

Not Your Grandfather's
Corn Maze –
Regulatory and Legal
Responses to
Challenges Faced by
Agriculture Due to PFAS
Contamination



Michigan farmer sues auto supplier after PFAS taints cattle herd

Published: Aug. 26, 2022, 8:00 a.m.



Grostick Cattle Farm sues Tribar over PFAS
1,164 shares
By Garret Ellison | g Ellison@mlive.com

mlive. August 26, 2022.

“

Jason Grostick is feeding cattle that he can't sell. He's growing grain that nobody will buy. In his words, the farm is "slowly but surely going bankrupt."

[T]he state of Michigan issued an advisory for beef from his organic farm after testing found elevated levels of toxic 'forever chemicals' known as PFAS in the meat they sell.

”

US food pesticides contaminated with toxic 'forever chemicals' testing finds

PFAS are present at 'potentially dangerous' levels in widely used chemicals sprayed on food crops destined for Americans' plates



Spraying pesticide at grape vineyard in the San Joaquin Valley, California. Photograph: Education Images/UiG/Getty Images

The Guardian. May 7, 2023.

“

I can't imagine anything that could make these products any more dangerous than they already are, but apparently my imagination isn't big enough," said Nathan Donley, environmental health science director at the Center for Biological Diversity (CBD), which co-authored the study. "The EPA has to take control of this situation and remove pesticide products that are contaminated with these extremely dangerous, persistent chemicals."

”

“

[W]astewater treatment plants like Deer Island were not built to handle the toxic "forever chemicals" known as PFAS.

The treatment process concentrates PFAS chemicals in the sludge, and therefore in the fertilizer.

Fertilizer made from Deer Island sludge would be allowed under Michigan's specs but not Connecticut's. Maine banned the use of sludge-based fertilizers altogether in 2022...Massachusetts has no guidelines, but regulators are "exploring options."

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Our sewage often becomes fertilizer. Problem is, it's tainted with PFAS

06:13

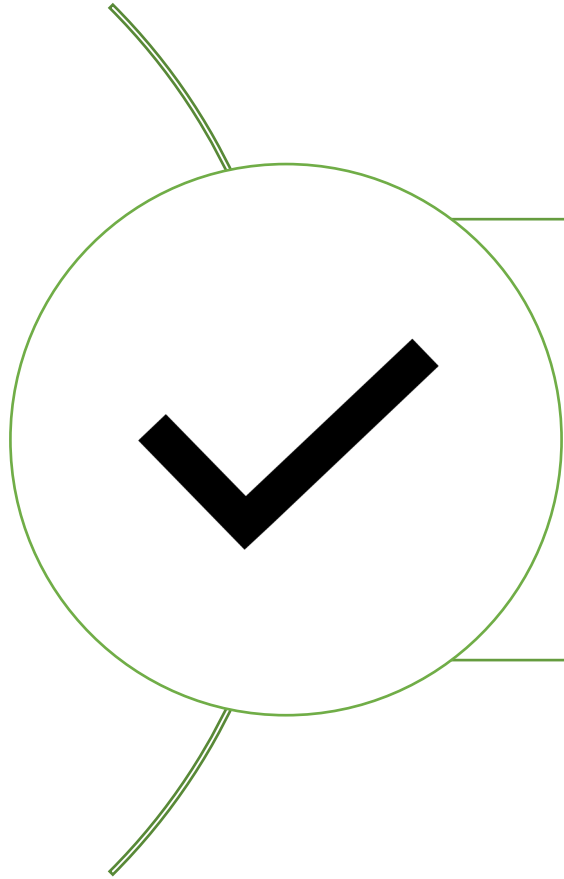
March 30, 2023 By Barbara Moran



Fertilizer containing sludge being applied to farmland. (Courtesy North East Biosolids and Residuals Association)

WBUR. March 20, 2023.

Question One:

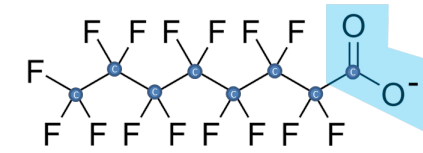


What are PFAS?

