS, PFHxS, PFBA, PFHxA) revert to the PQL as the Standard

SC PFAS Updates





PFAS Regulation – Proposed but not moving forward

- SC H. 3116 amendment to Chapter 6, Title 48 of SC Code aimed to prohibit discharge of effluent with any level of PFAS, including PFOA and PFOS, to ambient or drinking waters of the state

PFAS Litigation

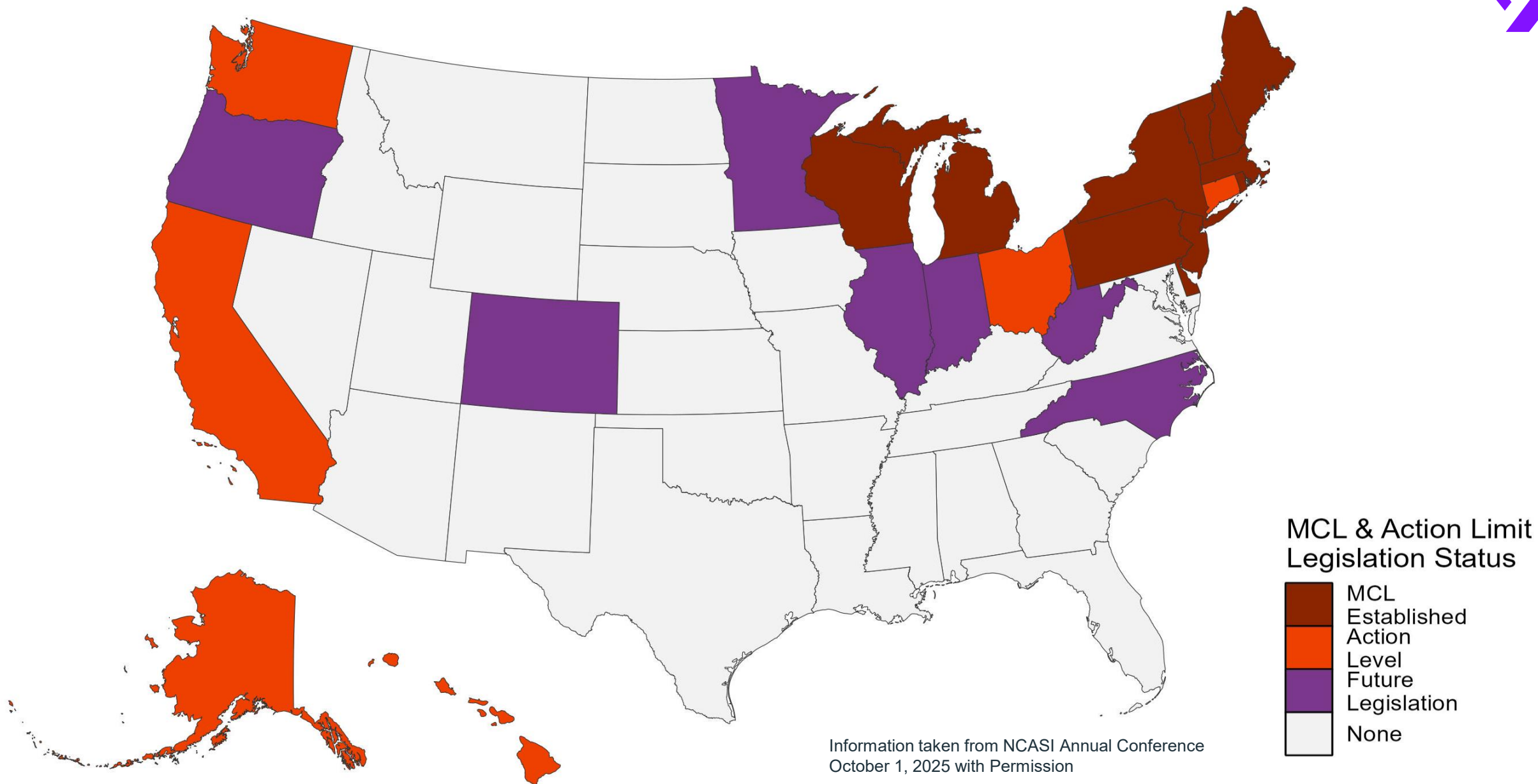
- Activity in SC has been primarily focused on Third Party Lawsuits
- 3M, DuPont and others have agreed to settlements worth billions of dollars with public water systems
- These are part of a Multidistrict Litigation (MDL)
- Several SC Public Water Authorities have sued both Industrial Dischargers and Significant Industrial Users Discharges (to POTWs) for damages
- These SC actions have been rolled into the MDL
- A federal bellwether trial is not yet set due to the new cases filed in the last 1-2 years
- Litigation will take years

