WISCONSIN DEPARTMENT OF NATURAL RESOURCES

PFAS Permitting:
Best Practices and Implementation Challenges

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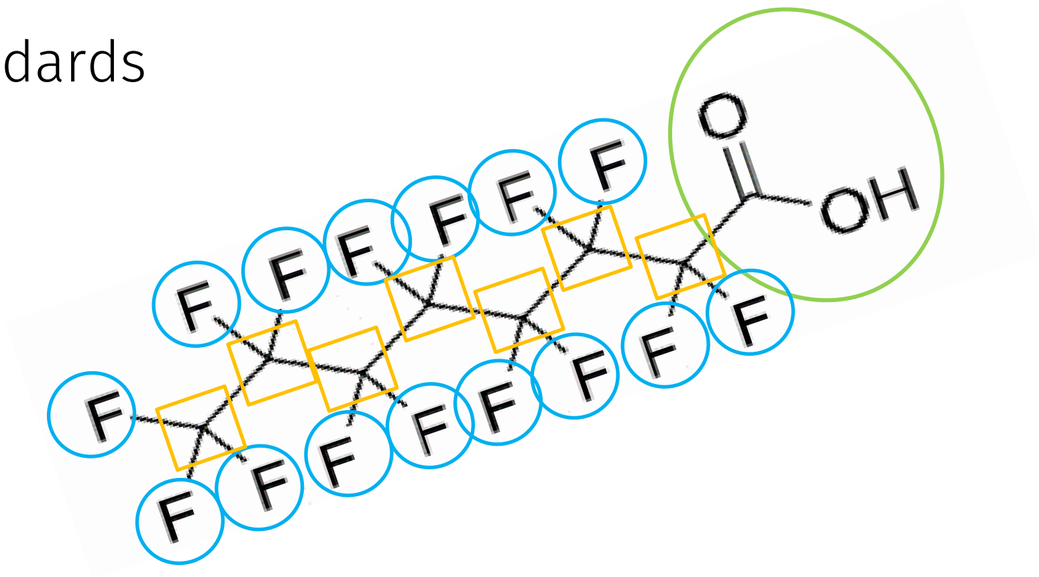
February 28, 2023

AGENDA

- Permitting in the absence of numeric standards
  - Pre-2022 Wisconsin
- Wisconsin's PFOA and PFOS Standards
  - Post-2022 Wisconsin
- Wisconsin's Interim Biosolids Strategy



Permitting PFAS in the Absence of Numeric Standards

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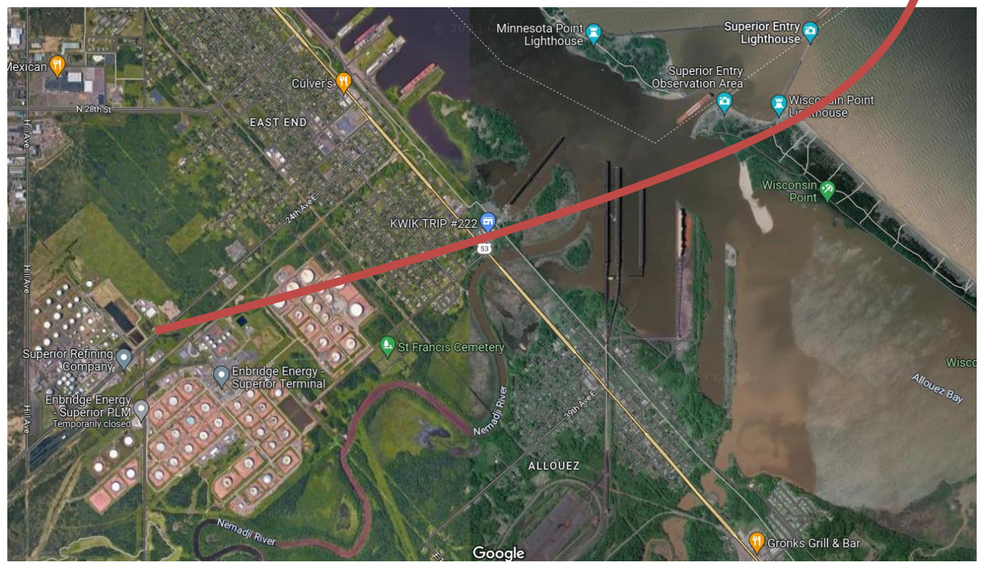
Husky Refinery Fire

- Explosion in Spring 2018
  - AFFF used, collected in stormwater ponds on-site
  - Husky needed to dewater ponds, but they were contaminated with PFAS



Authorities (other than numeric standards)

✗ Narrative Standards – Can be difficult to translate into a numeric limit, requires new individual permit

- "Substances… which are toxic or harmful to humans… shall not be present in amounts found to be of public health significance"

✗ Secondary Value Limits – Too long of a process for an immediate need, sets de facto standard without rulemaking

- Calculate a limit based on toxicology data in an individual permit

✗ Neighboring states' standards (on interstate waters) – Not an interstate water

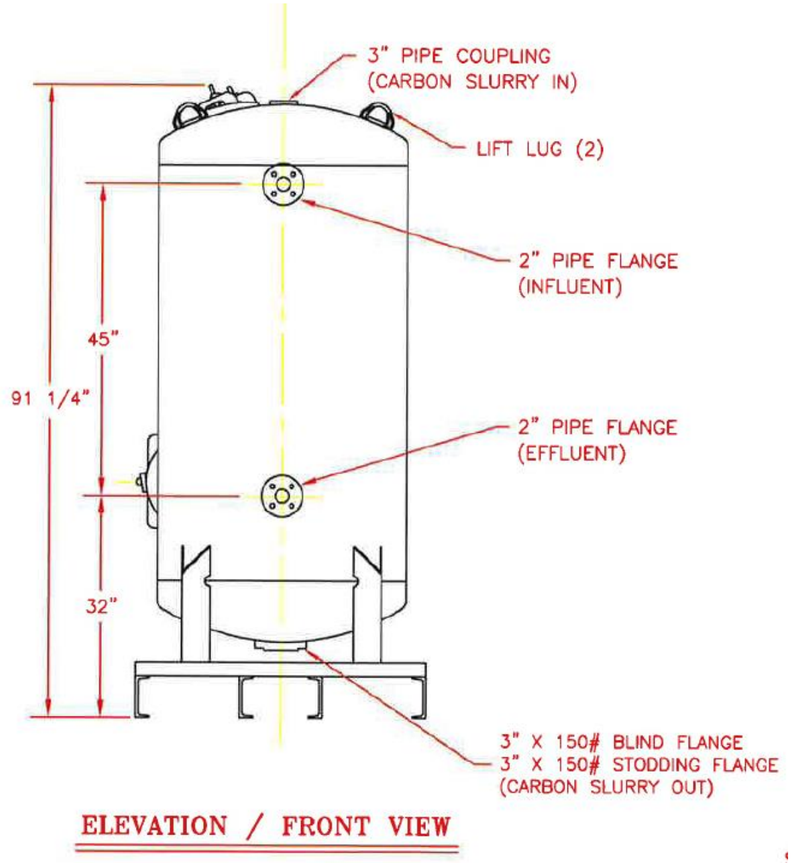
- 40 CFR 122.4(d) - shall ensure compliance with standards of all affected states