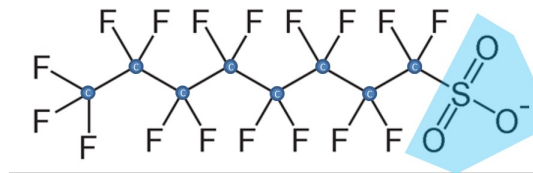


Characteristics

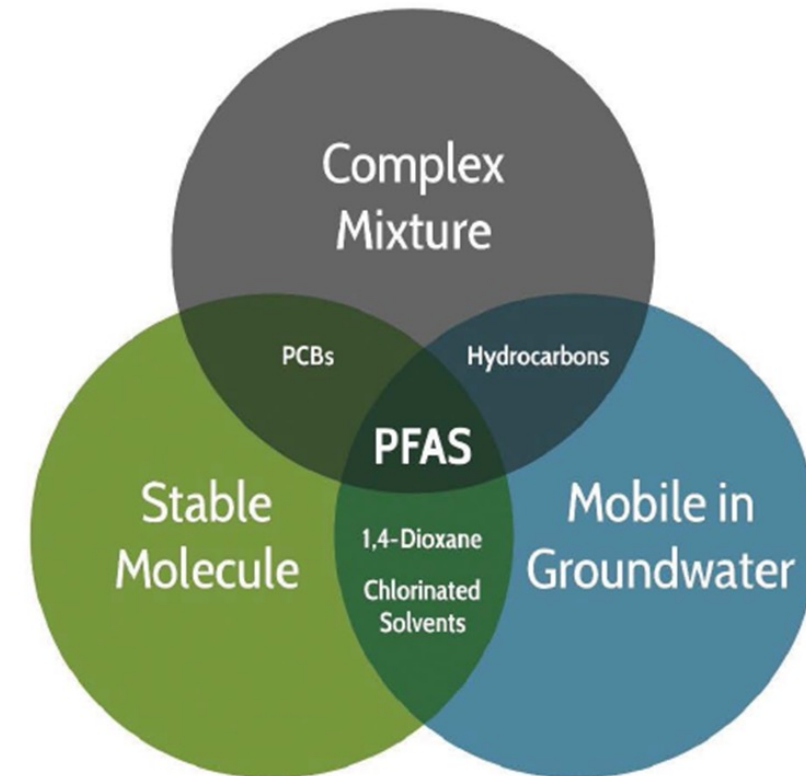
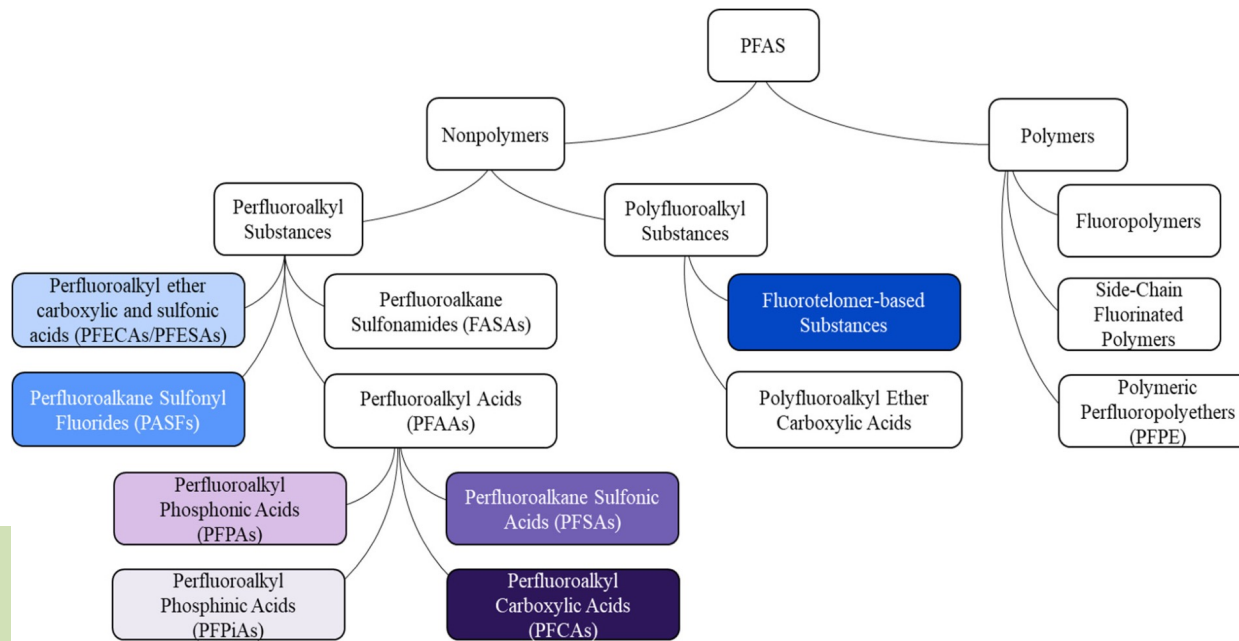
- Class of compounds with strong, stable C-F bonds
- Hydrophobic (water-hating) and AND lipophobic (oil-hating)
- Relatively low volatility and high solubility
- Mobile in the environment
- Resistant to degradation
- No natural environmental source
- Regulated at VERY low levels (parts per trillion)