State Updates

Slides borrowed with permissions from NCASI Annual Conference
Presentation by Jayme Coyle, Ph.D. October 1, 2025



MCLs and Action Levels



Effluent Discharge



Monitoring and reporting requirements

NJ (groundwater),
PA, VA, WA, WV, WI

Proposed/future legislation

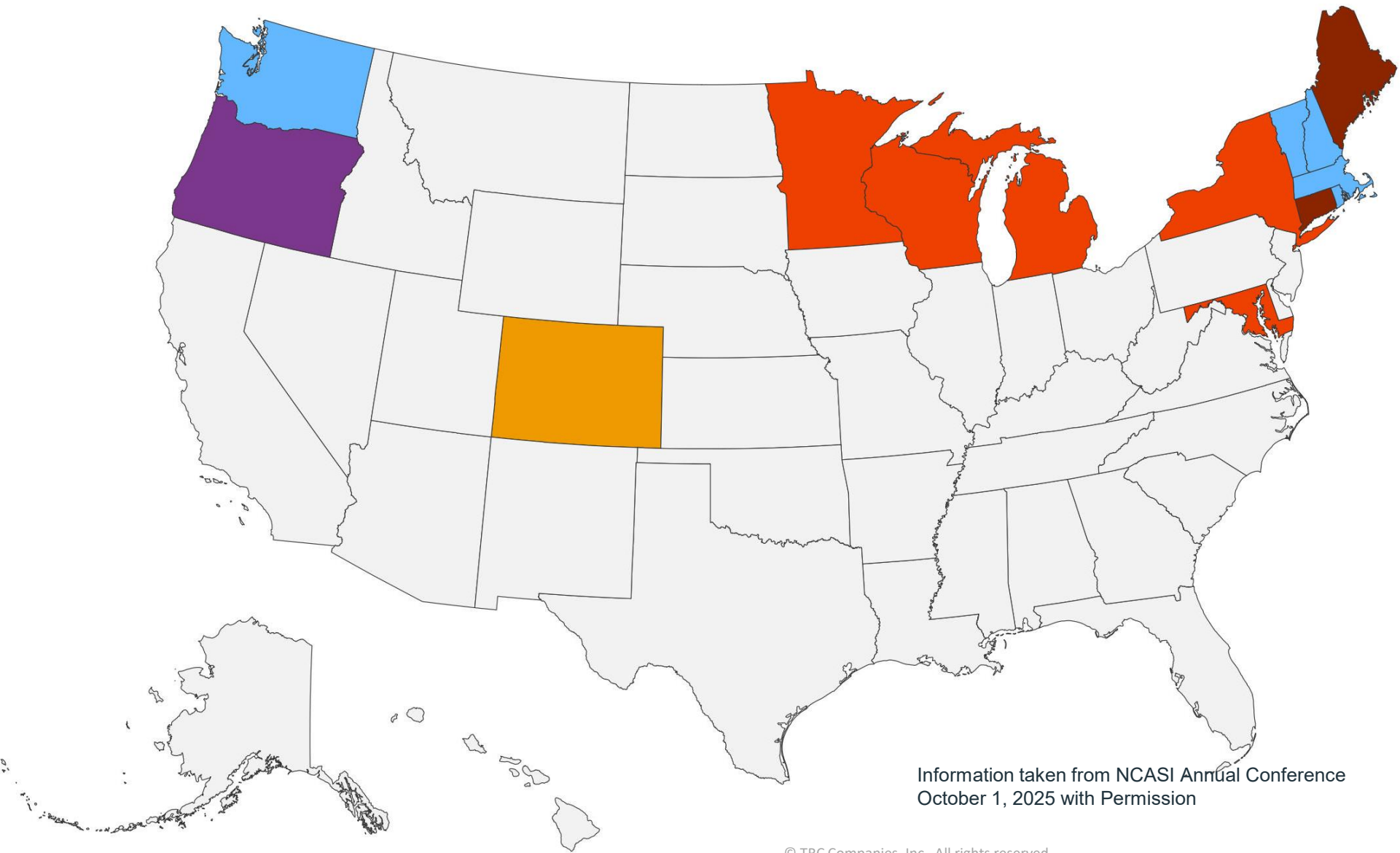
MI, NY