○ General Permit Eligibility Criteria

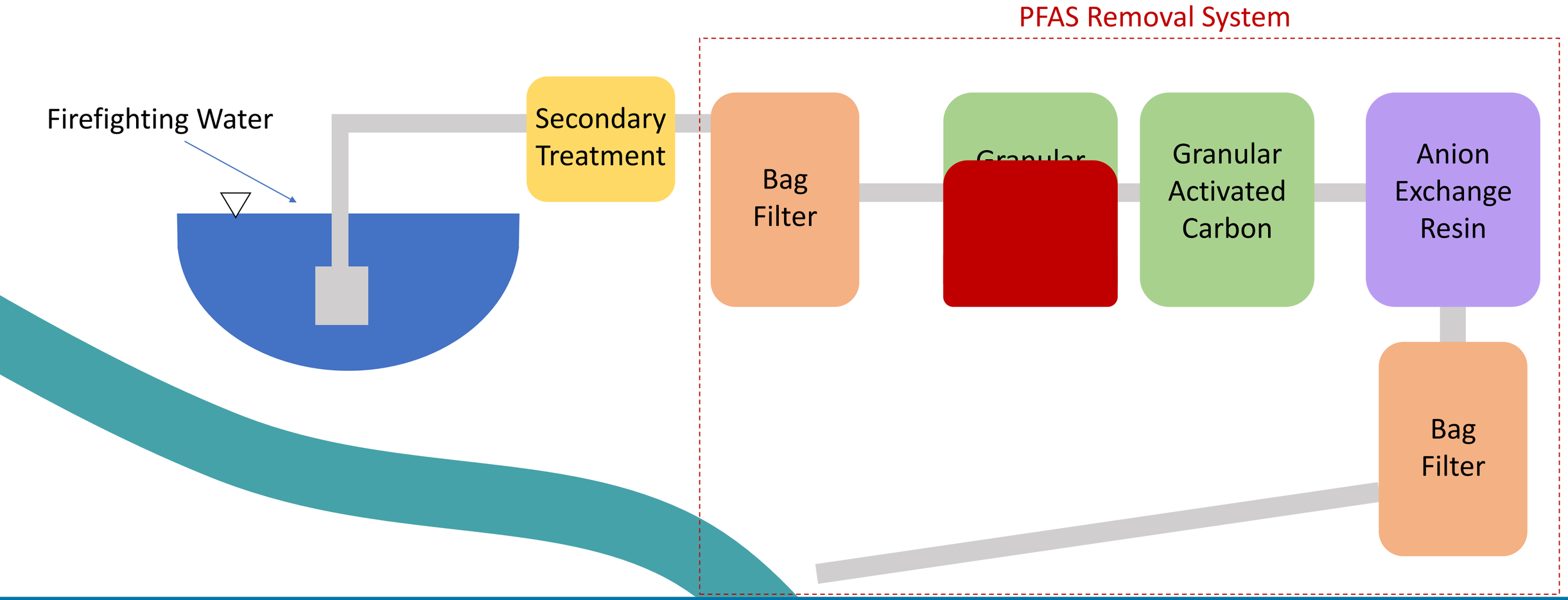
- Discharges not covered: "Discharges containing substances that will have a reasonable potential to exceed surface water quality standards"

WI's APPROACH TO PFAS IN GENERAL PERMITS

- Where a discharge contains elevated PFAS concentrations:
  - Firefighting water with Class B foam
  - Construction dewatering near contaminated sites
  - Pump and treat remediation
  - Well purging
  - Pilot tests for drinking water systems
- Coverage letter identifies DNR's expectations with regards to controlling releases of PFAS
- Failure to remove PFAS
  = no longer eligible for GP
  = termination of GP coverage, if not corrected
  ≠ enforceable limit violation



