



**PFAS**  
**A Big Topic**  
**A Brief History**  
**A Bit of Updates**

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# Our Mission

Wisconsin's Green Fire advances science-informed analysis and policy solutions that address Wisconsin's greatest conservation challenges.

# Our Vision

Wisconsin's citizens enjoy the benefits of clean water, clean air, and healthy ecosystems through scientific and thoughtful management of natural resources.

# What are PFAS?

Perfluoroalkyl and polyfluoroalkyl substances

Category of over 10,000 man-made chemical compounds.

PFAS repel oils, stains, and water; they are effective flame retardants.

PFAS have strong chemical bonds, do not easily breakdown and can bio-accumulate & bio-magnify

Not all PFAS can be measured or traced.

Most studied and regulated are PFOA & PFOS (currently).

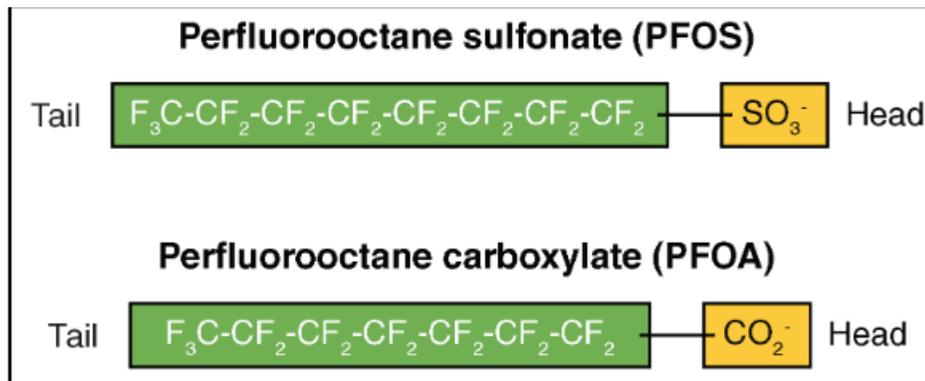
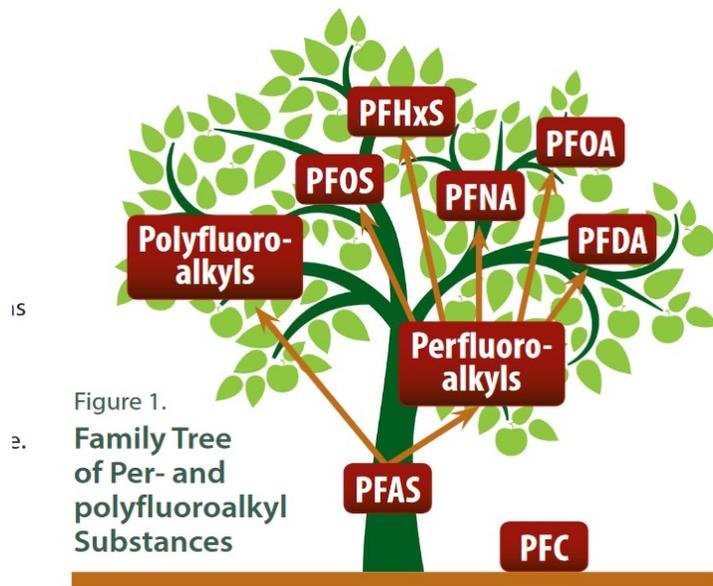
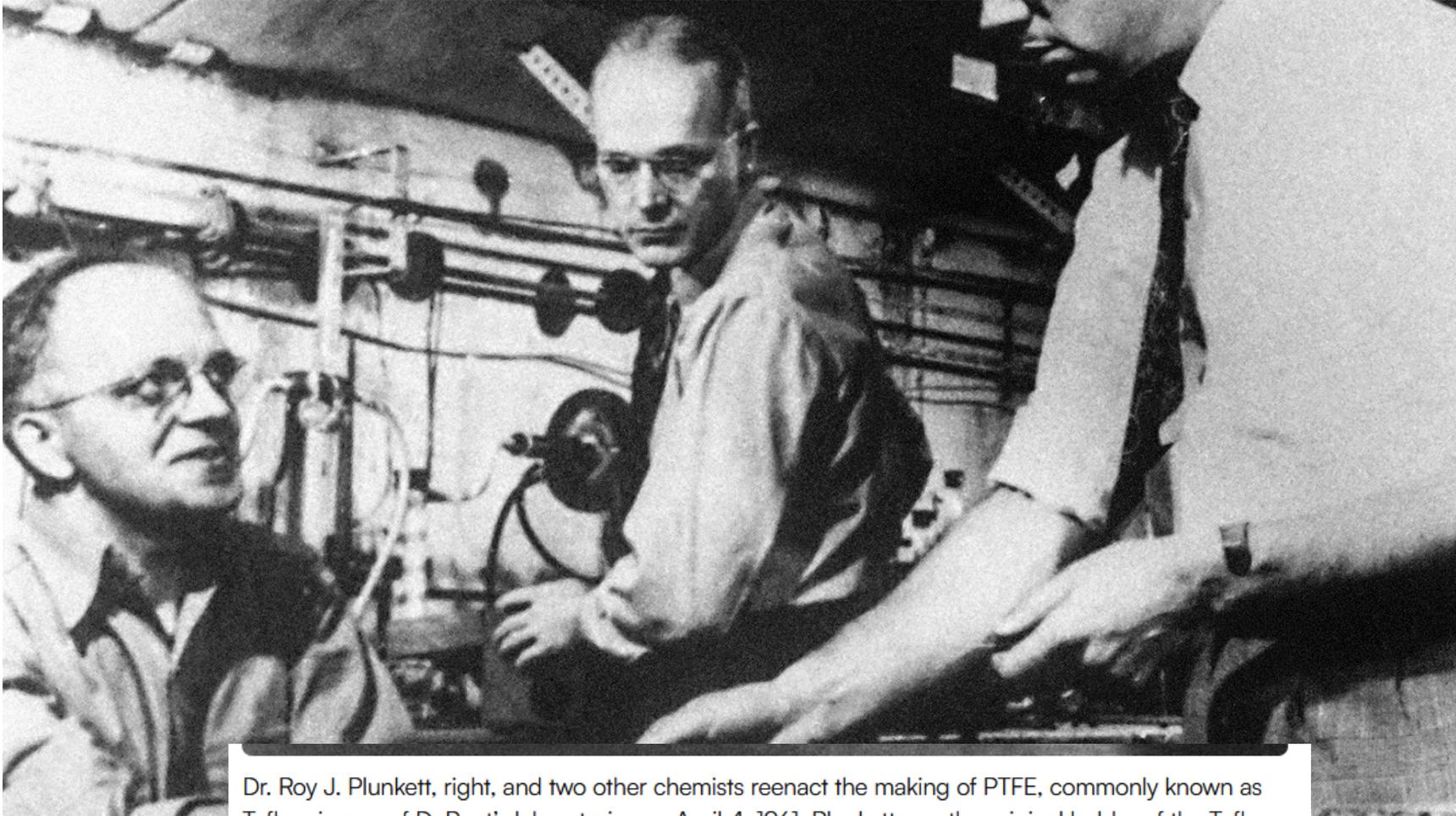


