



# PFAS Regulatory Trends *Report from the ITRC PFAS Team*

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Linda Hall, PhD  
Senior Associate Toxicologist  
GSI Environmental Inc.



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# Your Presenter



**Linda C. Hall, PhD**

**Senior Associate Toxicologist,  
GSI**

**Co-lead, ITRC Regulations,  
Toxicity, Risk Assessment  
subgroup**

lhall@gsienv.com

# Regulation of PFAS: What's New and Noteworthy

**Overview: PFAS Regulatory Trends**

**Federal Actions**

**State Actions**

**ITRC Resources**

**Summary and Questions**

# Overview: PFAS Regulatory Trends

Federal Actions

State Actions

ITRC Resources

Summary and Questions

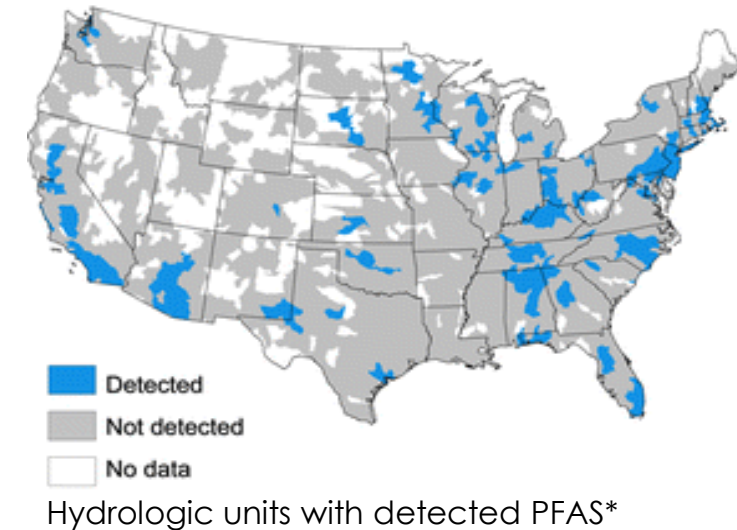
# Overview: PFAS Regulatory Trends

## ▶ Federal Actions and Programs

- ▶ No legally enforceable drinking water standards to date
- ▶ US EPA (SDWA, TSCA, TRI, CERCLA)
- ▶ FDA (food contact materials, food surveys)

## ▶ States

- ▶ Legally Enforceable Drinking Water Standards; Advisories
- ▶ Consumer Products, AFFF, Surface Water, Soil, Wildlife Consumption Advisories, WWTP Effluent



\*<https://pubs.acs.org/doi/abs/10.1021/acs.estlett.6b00260>

## Overview: PFAS Regulatory Trends

### Federal Actions

### State Actions

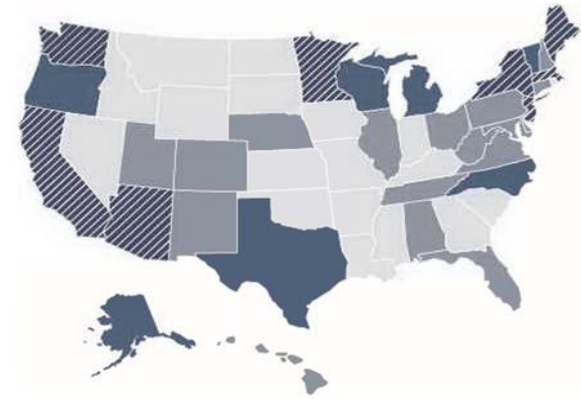
### ITRC Resources

### Summary and Questions

# Federal PFAS Regulations

## ▶ USEPA

- ▶ Toxic Release Inventory (2020); requires reporting of 172 PFAS
- ▶ TSCA (2020): Significant New Use Rule for long chain sulfonates, carboxylates
- ▶ UCMR5 (2023-2025)
  - ▶ 29 PFAS, lower detection limits
  - ▶ Wider scope than UCMR3: all water systems > 3000 customers
- ▶ Designation of PFOA, PFOS as Hazardous Substances under CERCLA (2021?)
- ▶ MCLs – PFOA and PFOS: Final Regulatory Determination Q2 2021
- ▶ Toxicity Assessments (in support of Drinking Water Health Advisories)
  - ▶ Finalize for GenX chemicals, PFBS (2021)
  - ▶ Draft analyses PFBA, PFHxA, PFHxS, PFNA, PFDA (Q4 2021)