Proposed, but currently dead

SC H. 3116 amendment to Chapter 6, Title 48 of SC Code aimed to prohibit discharge of effluent with any level of PFAS, including PFOA and PFOS, to ambient or drinking waters of the state

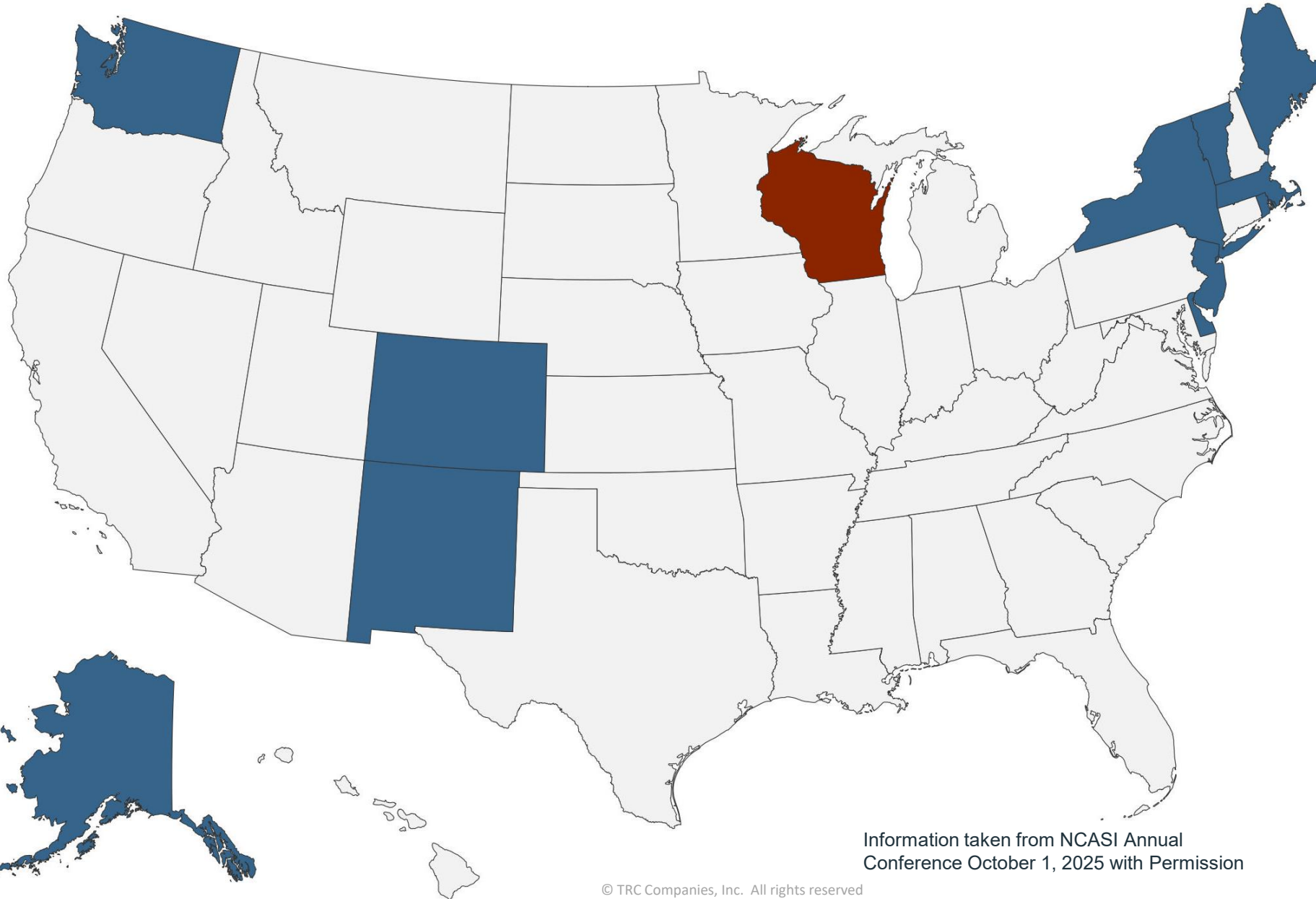
Information taken from NCASI Annual Conference October 1, 2025 with Permission