PFOA
perfluorooctanoic acid



PFOS
Perfluorooctanesulfonic acid



PFAS Industrial Uses

- Wide range of industrial and commercial applications
- Uses date back to the 1940s
- Often in relatively small quantities
- Proprietary formulations

PFAS ¹	Development Time Period							
	1930s	1940s	1950s	1960s	1970s	1980s	1990s	2000s
PTFE	Invented	Non-Stick Coatings			Waterproof Fabrics			
PFOS		Initial Production	Stain & Water Resistant Products	Firefighting foam				U.S. Reduction of PFOS, PFOA, PFNA (and other select PFAS ²)
PFOA		Initial Production	Protective Coatings					
PFNA					Initial Production	Architectural Resins		
Fluoro-telomers					Initial Production	Firefighting Foams		Predominant form of firefighting foam
Dominant Process ³		Electrochemical Fluorination (ECF)						Fluoro-telomerization (shorter chain ECF)
Pre-Invention of Chemistry /		Initial Chemical Synthesis / Production			Commercial Products Introduced and Used			



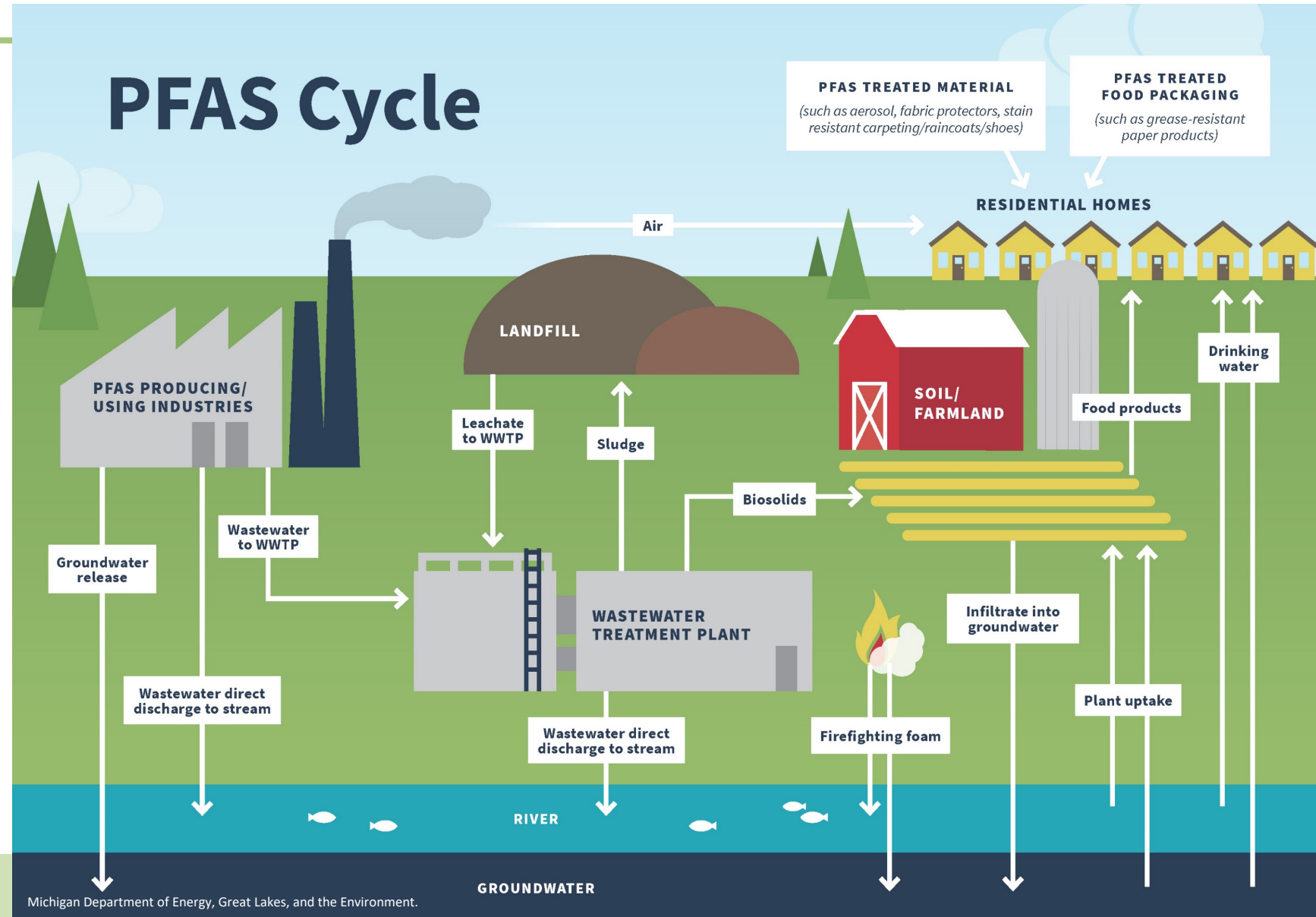
Source: Pinellas County, Florida.