# Federal PFAS Regulations

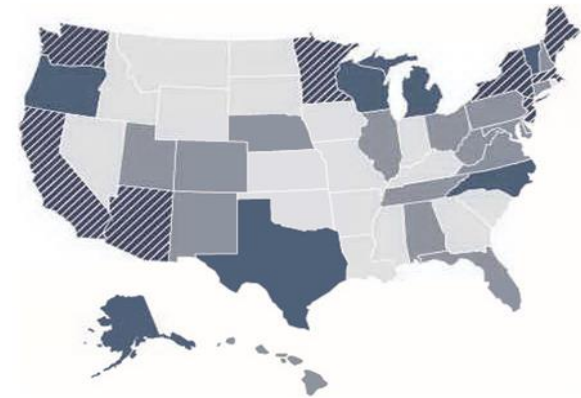
## ▶ **USEPA, continued**

- ▶ Incineration/destruction of PFAS – draft USEPA guidance (2020)
- ▶ Non-target analyte measurement (industrial releases of 'novel' PFAS)
- ▶ Risk Assessment for PFOA and PFOS in Biosolids (pending)

## ▶ **FDA**

- ▶ Food testing for PFAS (2020)
- ▶ Phase out of 6:2 FTOH (2021)

## ▶ **Congressional calls for multiple additional actions**





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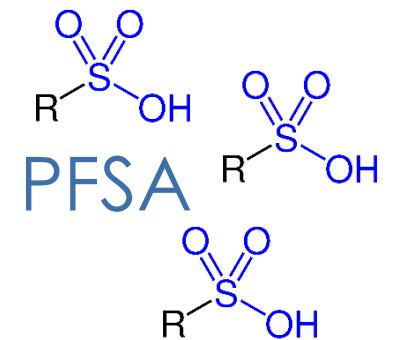
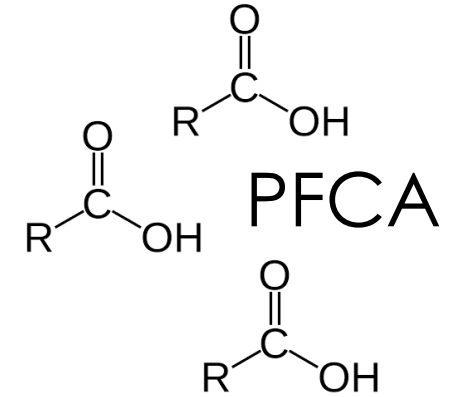
## ITRC Resources

## Summary and Questions

# State Actions

## ▶ Initial Focus: Drinking Water

- ▶ PFOA, PFOS
- ▶ Other perfluoroalkyl acids (PFAA), GenX
- ▶ PFAA precursors
  - ▶ WI (FOSA, NETFOSE, NETFOSA, NETFOSAA)
  - ▶ CA (“PFOA and precursors”; “PFOS and precursors”)