Biosolids / Soil Amendments

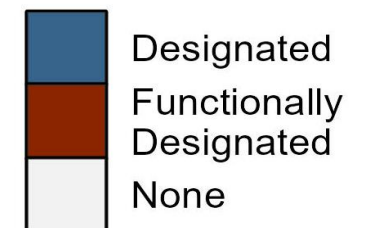


Information taken from NCASI Annual Conference
October 1, 2025 with Permission

Hazardous Substance/Material/Constituent

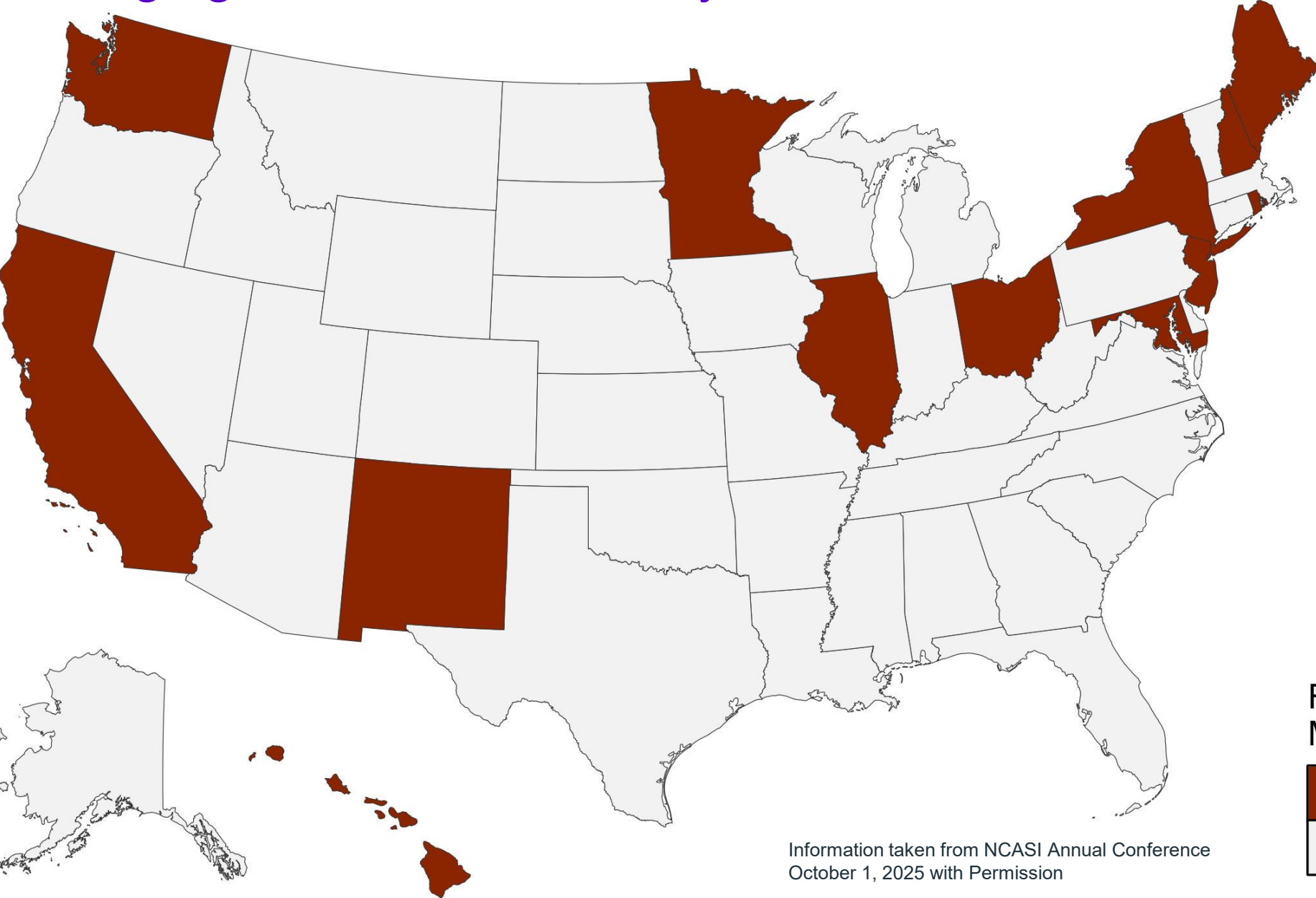


Designation
(Includes Interim)



Information taken from NCASI Annual
Conference October 1, 2025 with Permission

FCM/Packaging Ban for Intentionally-added PFAS



Information taken from NCASI Annual Conference
October 1, 2025 with Permission

Air and Soil Actions



Air

- **MI** has set HB screening levels for (PFOA/S, 6:2 FTS) in emissions sources required for permitting
- **NH** began rulemaking for determining BACT to limit air emissions -> impact water and soil
- **OR** set PFOA/PFOS on the Priority List of Air Pollutant for eventual regulation
- CA, MN, **NY**, WI added PFAS to required reporting/monitoring of air emissions

Soil

- AK, DE, FL, ME, MI, **MN**, NJ, NM, PA, TX, VT, WA, WI have established cleanup/remediation goals/screening levels
- **HI**, IA, NH have set action/enforceable limits

Black = Currently in place;

Red = Promulgated within the last year