Treatment Example: Husky Refinery



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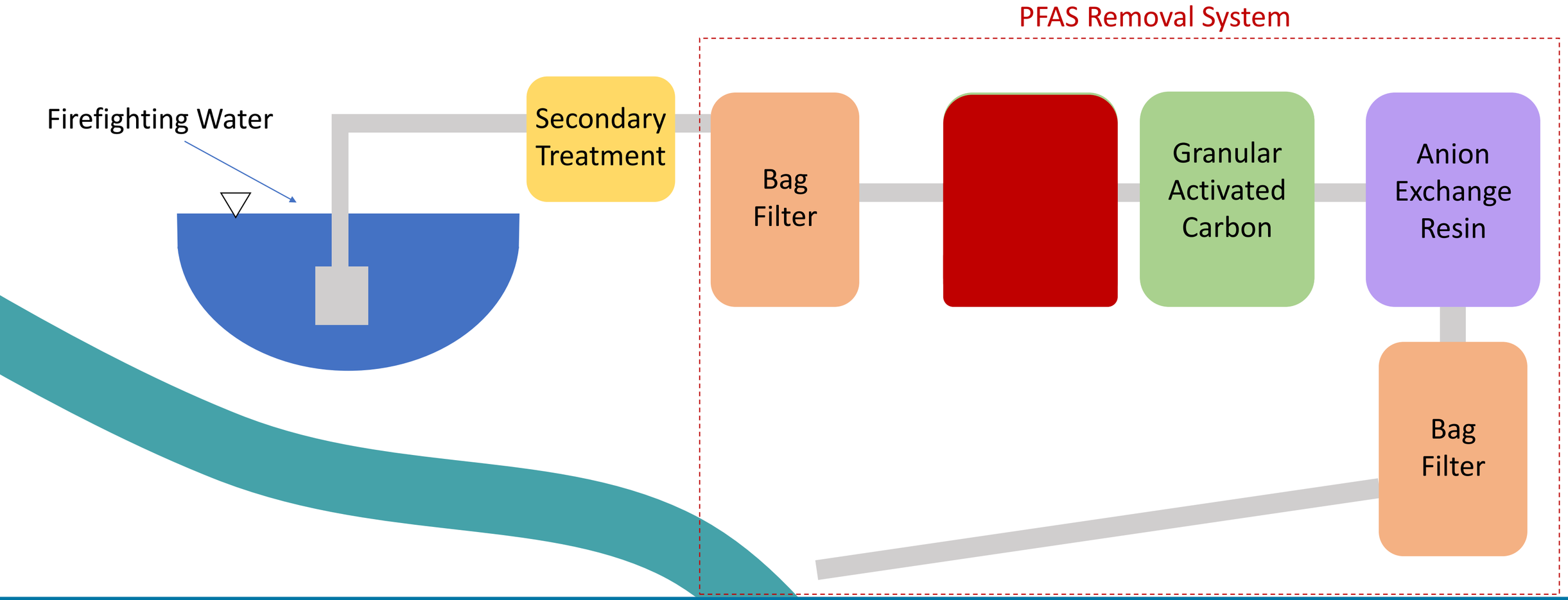

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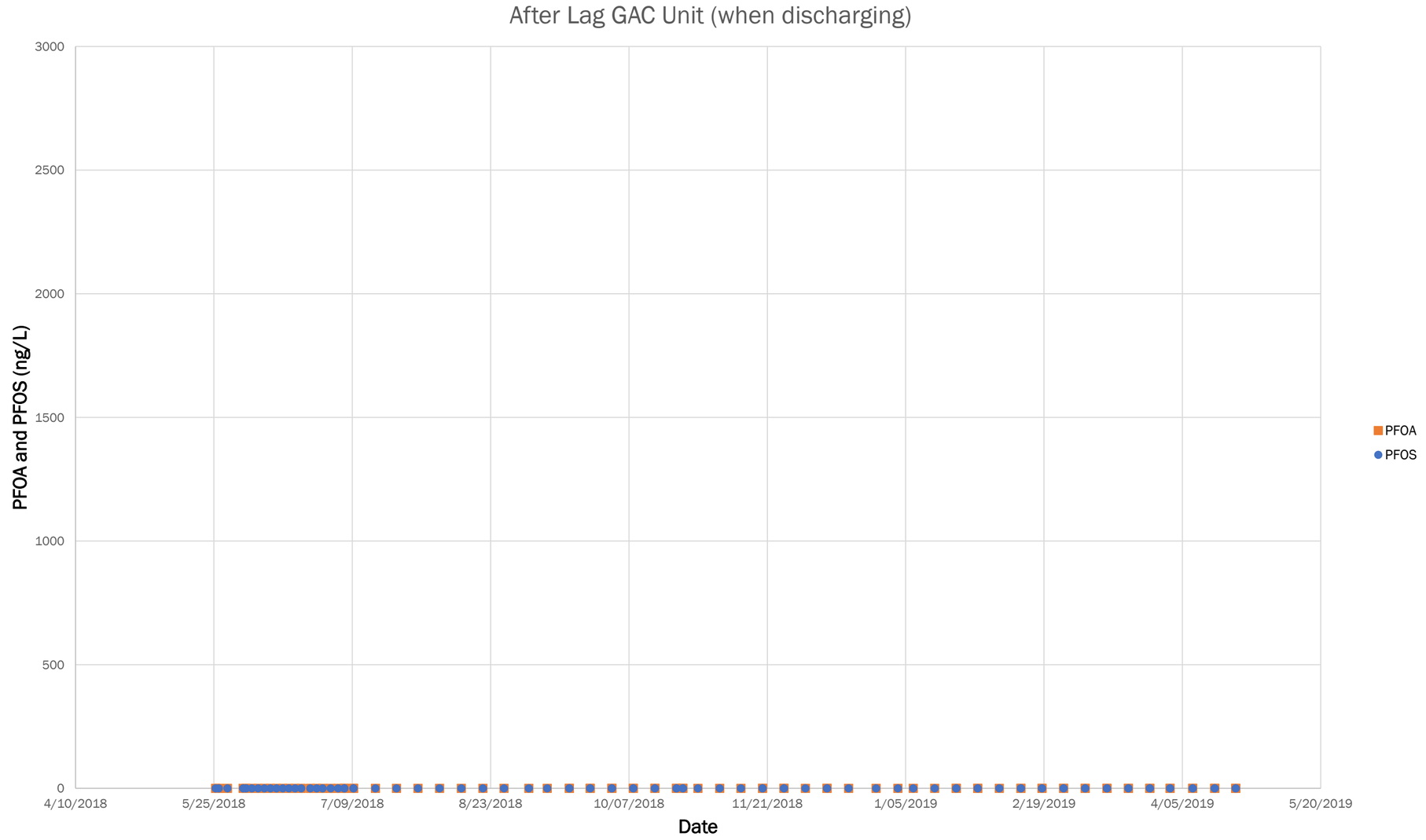
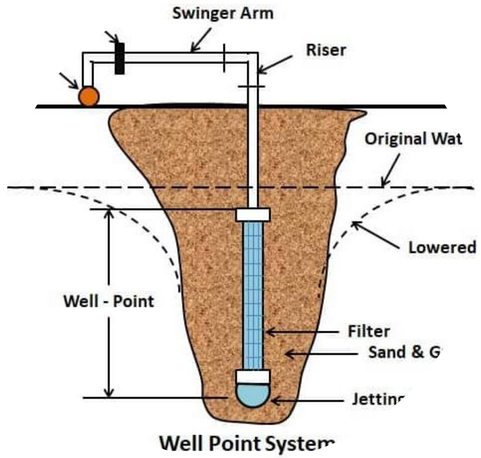


