



# *PFAS Issues for Great Lakes Ports Association*

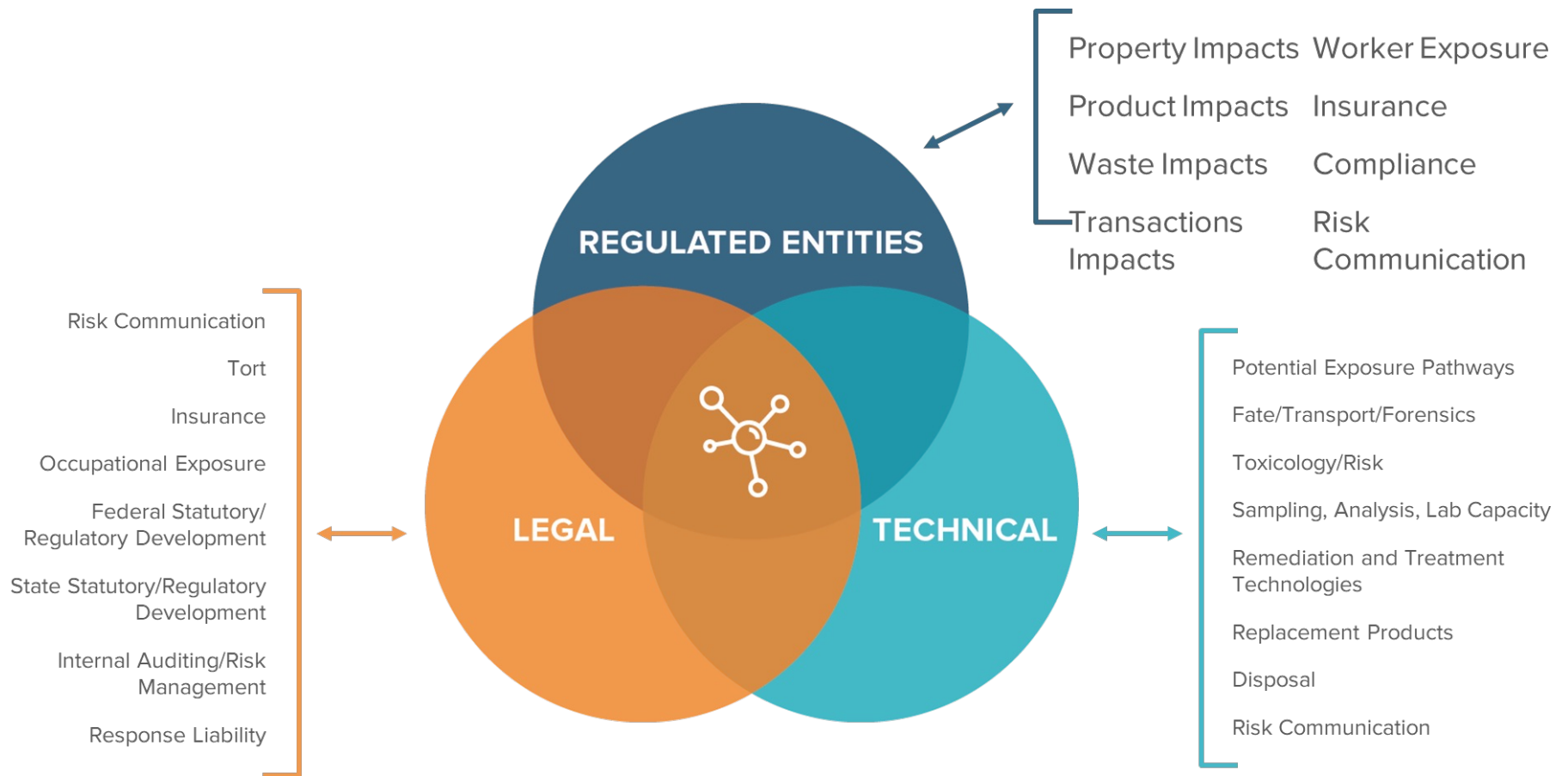
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# PFAS Issues

- Everything PFAS
- What are PFAS?
- PFAS Specifics
- PFAS Sources
- PFAS Drinking Water Standards
- PFAS CERCLA Designations
- PFAS – Other Remediation Rules
- PFAS - NPDES Permit Issues
- Questions?