Blue = potential rulemaking

Thanks!



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Maximum Contaminant Levels (MCLs)

Safe Drinking Water Act (SDWA)



Federal MCLs for PFAS



Final MCLs	
PFOS	4 ng/L
PFOA	4 ng/L
PFNA	10 ng/L
PFHxS	10 ng/L
HFPO-DA (Gen-X)	10 ng/L
Hazard Index for 4 PFAS =1.0 Weightings: PFNA 10, PFHxS 10, Gen-X 10, and PFBS 2000	

- Final Rule: April 10, 2024
 - Initial monitoring must be completed between 2024-2027 (3 years)
 - MCLs must be met within 5 years after finalized (2029).
 - Legally enforceable limits.
-
- May 14, 2025
 - EPA Announced plans to provide “Common sense flexibility” to PFAS MCL implementation
 - Requires Rule Making (Propose – Fall 2025; Final Spring 2026)
 - Extend Compliance Date to 2031
 - Enhance communication and outreach with public water utilities
 - Hold Polluters accountable
 - Rescind and reconsider regulatory determinations for:
 - PFHxS, PFNA, Gen-X, and HI including PFBS
 - July 28, 2025
 - National Drinking Water Advisory Council Public Meeting
 - Public Comments on EPA May 14th proposed rule changes