WI's APPROACH TO PFAS FOR INDIRECT DISCHARGES

- 40 CFR 403(1)(a) prohibits pass through or interference
- Pass through: discharge to sewer causes a violation of POTW's permit
  - Includes narrative toxics standard
- Interference: discharge causes disruption of POTW treatment processes, operations, or sludge processes, use, and disposal
  - Foaming at plant
  - Inability to landspread biosolids

OUTCOMES IN THE ABSENCE OF NUMERIC STANDARDS



Wisconsin's PFOS and PFOA Water Quality Standards Rule

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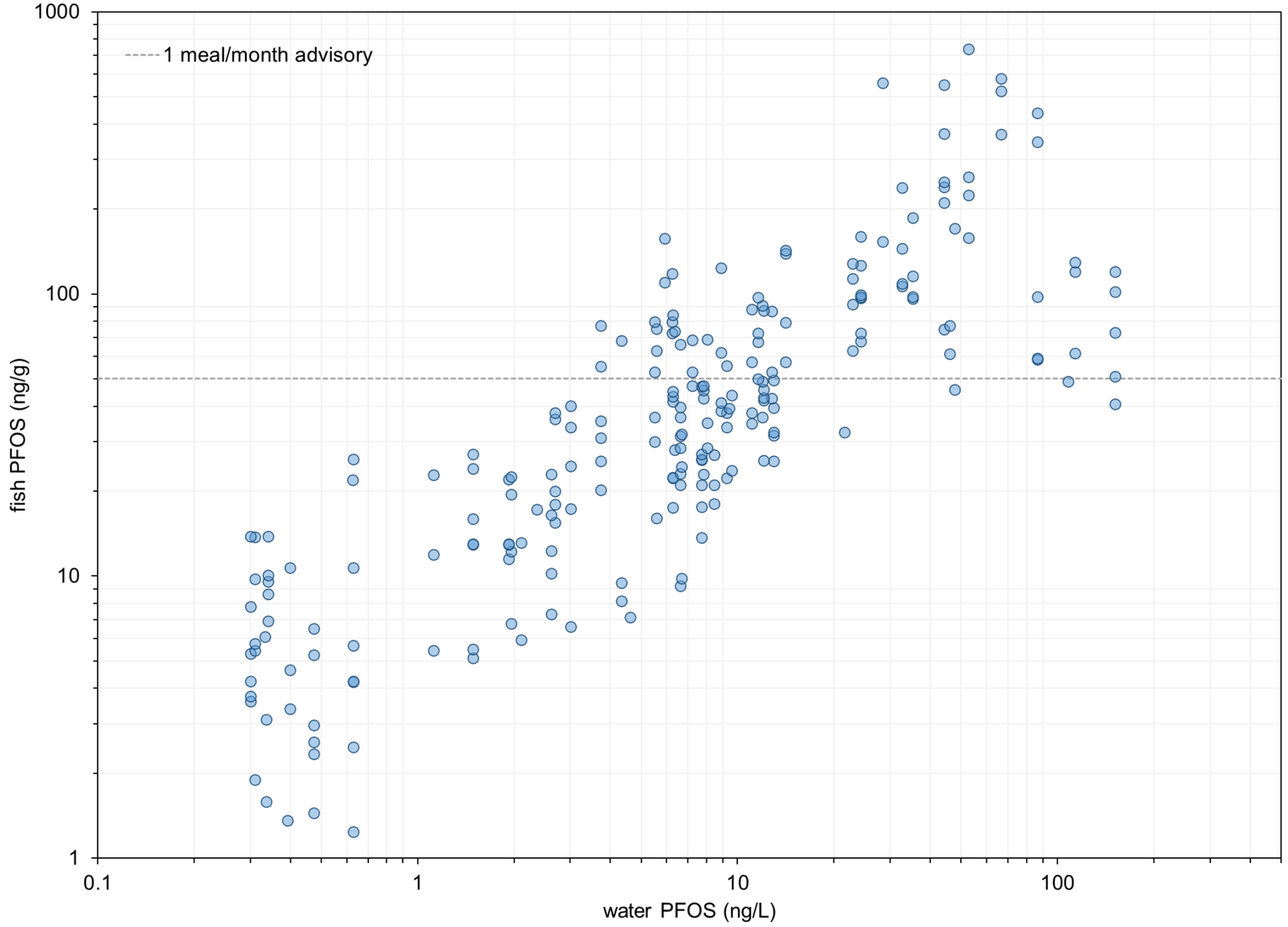
PFOS Water Quality Standard