PFAS in Agricultural Products

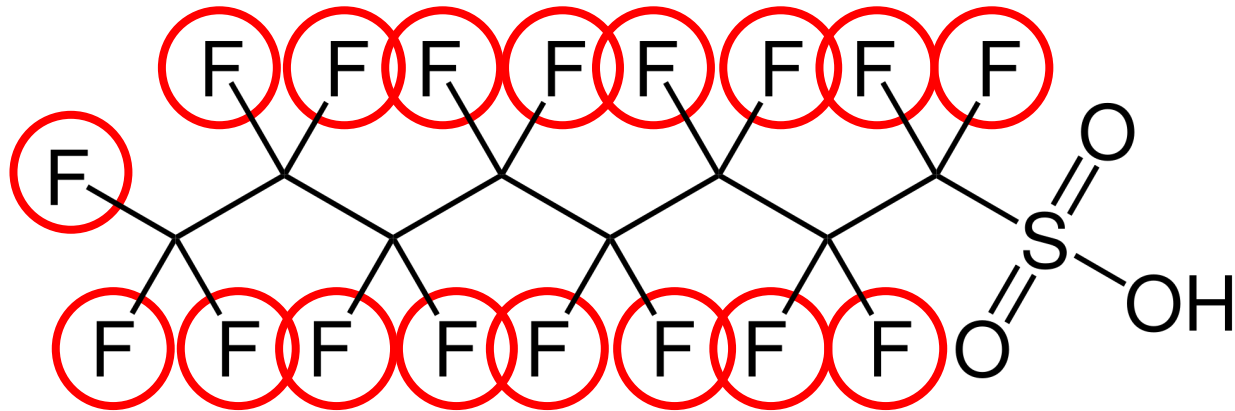
Common Sources

- Land-applied sewage sludge or biosolids
- Industrial or municipal compost
- Fire fighting foam
- Irrigation water
- Pesticides
- Atmospheric Deposition

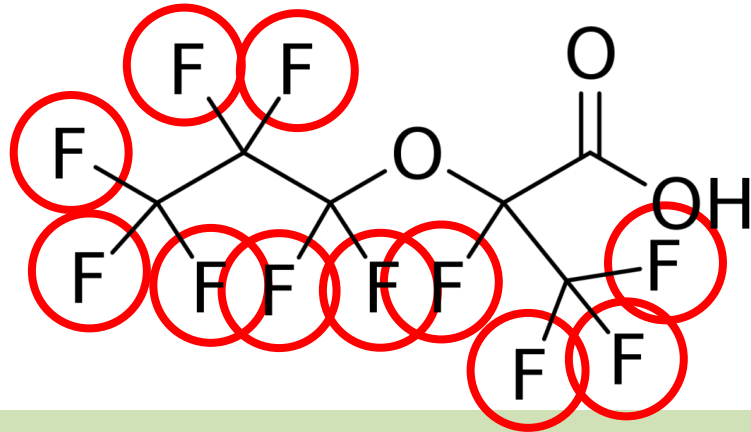


What is a PFAS Compound?