PFOA/PFOS Hazardous Substance Designation

Comprehensive Environmental Response,
Compensation, and Liability Act (CERCLA)



PFOA & PFOS Hazardous Substance Designation



Timetable of CERCLA Designation – PFOA and PFOS

- Rule Final on **May 8, 2024**
- Effective Date of Designation **July 8, 2024**

USEPA Enforcement Discretion

- Sectors targeted for enforcement: **Manufacturers, Federal Facilities, “Other” Industrial Sources**
- Sectors not targeted for enforcement: **POTWs & Community Water Utilities; Municipal Separate Storm Sewer System; Publicly Owner-Operated Municipal Solid Waste Landfills (MS4s); Farms That Apply Biosolids; State/Tribal/Municipal Airports; Tribal/Local Fire Departments**

Important Dates – Other PFAS Designations

EPA: An Advanced Notice of Proposed Rulemaking (ANPRM) **published April 13, 2023**, to seek input on hazardous substance designation for:

- 7 other PFAS, other than PFOA and PFOS, and their salts and isomers;
- Precursors to PFOA, PFOS, and seven other PFAS; and/or
- Categories of PFAS

<https://www.epa.gov/epcra/designation-pfoa-and-pfos-hazardous-substances-under-cercla-release-reporting-requirements>

CERCLA Hazardous Substance Designation: Where Are We Today?



- February 27, 2025: U.S. Court of Appeals for District of Columbia Circuit granted EPA's request for 60-day stay in PFOA/PFOS Hazardous Substance Designation.
- Stay temporarily paused litigation over EPA's Hazardous Substance Designation.
- April 25, 2025: 60-day stay expires.

CONGRESS.GOV Advanced Searches Browse

Legislation Examples: hr5, sres9, "health care" MORE OPTIONS

Home > Legislation > 118th Congress > S.1430

S.1430 - Water Systems PFAS Liability Protection Act
118th Congress (2023-2024)

BILL Hide Overview

Sponsor: [Sen. Lummis, Cynthia M. \[R-WY\]](#) (Introduced 05/03/2023)

Committees: Senate - Environment and Public Works

Latest Action: Senate - 05/03/2023 Read twice and referred to the Committee on Environment and Public Works. ([All Actions](#))

Tracker: Introduced

Some Arguments Against PFOA/PFOS Hazardous Substance Designation

Interpretation of
"substantial danger"
standard broad, not
consistent with
intent of CERCLA

Cost-benefit
analysis was
deficient

No justification of
liability & cleanup
costs

USCA Case #24-1193 Document #2096374 Filed: 01/24/2025 Page 1 of 38

ORAL ARGUMENT NOT YET SCHEDULED

24-1193
(and consolidated cases)

**United States Court of Appeals
for the District of Columbia Circuit**

CHAMBER OF COMMERCE OF THE
UNITED STATES OF AMERICA, et al.,
Petitioners,

v.
U.S. ENVIRONMENTAL PROTECTION AGENCY, et al.,
Respondents.

On Petition for Review of Final Action
by the United States Environmental Protection Agency

BRIEF FOR STATES OF NEW YORK, ARIZONA, COLORADO,
CONNECTICUT, ILLINOIS, MARYLAND, MASSACHUSETTS,
MICHIGAN, MINNESOTA, NEW JERSEY, NEW MEXICO, OREGON,
WASHINGTON, AND WISCONSIN, AND THE DISTRICT OF
COLUMBIA, AS AMICI CURIAE IN SUPPORT OF RESPONDENTS

Toxics Release Inventory (TRI)

Emergency Planning and Community
Right-to-Know Act (EPCRA) Section 313





Toxics Release Inventory (TRI) Rule Change



- Effective date November 11, 2023
- USEPA has applied the “Chemicals of Special Concern” designation on the TRI-reportable PFAS to remove the *de minimis* exemption.
- This affects the TRI reporting year beginning January 1, 2024, with July 1, 2025 reporting deadline.
- In parallel, EPA continues to add PFAS to the TRI list (May 2024: 7 PFAS added)

TRI Timeline:

- Dec 2019: NDAA added 172 PFAS with framework for adding more PFAS
- June 2020: Final rule in CFR
 - 100 lbs of each listed PFAS
 - PFOA *de minimis* 0.1%
 - All other listed PFAS: *de minimus* 1%
- June 2021: 8 more PFAS added
- June 2023: 9 more PFAS added (189 total)

<https://www.epa.gov/toxics-release-inventory-tri-program/addition-certain-pfas-tri-national-defense-authorization-act>

TRI PFAS Reporting: Where Are We Today?