PFOS = 8 ng/L

Prevents issuance of 1 meal/month fish consumption advisory



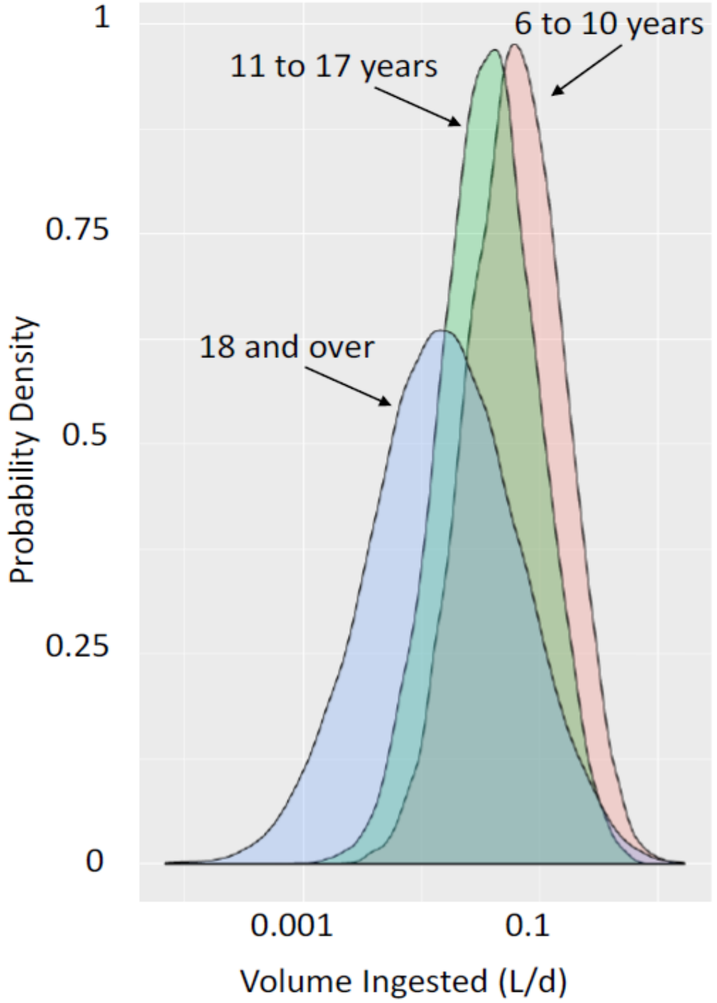
PFOA Water Quality Standard

PFOA = 20 ng/L in drinking water sources

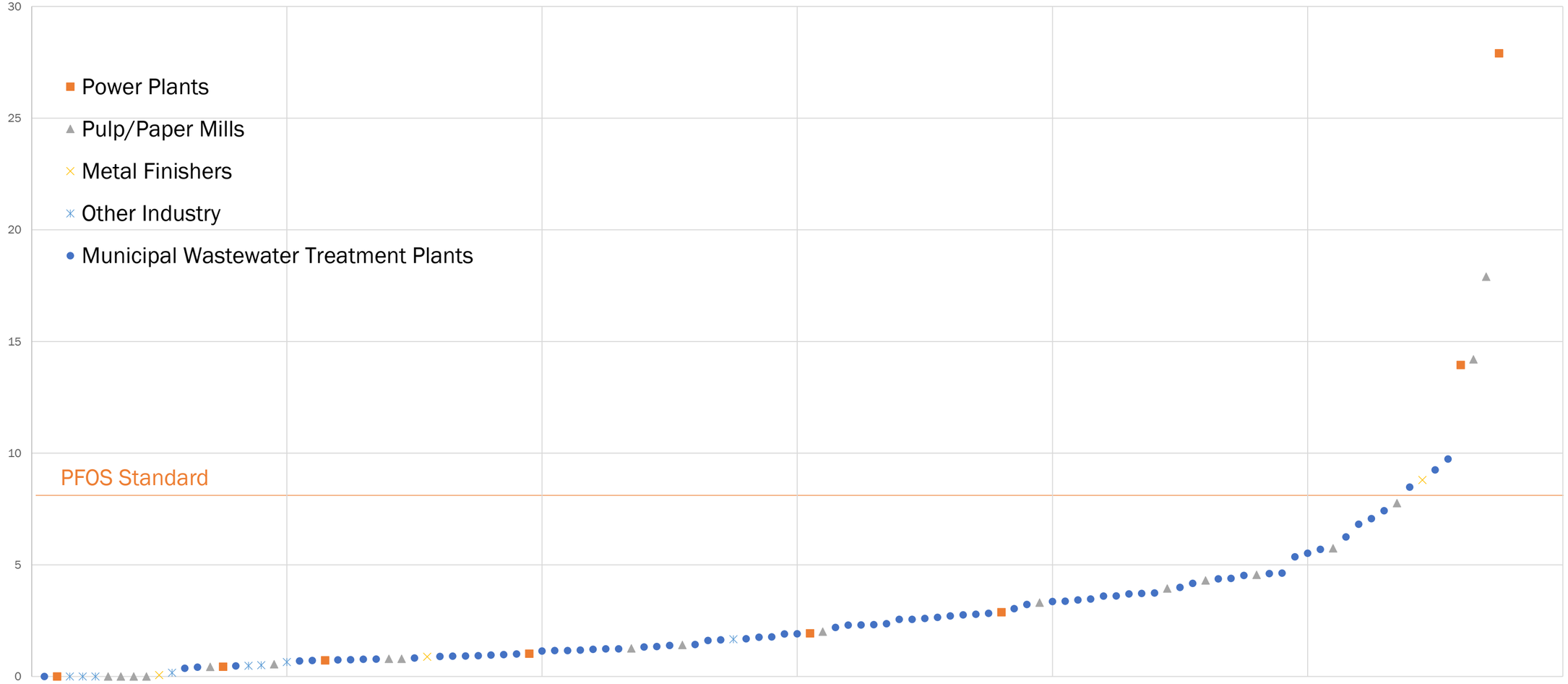
Protects against daily ingestion

95 ng/L in all other waters

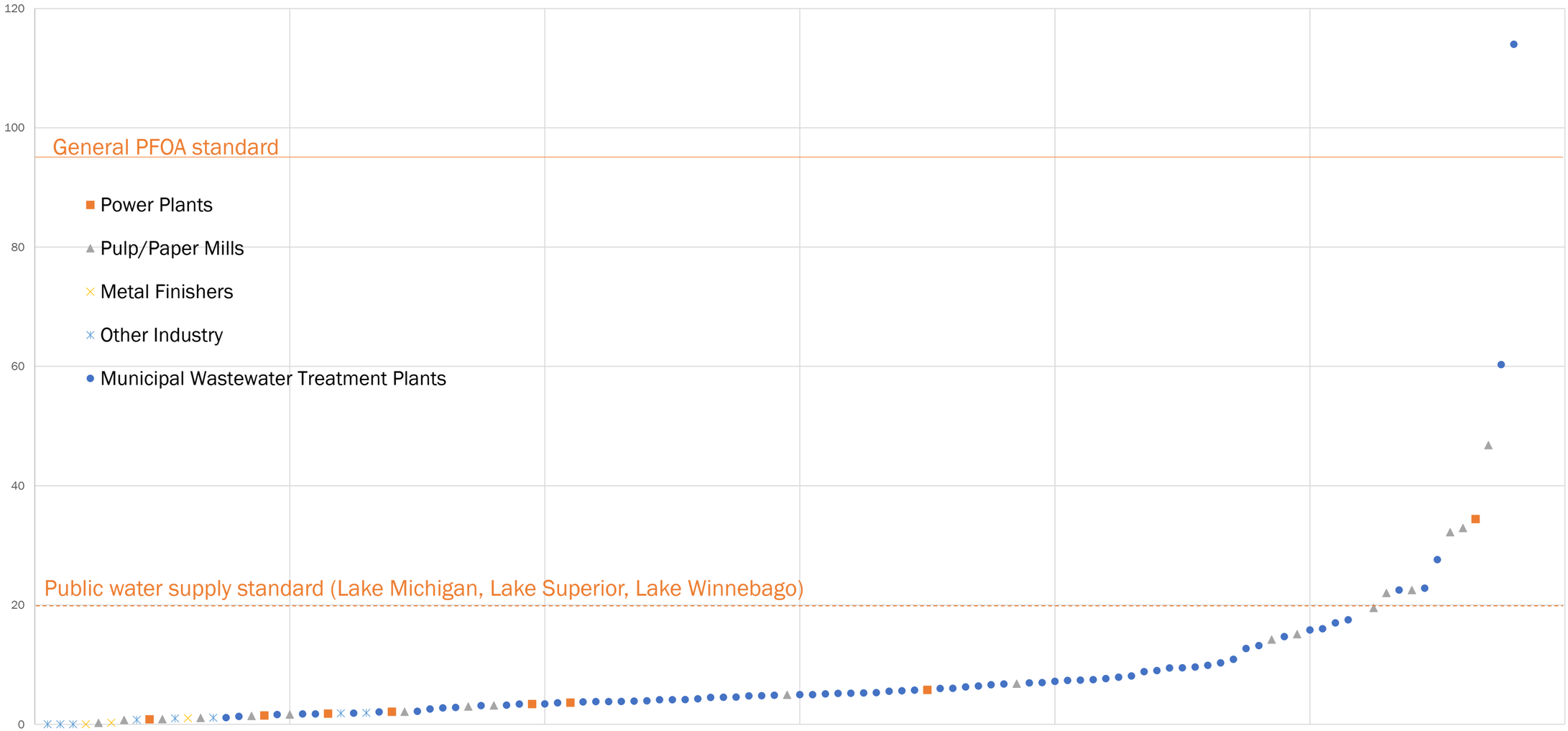
Protects against incidental ingestion by children during recreation