Figure 2. The head and tail structure of PFOS and PFOA.



**When did this  
madness all start?**

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Dr. Roy J. Plunkett, right, and two other chemists reenact the making of PTFE, commonly known as Teflon, in one of DuPont's laboratories on April 4, 1961. Plunkett was the original holder of the Teflon patent.

AP

## The early milestones of PFAS' invention and spread

### ■ 1934

The first form of PFAS, polychlorotrifluoroethylene (PCTFE), is discovered by Fritz Schloffer and Otto Scherer at the former German chemical conglomerate IG Farben.

### ■ 1938

Roy J. Plunkett and Jack Rebok accidentally discover polytetrafluoroethylene (PTFE) when a frozen, compressed sample of the chemical fluorocarbon tetrafluoroethylene spontaneously forms a white, waxy solid.

### ■ 1945

DuPont trademarks PTFE as Teflon.



An aerial view of the K25 Plant at the Oak Ridge, Tennessee, site of the Manhattan Project in 1947. PTFE was used as material for gaskets and valves to hold toxic uranium hexafluoride in pipes at the project's uranium plant.

*Ed Westcott/Newscom*

# The beginning

### ■ 1945

3M, then known as the Minnesota Mining And Manufacturing Co., acquires the Simons Process from Joseph Simons, which allows the company to upscale the production of fluorochemicals and other types of PFAS.

### ■ 1951

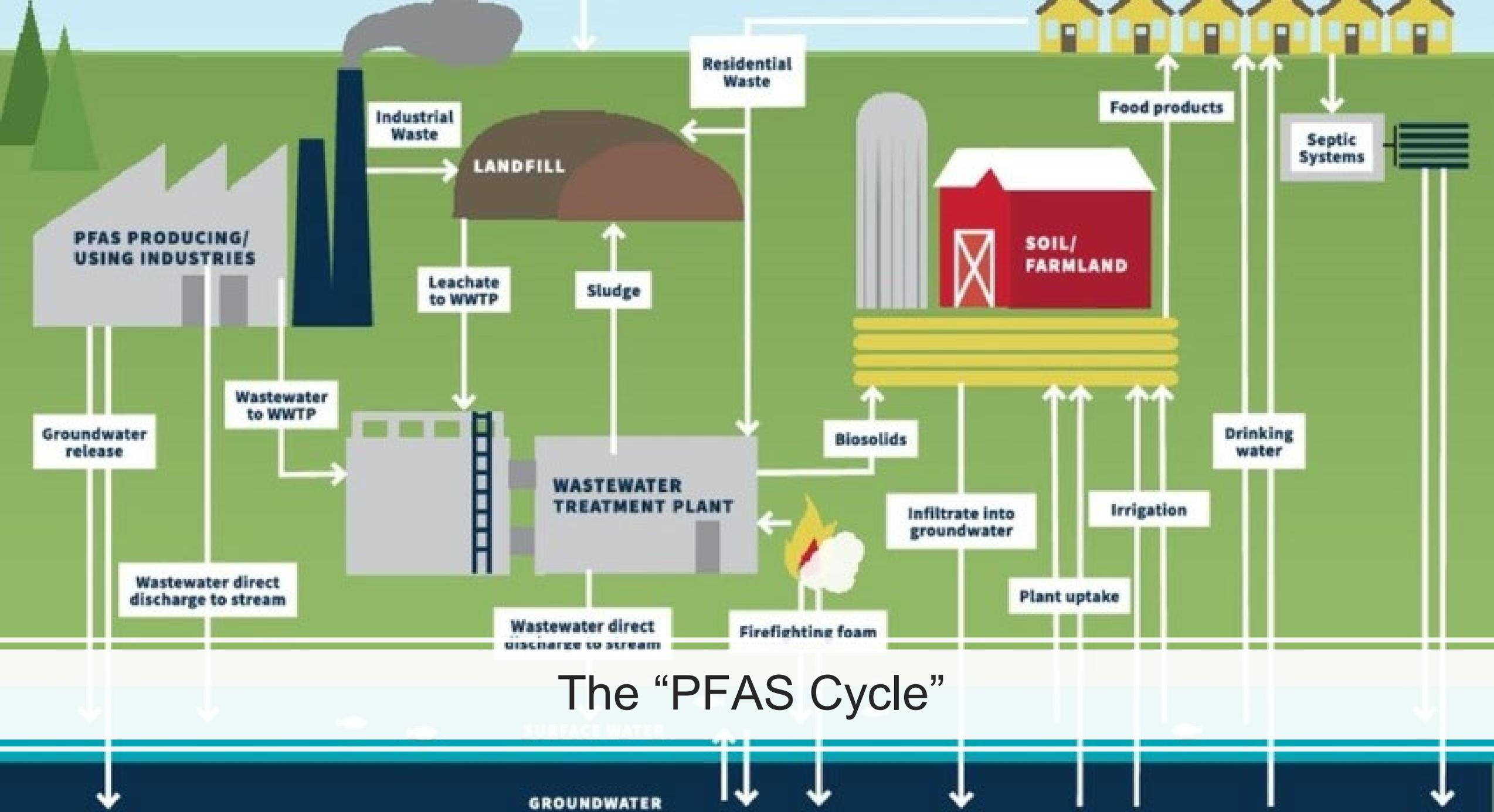
DuPont's plastics manufacturing plant in Parkersburg, West Virginia, begins production of Teflon.

