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PFAS Rulemaking and Policy

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- PFAS Background/Use
- Regulatory History/Current Outlook
- Litigation Outlook
- Due Diligence and Next Steps

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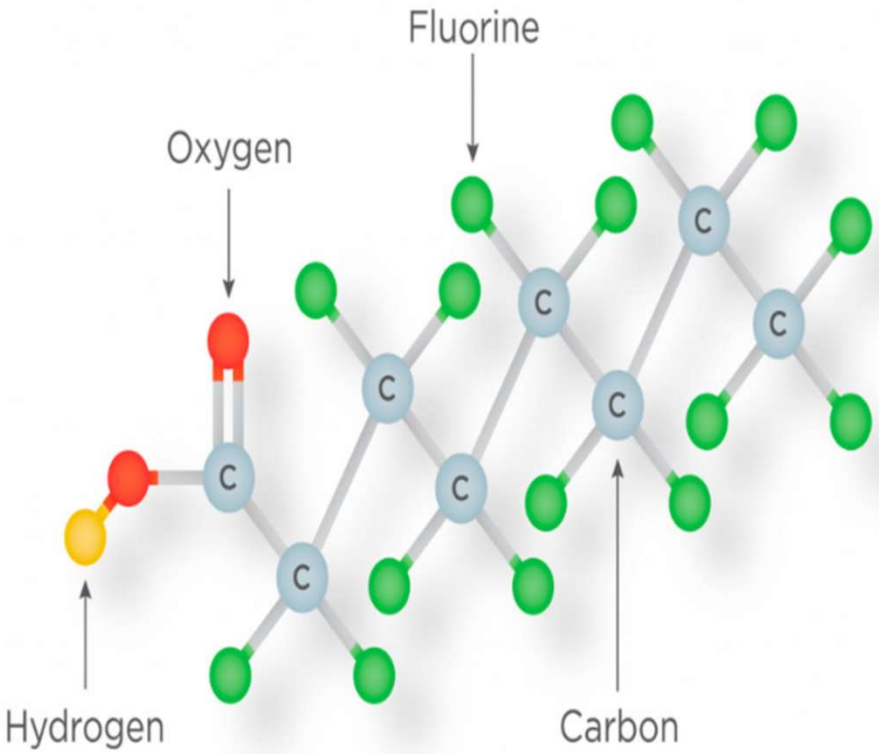
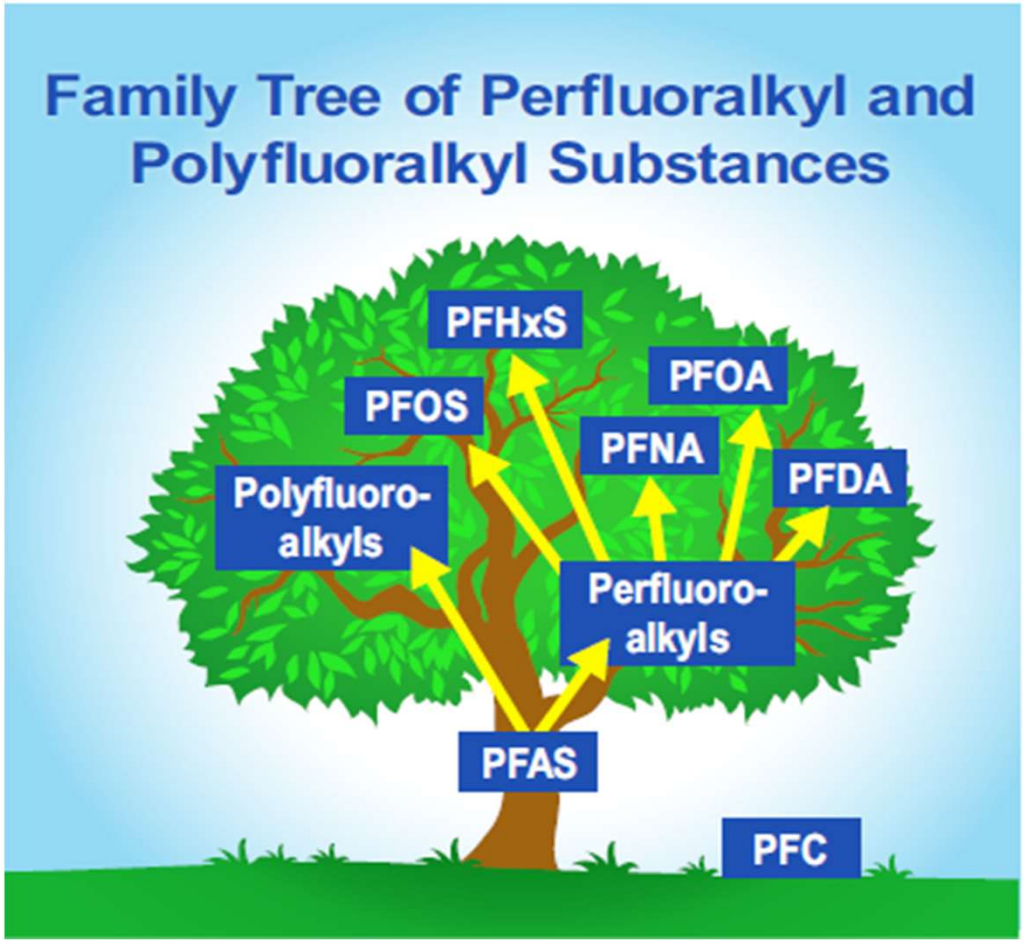
PFAS Background/Use