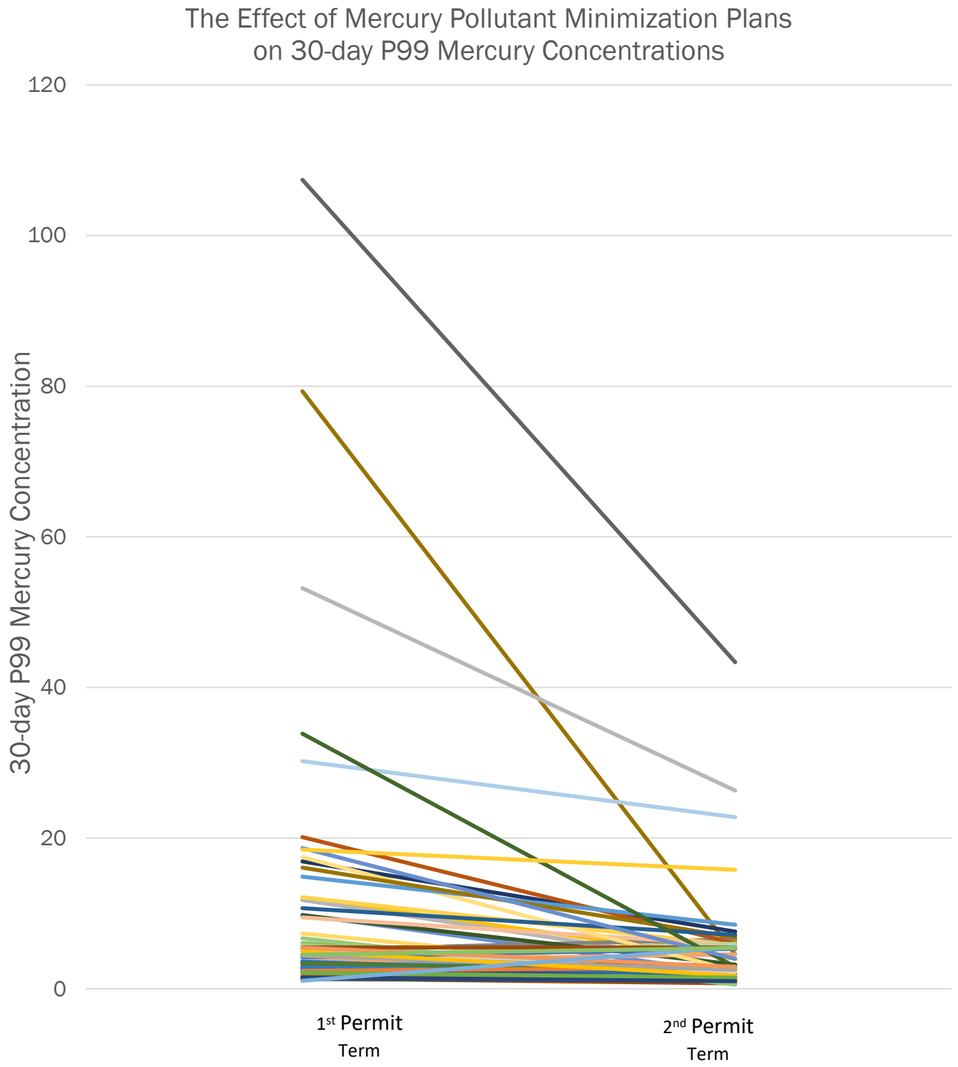
Monitoring Efforts - PFOS in Effluent



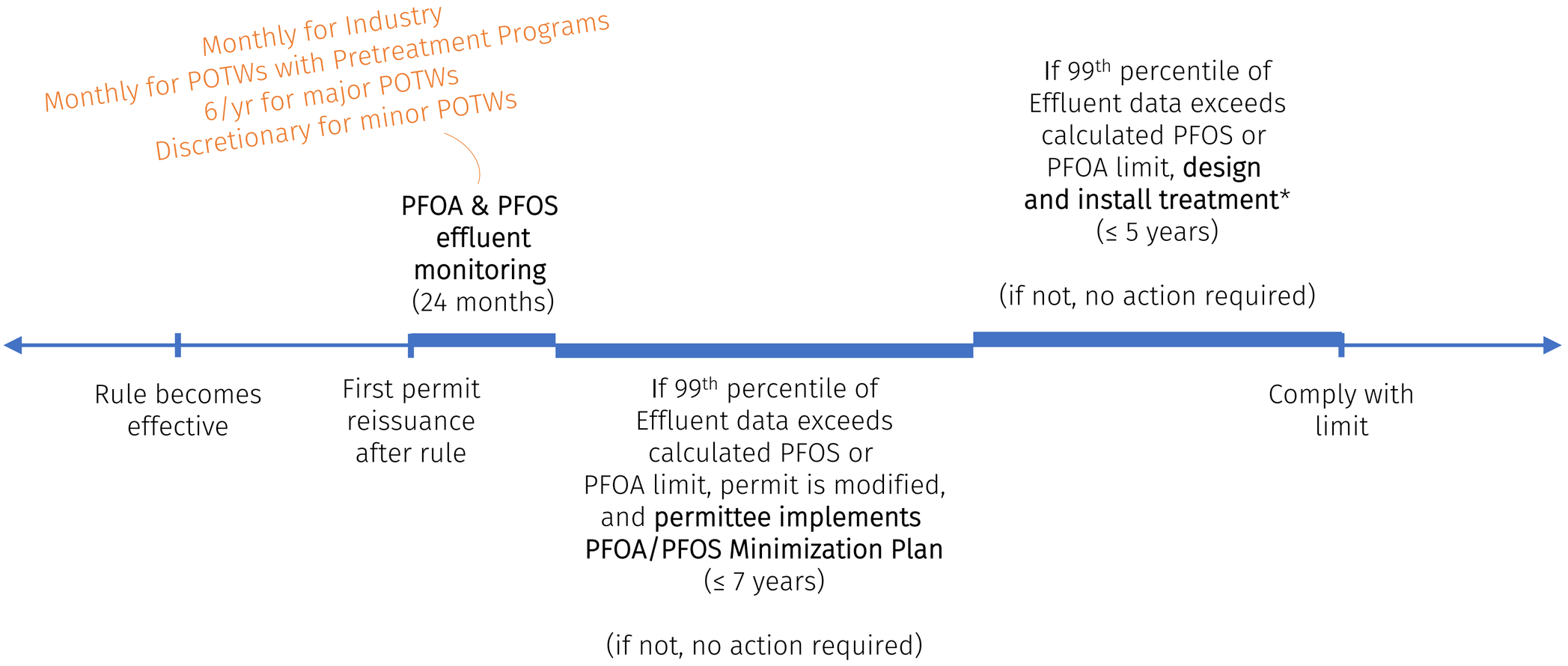
Monitoring Efforts - PFOA in Effluent



Pollutant Minimization Plan Approach



Implementation Process



PFOA/PFOS Minimization Plans

- Permittee drafts PMP and DNR reviews
- Implement PMP within 12 months of approval
- PMP shall include:
  - Documentation of previous PFAS-reduction activities
  - Proposed PFAS-reduction activities
  - Documentation/assessment framework