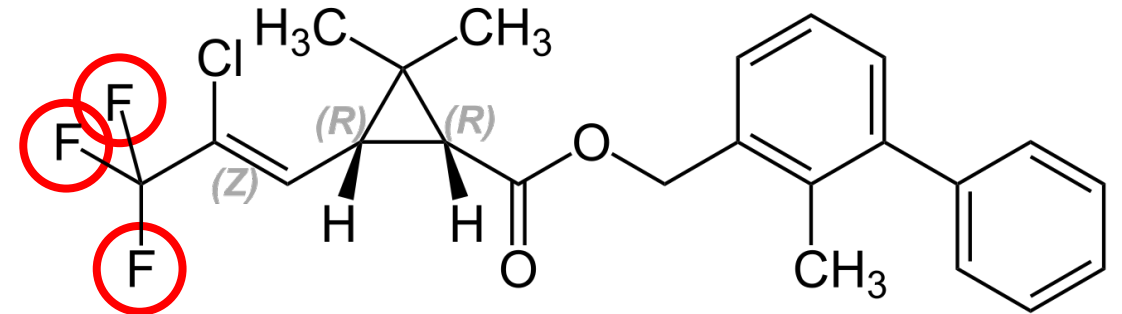
Perfluorooctanesulfonic acid (PFOS)



GenX Compounds



**Bifenthrin
(Insecticide)**



Question Two:



What is the significance of PFAS to the agriculture industry?

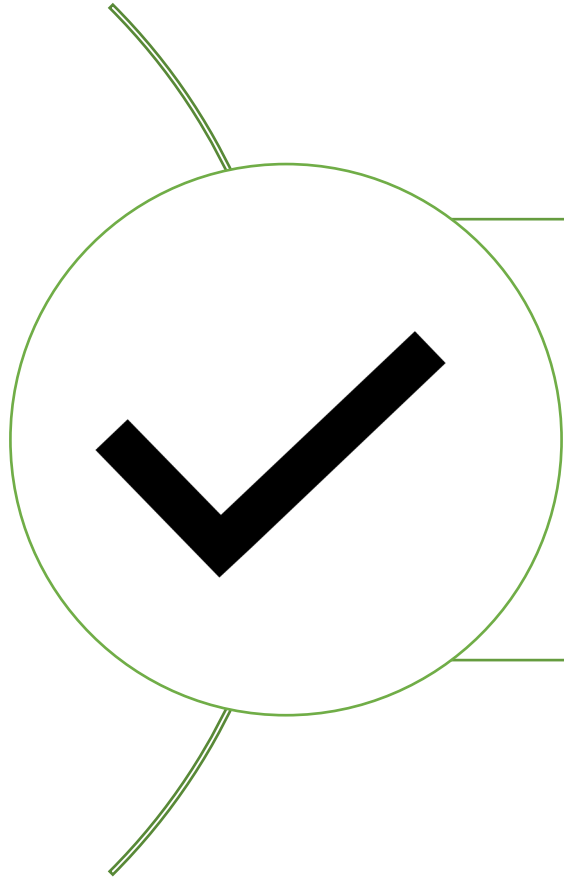


Significance for Agriculture and Food Processing Industries

- Property Damage
- Stranded Assets
- Operating Expense
- Indemnity Risk
- Litigation Risk
- Regulatory Compliance



Question Three:



What is the current regulatory and litigation environment for PFAS?



Disclaimer

When discussing the regulatory and litigation environment of PFAS, we will cover:

- What are current regulations covering PFAS.
- What are some of the ramifications of the new and proposed PFAS regulations.
- What litigation around PFAS are we seeing.

Disclaimer: This presentation does not constitute legal advice. I am not licensed to practice law in most states. Therefore, if there are additional PFAS issues or comments it may warrant engaging an attorney licensed to practice law in your particular state(s).



Federal Regulations for PFAS

Environmental Protection Agency (EPA)

- **March 2021:** Regulatory Determinations for Contaminants on the Fourth Contaminant Candidate List.
 - Includes final determination to regulate PFOA and PFOS in drinking water.
- **October 2021:** Published PFAS Strategic Roadmap—committing to:
 - Bolder new policies to safeguard public health,
 - Protect the environment, and
 - Hold polluters accountable.
- **November 2022:** EPA released “[A Year of Progress Under EPA’s PFAS Strategic Roadmap:](#)”
 - Underscores key actions taken by EPA during the first year of implementing the PFAS Roadmap.