# States with Values for Other PFAS (and Year Implemented)

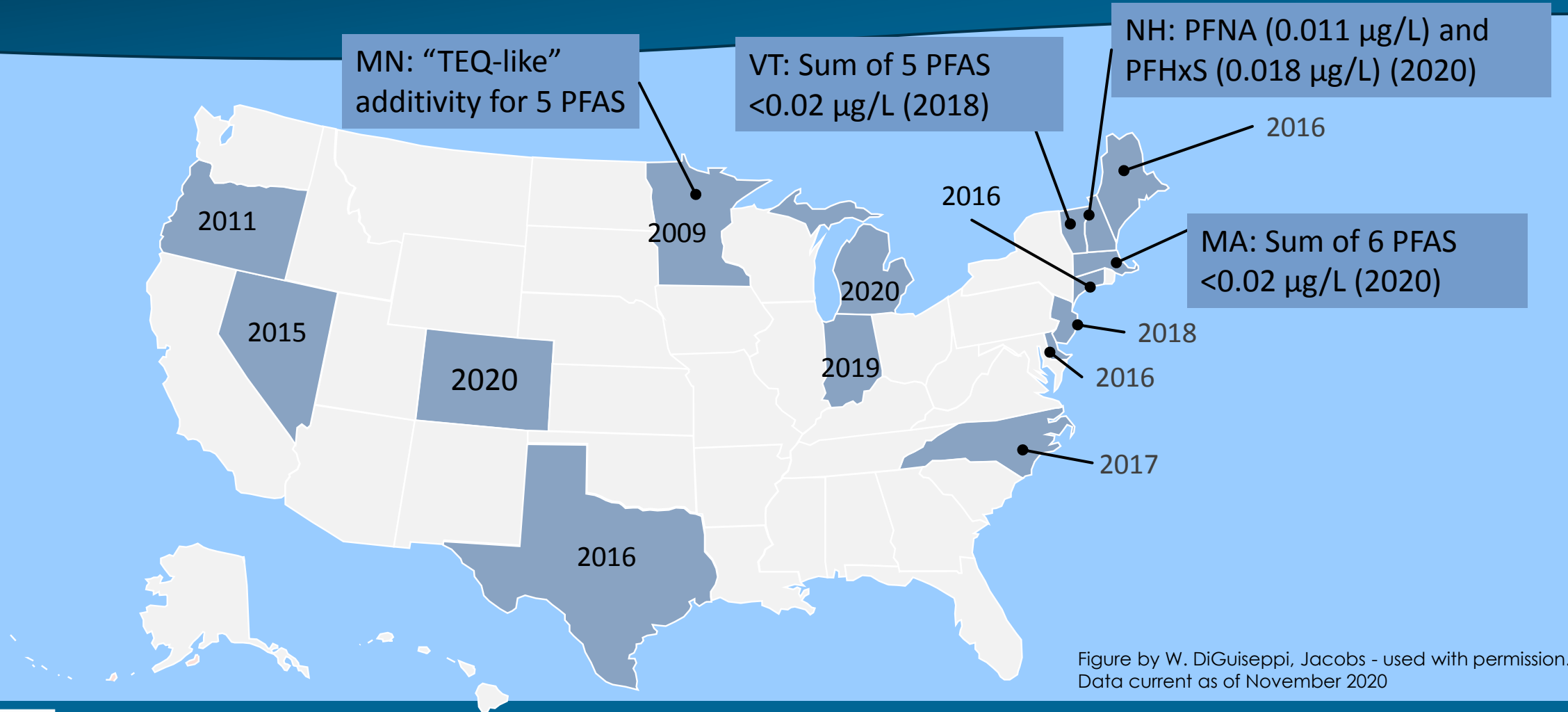


Figure by W. DiGuseppi, Jacobs - used with permission.  
Data current as of November 2020

# State Regulatory Trends and Emerging Issues

- ▶ **Surface Water Quality Criteria**
  - ▶ Wisconsin (PFOA, PFOS pending)
- ▶ **WWTP Effluent**
  - ▶ Sampling – WI, MN, CA (required)
- ▶ **Biosolids Land Application**
  - ▶ Regulation via Soil-to-Groundwater criteria
- ▶ **Incineration**
  - ▶ AFFF: formation of novel PFAS
- ▶ **Novel PFAS (non-target analytes)**
  - ▶ North Carolina, New Jersey, New Hampshire

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# PFAS – Resources

## ▶ ITRC PFAS Team:

- ▶ 600+ members (2020) – academics, stakeholders; state and local; federal; industry and consulting
- ▶ Goal is to produce technical resources for regulators, consultants, responsible parties, and stakeholders
- ▶ Use to support risk evaluation and select appropriate response actions at PFAS release sites

# Technical and Regulatory Guidance

## ► Final web document (April 2020, editorial revisions September 2020)

<b>What are PFAS?</b>	<b>How do they behave in the environment?</b>	<b>Why are we concerned about PFAS?</b>	<b>How do we evaluate PFAS in the environment?</b>	<b>How do we remediate PFAS?</b>	<b>What are the major concerns and how do we share what we know?</b>
<ul style="list-style-type: none"><li>• Introduction</li><li>• History and use</li><li>• Naming conventions</li><li>• PFAS releases to the environment</li><li>• Firefighting foams</li></ul>	<ul style="list-style-type: none"><li>• Physical and chemical properties</li><li>• Fate and transport processes</li><li>• Media-specific occurrence</li></ul>	<ul style="list-style-type: none"><li>• Human and ecological health effects</li><li>• Site risk assessment</li><li>• Regulations, guidance and advisories</li></ul>	<ul style="list-style-type: none"><li>• Site Characterization</li><li>• Sampling and Analytical Methods</li><li>• Case Studies</li></ul>	<ul style="list-style-type: none"><li>• Treatment technologies</li><li>• Case studies</li></ul>	<ul style="list-style-type: none"><li>• Stakeholder perspectives</li><li>• Risk communication</li></ul>

## ► 11 Fact Sheets (August 2020)

## ► Ten video modules published on YouTube (April 2020)



# ITRC PFAS Resources- Fact Sheets

- ▶ Naming Conventions
- ▶ **Regulations**
  - ▶ **PFAS Water and Soil Values (updated ~ monthly)**
  - ▶ **PFAS Regulatory Programs Table (New for 2021)**
- ▶ History and Use
- ▶ Sampling Precautions and Laboratory Analytical Methods
- ▶ Fate and Transport and Physical and Chemical Properties
- ▶ Site Characterization and Media-specific Occurrence
- ▶ Treatment Technologies and Methods
- ▶ Human and Ecological Health Effects and Risk Assessment
- ▶ Risk Communication
- ▶ Stakeholder Perspectives