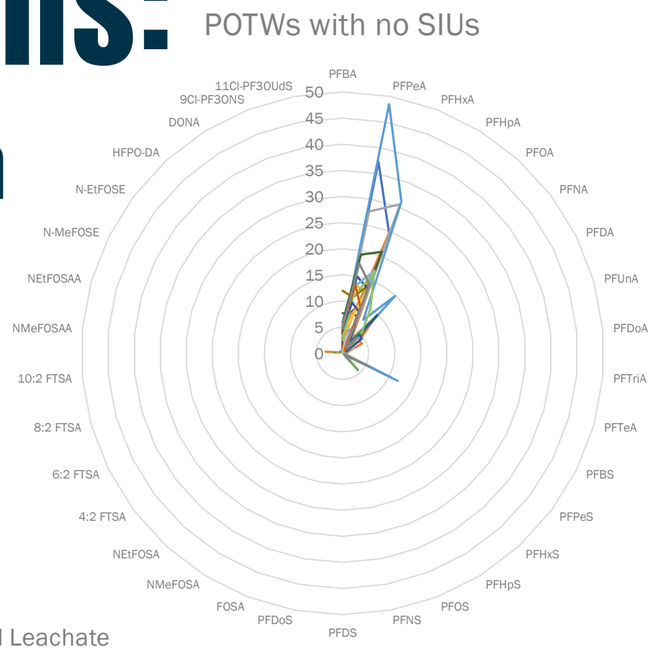
Example PMP Actions:
Addressing ongoing PFAS sources

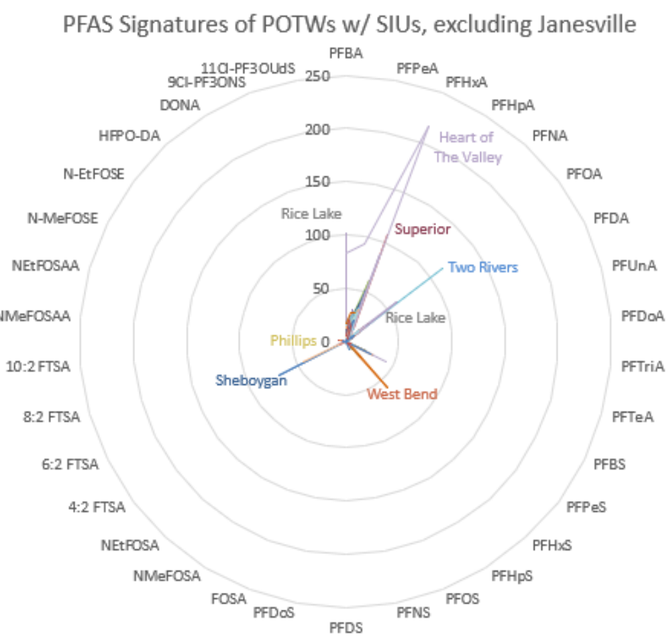
- POTWs: Address SIUs and commercial sources
- Industries: Sampling to establish mass balance
  - Source water
  - Raw materials
  - Chemical additives
- End intentional use of PFOS, PFOA, and precursors
- Screen new additives by environmental staff at facilities
- If essential materials contain PFOS, PFOA, or precursors, search for alternative suppliers and/or monitor additives' PFAS concentrations