### ■ 1953

3M scientists Patsy Sherman and Samuel Smith discover perfluorooctane sulfonic acid (PFOS), which would go on to be used as a component in a wide variety of products for years, including Scotchgard.

### ■ 1954

French engineer Marc Grégoire coats his wife's cooking pans with Teflon. Two years later, Grégoire launches Tefal, a company that produces Teflon-coated cookware.



# The "PFAS Cycle"

SURFACE WATER

GROUNDWATER

# Our Consumer Choices









**April 2024**

# **Biden-Harris Administration Finalizes Critical Rule to Clean up PFAS Contamination to Protect Public Health**

EPA action designates two widely used PFAS as hazardous substances under the Superfund law, improving transparency and accountability to clean up PFAS contamination in communities

**June 2024**

US Chamber of Commerce, National Association of Manufacturers & American Chemistry Council suing over EPA's rule designating two PFAS as "hazardous substances."





Compound	Final MCLG	Final MCL (enforceable levels)
PFOA	Zero	4.0 parts per trillion (ppt) (also expressed as ng/L)
PFOS	Zero	4.0 ppt
PFHxS	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
HFPO-DA (commonly known as GenX Chemicals)	10 ppt	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index

# Final PFAS National Primary Drinking Water Regulation

June 25th the Federal PFAS MCLs become effective, starting the five-year period to reach compliance

## Wisconsin's Surface Water Standards

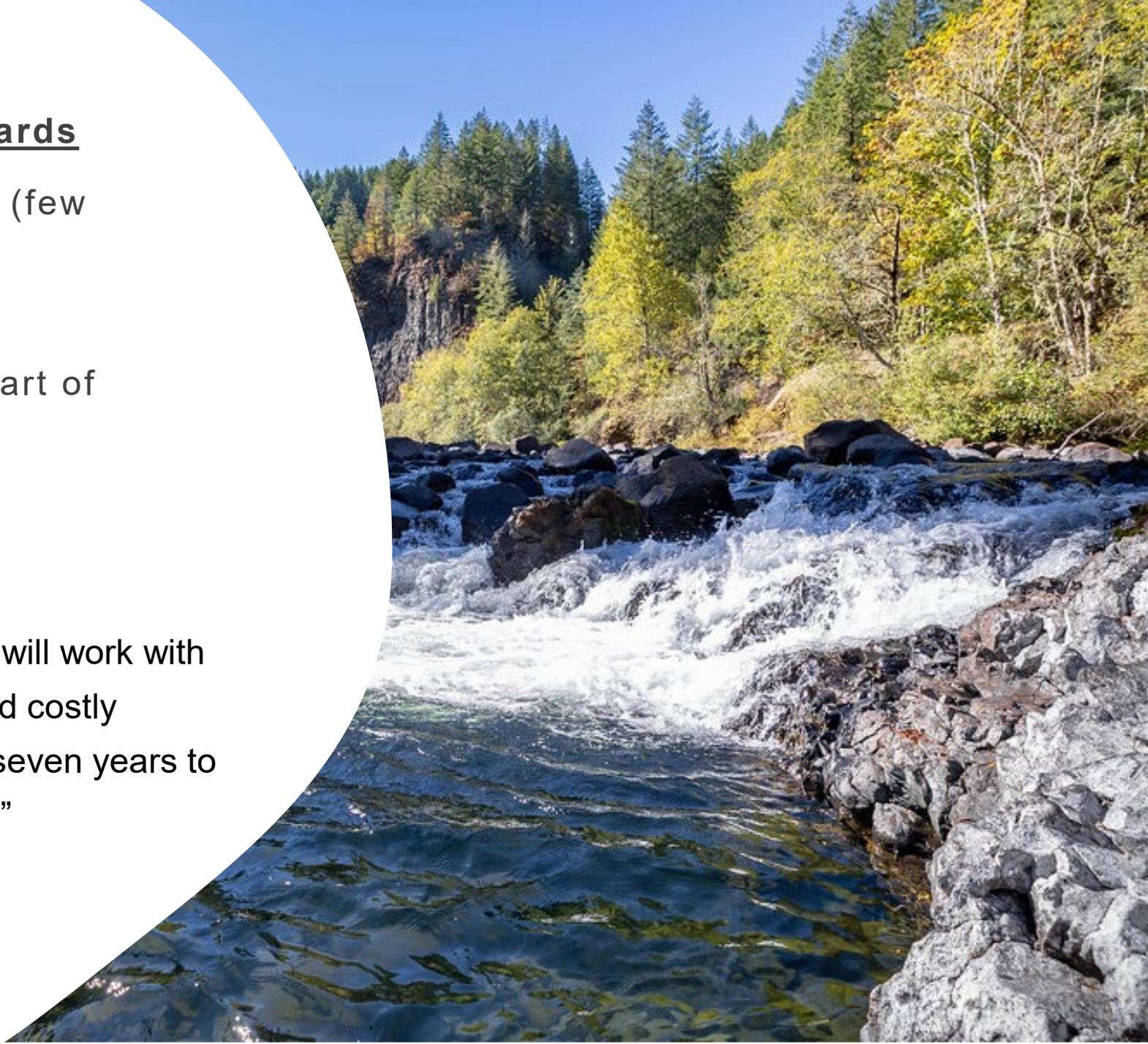
PFOS = 8 ppt for all surface waters (few exceptions)