<https://pfas-1.itrcweb.org/fact-sheets/>

# PFAS Water and Soil Values Table

November 2020

## Standards and guidance values for PFAS in groundwater, drinking water, and surface water/effluent (wastewater).

This Table belongs with the ITRC PFAS Technical and Regulatory Guidance Document. The values included here were confirmed to be in use as of the end of the calendar month for which this table is prepared. These values are changing rapidly. The ITRC PFAS Technical and Regulatory Guidance Document is available at <http://pfas-1.itrcweb.org> to access the current version of this file. Please see ITRC Disclaimer <http://pfas-1.itrcweb.org/about-itrc/#disclaimer>

PFAS																	
Location	Agency / Dept	Year First Listed	Standard / Guidance	Type	Promulgated Rule (Y/M/D)	Footnote	PFDA	PFOS	PFNA	PFBA	PFBS	PFHxS	PFHxA	PFPeA	PFHpA	PFOSA	PFDA
							335-67-1	1763-23-1	375-95-1	375-22-4	375-73-5	355-46-4	307-24-4	2706-90-3	375-85-9	754-91-6	335-76-2
<b>U.S. Environmental Protection Agency</b>																	
USEPA	Office of Water	2016	HA	Dw	N	a	0.070	0.070									
	Regions	2014	RSL	Gw	N	b					400						
	Regions	2018	RSL Calculation	Gw	N	c	0.400	0.400									
	CLEM	2019	Interim Recommendation	Gw	N	m	0.040	0.040									
<b>U.S. States</b>																	
Alaska (AK)	DEC	2016	CL	Gw	Y		0.400	0.400									
	DEC	2018	Action Level	Dw/Gw/Sw	N	a	0.070	0.070									
California (CA)	SwRCB	2018	NL	Dw	N		0.005	0.007									
	SwRCB	2018	RL (CA)	Dw	Y		0.010	0.040									
Colorado (CO)	DPHE	2018	GQS	Gw	Y	d	0.070	0.070									
	WQCC	2020	Translation Levels	Gw/Sw	Y	q	0.070	0.070	0.070		400	0.700					
Connecticut (CT)	DPH	2016	AL	Dw/Gw	N	e	0.070	0.070	0.070			0.070			0.070		
Delaware (DE)	DNREC	2016	RL	Gw	N	a	0.070	0.070									
	DNREC	2016	SL	Gw	N	a	0.070	0.070									
Florida (FL)	FDEP	2019	PGCTL	Gw	O	n	0.070										
	FDEP	2019	SL	Sw	O	n	0.500	0.010									
Indiana (IN)	DEM	2019	SL (tap)	Protected Gw	Y						400						
Iowa (IA)	DNR	2016	Statewide Standards	Protected Gw	Y	a	0.070	0.070									
	DNR	2016		Non-protected Gw	Y			1									
Maine (ME)	DEP	2018	RAG	Gw	N		0.400	0.400			400						
Massachusetts (MA)	DEP	2018/2019	Drinking Water Values	Dw	O	e	0.020	0.020	0.020			0.020			0.020		0.020
	DEP	2019	Gw-1	Gw	Y	e	0.020	0.020	0.020			0.020			0.020		0.020
	DEP	2019	Gw-3	Gw	Y		40,000	500	40,000			500			40,000		40,000
	DEP	2020	MCL	Dw	Y	r	0.020	0.020	0.020			0.020			0.020		0.020
Michigan (MI)	DEQ	2015	HNW	Sw	Y		0.420	0.011									
	DEQ	2018	GCC	Dw/Gw	Y	a	0.070	0.070									
	DHHS	2019	Screening Levels	Dw	N		0.009	0.008	0.009		1	0.084					
	EGLE	2020	MCL	Dw	Y		0.008	0.016	0.006		420	0.051	400				
Minnesota (MN)	MDH	2009/2011/2018	HRL - subchronic	Dw/Gw	Y	f	0.035			7	9						
	MDH	2009/2011/2018	HRL - chronic	Dw/Gw	Y	f	0.035	0.300		7	7						
	MDH	2017/2019	HBW - subchronic	Dw/Gw	N	f		0.015			3	0.047					
	MDH	2017/2019	HBW - chronic	Dw/Sw	N	f		0.015			2	0.047					

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# Summary

## ▶ **States likely to continue to lead**

- ▶ Regulation, multiple environmental media, products, use and disposal of AFFF

## ▶ **Significant Trends in Regulation**

- ▶ Precursors
- ▶ Novel PFAS
- ▶ Consumer Products

# Questions?