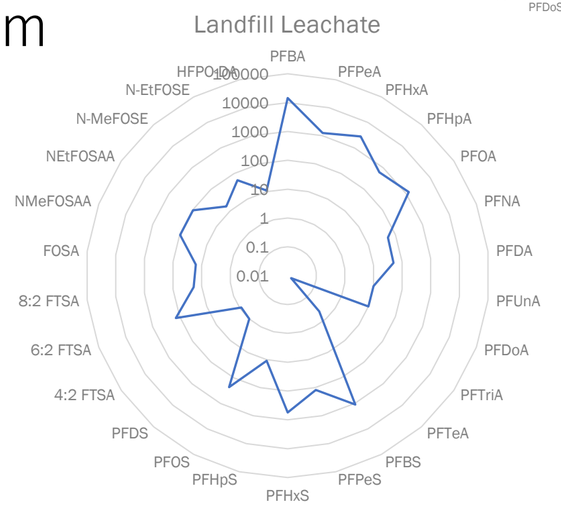
Example PMP Actions:

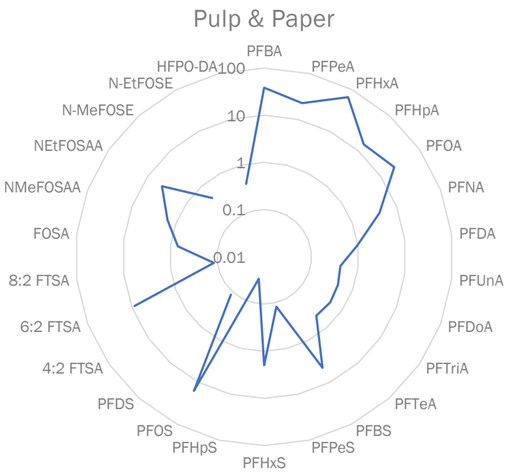
Addressing legacy contamination

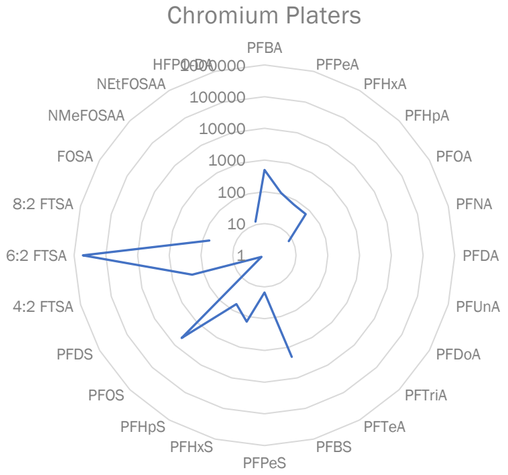
- Review historic PFAS usage and locations
- PFAS fingerprinting analysis
- Sampling throughout system to identify legacy source
- Clean, line, or replace pipes/tanks









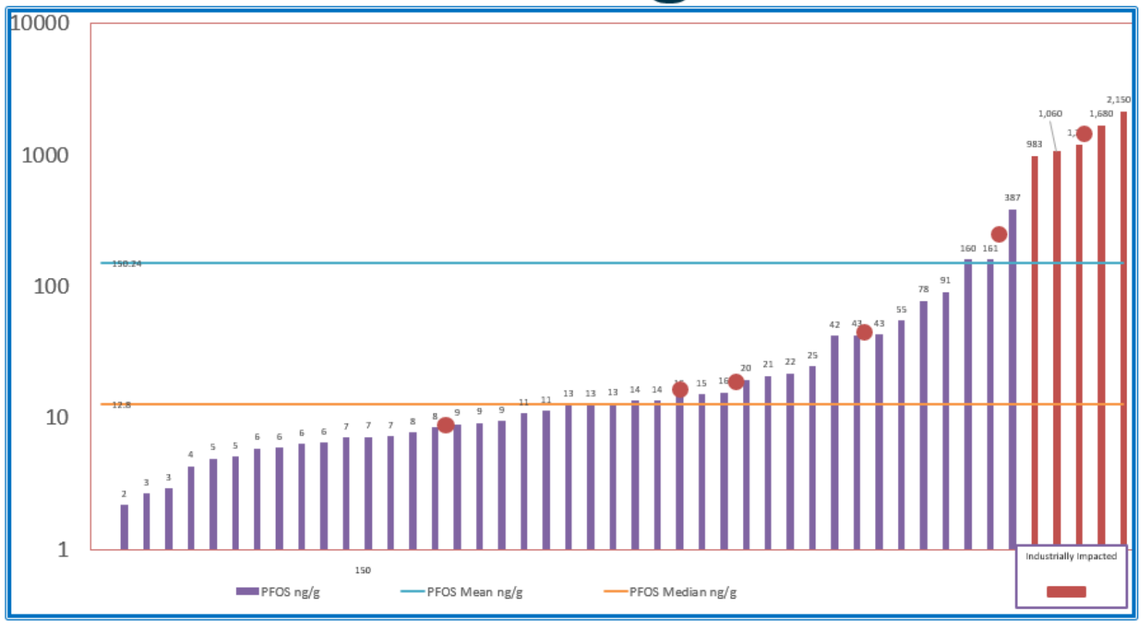


Wisconsin's Interim Biosolids Strategy

PFAS Interim Biosolids Strategy

- EPA Risk Assessment: Coming Late 2024
- WI's Interim Strategy (advisory)
  - 0-19 ppb PFOA+PFOS
    - Share results with landowner
    - Track application rates
  - 20-49 ppb PFOA+PFOS
    - Commence Source Reduction
  - 50-149 ppb PFOA+PFOS
    - Notify DNR
    - Max application rate of 1.5 dry tons/ac
  - >150 ppb PFOA+PFOS
    - No land application. Seek alternative disposal options.
- Next Steps

Biosolids - Michigan data



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"WILD WISCONSIN:
OFF THE RECORD"

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