PFOA =

20 ppt for surface waters deemed part of public water supply

95 ppt for all other surface waters

“If facilities exceed standards, the agency will work with permitted facilities to reduce PFAS to avoid costly treatment. Those facilities will have up to seven years to implement plans to minimize PFAS levels.”

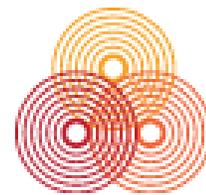


# Biosolids

**The  
Guardian**

**Texas farmers claim company sold them  
PFAS-contaminated sludge that killed  
livestock**

Two ranches also allege biosolids with 'forever chemicals'  
ruined crops, polluted drinking water and left their  
properties worthless



**WISCONSIN  
PUBLIC RADIO**

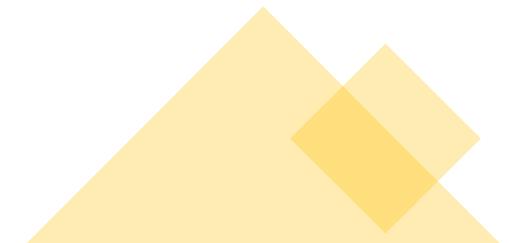
**Stella residents sue 3M and Rhinelander paper  
mill for PFAS contamination of private wells**

Residents have filed a class action lawsuit, claiming that waste spread on farm fields led to PFAS pollution of wells



# **PFAS-affected water systems to receive \$750M in settlement with Tyco Fire Products**

Wisconsin-based company manufactured firefighting foam containing toxic chemicals



# Groundwater

May 21, 2024

DNR Request of DHS-  
Recommendations for State  
Groundwater Quality Standards  
(12<sup>th</sup> Request or Cycle 12)

PFAS	Present Wisconsin Maximum Contaminant Levels (ppt)	Previously DHS recommended enforcement standards (ppt)	EPA Promulgated MCLs (ppt)
PFOA	70*	20*	4
PFOS	70*	20*	4
PFHxS	none	40	10
PFNA	none	30	10
Gen X chemicals	none	300	10
PFBS	none	450,000	2,000**
* individually or combined not to exceed this value			
** value used as a health-based water concentration in EPA's hazard index			

# SB312 v. \$125 Million PFAS Trust Fund

- SB312 DID NOT distribute the money from the Trust Fund
- SB312 DID NOT establish any clean up standards
- SB312 DID weaken the Spills Law and make it harder to go after Responsible Parties
- The Trust Fund money was approved in the last budget, but not appropriated to program(s)
  
- A May 28<sup>th</sup> Legislative Council memo indicates JFC “could exercise its statutory authority to transfer funds as requested by DNR” to address PFAs contamination



**Ready, Set, Go!**  
**2025 Legislative Session**  
**Just Around The Corner!**

## Questions?





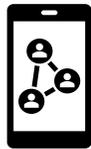
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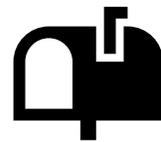
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