# Everything PFAS



# What are PFAS?

- “PFAS” means a per- or poly-fluoroalkyl substances
- Thousands of compounds

## Perfluorooctane sulfonate (PFOS)



## Perfluorooctane carboxylate (PFOA)



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

Source: ITRC PFAS AFFF Fact Sheet.

[https://pfas-1.itrcweb.org/wp-content/uploads/2018/03/pfas\\_fact\\_sheet\\_fate\\_and\\_transport\\_\\_3\\_16\\_18.pdf](https://pfas-1.itrcweb.org/wp-content/uploads/2018/03/pfas_fact_sheet_fate_and_transport__3_16_18.pdf)

# PFAS Specifics

- Primary focus is on PFOS and PFOA, as well as up to about 30 or so others
- “Long chain” vs “Short chain”

Table 3-2. Short-chain and long-chain PFCAs and PFSA

Short-chain PFCAs				Long-chain PFCAs				
PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnA	PFDoA
PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFNS	PFDS	PFUnS	PFDoS
Short-chain PFSA			Long-chain PFSA					

Source: ITRC PFAS AFFF Fact Sheet.

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# PFAS Sources

- PFAS have been used extensively, mostly because of their surfactant properties:
  - Carpets/Fabrics water resistance
  - Consumer products (e.g. cosmetics)
  - Textiles
  - Paper/cardboard packaging (including for food)
  - Firefighting foams (AFFF)
  - Cookware non-stick coating
  - Electroplating (fume suppressant, de-mister, wetting agent)
  - Paints/coatings

# PFAS Drinking Water Standards

- Final rule published April 26, 2024
- Effective June 25, 2024
- Rule sets Max Contaminant Levels (MCLs) for 5 PFAS substances (4 ppt for PFOS and 4 ppt for PFOA)
- Also sets MCL of Hazard Index = 1 for combination of 4 PFAS (PFNA, PFBS, GenX, PFHxs)
- If your plant provides drinking water to employees and guests from its own supply (not from city), then you have to meet the MCLs
- EPA provides 3 years to gather data, then another 2 years till have to comply
- **THERE IS LITIGATION**

# PFAS CERCLA Designations

- EPA looking to designate some PFAS as hazardous substances under CERCLA (Superfund)
- That would make generators, transporters, and site owners/operators liable for PFAS cleanups
- Designation of PFOA and PFOS – final rule published May 8, 2024
- EPA also issued enforcement guidance, mainly to protect (to some extent) public entities
- EPA also considering designating other PFAS substances – no action likely anytime soon
- Litigation has been filed challenging designations
- But in meantime, expect that if you send or sent PFAS-containing wastes for disposal at any time, you may get brought into a cleanup action by EPA or by other responsible parties



# PFAS – Other Remediation Rules

- RCRA – EPA moving toward possible regulation of some PFAS-containing wastes as hazardous wastes under RCRA
- EPA PFAS destruction and disposal guidance – 2<sup>nd</sup> version released recently
  - Favors deep wells, RCRA licensed treatment/disposal facilities, licensed incinerators
- Potential Clean Air Act regulation of PFAS air emissions from incinerators
- States can issue own remediation requirements – some have

# PFAS – NPDES Permit Issues

- EPA 12/5/22 Memo on NPDES Permits
- State inclusion of PFAS in permits
- EPA developing water quality criteria
  - Draft aquatic numbers – commented on
  - Human health numbers – mid 2024 draft
- Test methods
  - 1633 – EPA says final and validated, to be proposed for approval later in 2024
  - 1621 – screening method – EPA says final

# Questions?

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