EPA Cont'd

- **March 2023:** Proposed PFAS National Primary Drinking Water Regulation (NPDWR) for **six** PFAS including:
 - Perfluorooctanoic acid (PFOA), Perfluorooctane sulfonic acid (PFOS), Perfluorononanoic acid (PFNA), hexafluoropropylene oxide dimer acid (HFPO-DA, commonly known as GenX Chemicals), Perfluorohexane sulfonic acid (PFHxS), and Perfluorobutane sulfonic acid (PFBS).
 - Proposed PFAS NPDWR does not require any actions *until* it is finalized.
 - If fully implemented, expected to prevent thousands of deaths and reduce tens of thousands of serious PFAS-attributable illnesses.
- **2023:** Regional Listening Sessions: EPA has already held over 10 virtual regional listening sessions in 2023.
 - Includes a session focused on each EPA Region and a specific session for Tribal partners.



EPA Cont'd

Advance Notice of Proposed Rulemaking (ANPRM)

- **September 2022:** Seeking public input/data to consider future regulations on PFAS under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA/Superfund).
 - Seeking input and data regarding potential future hazardous substance designation under CERCLA.
 - If officially listed as hazardous substances:
 - EPA will have new authority to hold “potentially responsible parties” ***liable*** for cleanup of certain PFAS released into the environment.
 - Private parties would be able to bring cost recovery or contribution claims under CERCLA.
- **April 13, 2023:** ANPRM sought input on which additional PFAS compounds should be added as hazardous substances.



Food and Drug Administration (FDA)

- Assessing dietary exposure to PFAS.
- Publishes Analytical Results.
- Enforcement (since 2019):
 - FDA enforces PFAS in food based on health hazard analysis – EPA’s Toxic Reference Values (TRVs) (*low-level*) & National Health and Nutrition Examination Survey (NHANES) consumption data.
 - Nearly 800 samples of food in U.S. market:
 - Seafood,
 - Infant formula,
 - Lettuce,
 - Milk,
 - Bread,
 - Cheese, and
 - Etc....



Food and Drug Administration (FDA)

- 21 CFR (FDA) – Food Contact Materials
 - PFAS are regulated by FDA in food contact products.
 - Only PFAS authorized by FDA can be used in food contact materials.
 - Currently, FDA does not set maximum allowed limits on PFAS in food contact products.
- PFAS authorized for contact with food generally in four categories:
 - Non-stick cookware,
 - Gaskets, O-Rings, other parts used in food processing equipment
 - Processing aids, and
 - Paper/paperboard food packaging.
- No specific Federal regulation around PFAS in food packaging → leaving it to the states...



State Regulations for PFAS

Patchwork State System

- There are currently 197 policies in 33 states pending bills.
- There are 131 adopted policies in 25 states.
- States differ in the language included in their policies:
 - “*Intentionally* added,”
 - “Food” and “Food products,”
 - Timeline, and
 - Etc.....
- Will states policies/regulations be preempted?...

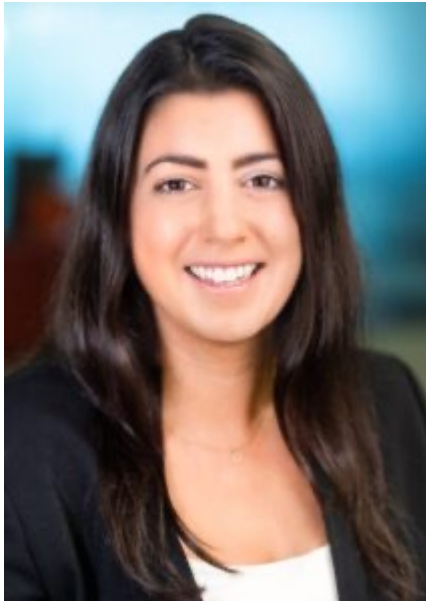


Expected Litigation Trends Around PFAS

- More to come...
- Currently focused on PFAS (PFOA & PFOS) manufacturers and purchasers of PFAS.
- Will likely expand to those who produce products in areas with PFAS contamination (water, soil, etc.) and those who buy/sell products with PFAS (especially “intentionally added”).
 - This will put new companies and new industries in the spotlight.



Takeaways & Questions



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