March 2025: Nine new PFAS added to TRI-reportable PFAS list: total now 205

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 261, 262, 266, and 372

[FRL-12583.1-02-OA]

Delay of Effective Date for 2 Final Regulations Published by the Environmental Protection Agency Between December 11, 2024, and January 6, 2025

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; delay of effective dates.

Federal Register citation	Title	Publication date	Original effective date	New effective date
89 FR 99727	Hazardous Waste Generator Improvements Rule, the Hazardous Waste Pharmaceuticals Rule, and the Definition of Solid Waste Rule; Technical Corrections.	12/11/2024	2/10/2025	3/21/2025
90 FR 573	Implementing Statutory Addition of Certain Per- and Polyfluoroalkyl Substances (PFAS) to Toxics Release Inventory (TRI) Beginning With Reporting Year 2025.	1/6/2025	2/5/2025	3/21/2025

1. Ammonium perfluorodecanoate (PFDA NH₄) (3108-42-7)
2. Sodium perfluorodecanoate (PFDA-Na) (3830-45-3)
3. Perfluoro-3-methoxypropanoic acid (377-73-1)
4. 6:2 Fluorotelomer sulfonate acid (27619-97-2)
5. 6:2 Fluorotelomer sulfonate anion (425670-75-3)
6. 6:2 Fluorotelomer sulfonate potassium salt (59587-38-1)
7. 6:2 Fluorotelomer sulfonate ammonium salt (59587-39-2)
8. 6:2 Fluorotelomer sulfonate sodium salt (27619-94-9)
9. Acetic acid, ((γ-ω-perfluoro-C8-10-alkyl)thio) derivs., Bu esters (3030471-22-5)



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Home / Chemicals under the Toxic Substances Control Act (TSCA)

Chemicals under the Toxic Substances Control Act (TSCA)

Pollution Prevention and Toxics News

EPA Proposes Rule to Clarify Supplier Notification Requirements for TRI-Listed PFAS

Toxics Release Inventory (TRI) Rule Change



PFAS THRESHOLDS

Manufactured (including imported)

more than 100 pounds of the chemical in the reporting year

OR

Processed

more than 100 pounds of the chemical in the reporting year

OR

Otherwise Used

more than 100 pounds of the chemical in the reporting year

- Previously, if the concentration of a non-carcinogenic TRI-reportable PFAS was below 1 percent, there was no requirement to identify materials present in a mixture at less than 1% by weight or volume (0.1% if carcinogenic). TRI supplier notification rule removes this *de minimis* exemption for Chemicals of Special Concern, including TRI-Reportable PFAS.
- Eliminating the *de minimis* threshold on the reportable PFAS, combined with the 100-lb reporting threshold for these PFAS chemicals, will increase the number of facilities required to report PFAS under TRI.



Supplier Notifications

- In addition to eliminating the *de minimis* exemption for TRI reporting of Chemicals of Special Concern, this rule also eliminates that exemption for Supplier Notifications.
- For the 200+ TRI-reportable PFAS, “suppliers must notify each customer of any toxic chemical present in a mixture or trade name product with at least the first shipment of the mixture or trade name product in each reporting year.”
- A data avalanche about PFAS will begin as suppliers provide notifications to their clients of the presence of TRI-reportable PFAS in their products.
- Facilities should strengthen the systems used to gather updated SDS or other notifications and track purchases containing PFAS on an on-going basis.