What are “PFAS”? Per and **P**oly**f**luoro**A**lkyl **S**ubstances



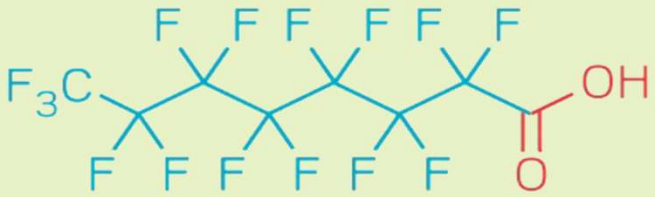


https://www.dep.pa.gov/Citizens/MyWater/drinking_water/PFAS/Pages/default.aspx

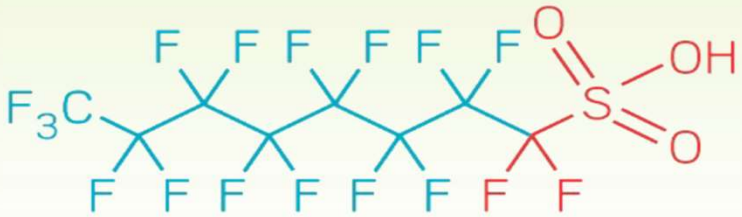
So What's the Difference

PERFLUORINATED

Longer Chains & Strong Bonds C8

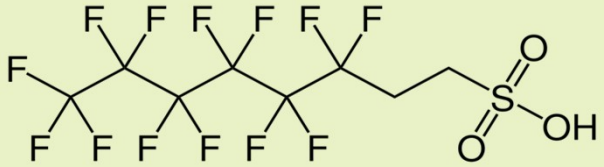


Perfluorooctanoic acid, PFOA, CAS 335-67-1



Perfluorooctane sulfonic acid, PFOS, CAS 1763-23-1

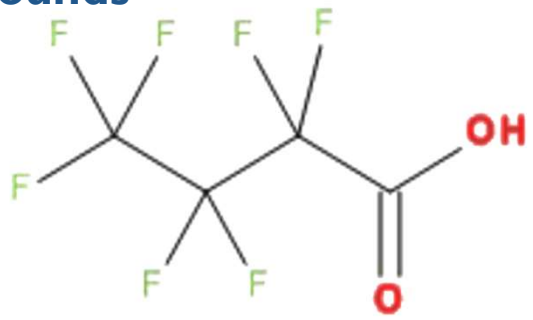
POLYFLUORINATED



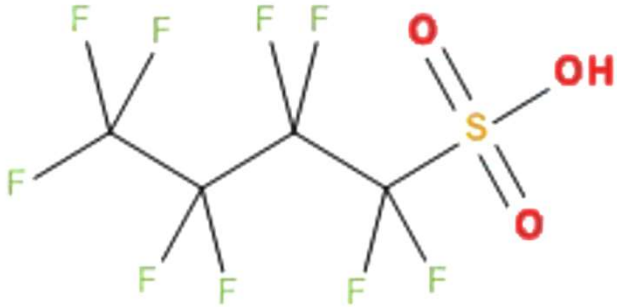
6:2 FTS

Replacement Substances (GenX, ADONA and PFBS)

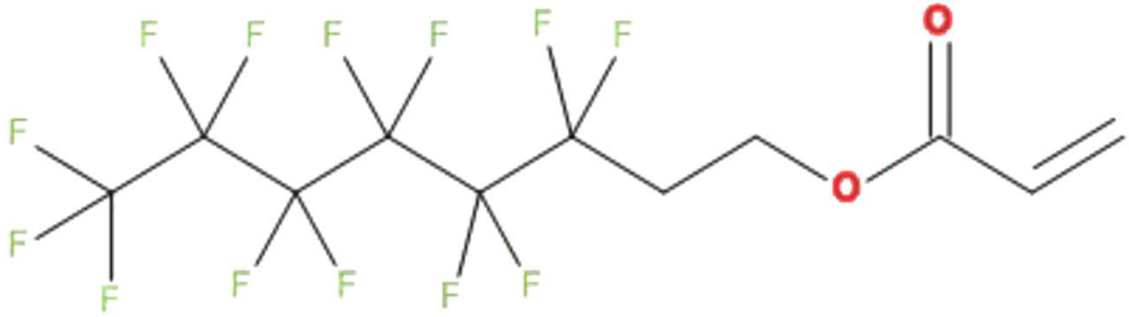
- **C4 & C6 Replacement Compounds**
  - » Industry Claims they are safer
  - » Precursors are still longer chain C8
  - » PFBA-food packaging and film
  - » PFBS-surfactants/ repellents, metal plating, pesticides, and flame retardants



PFBA

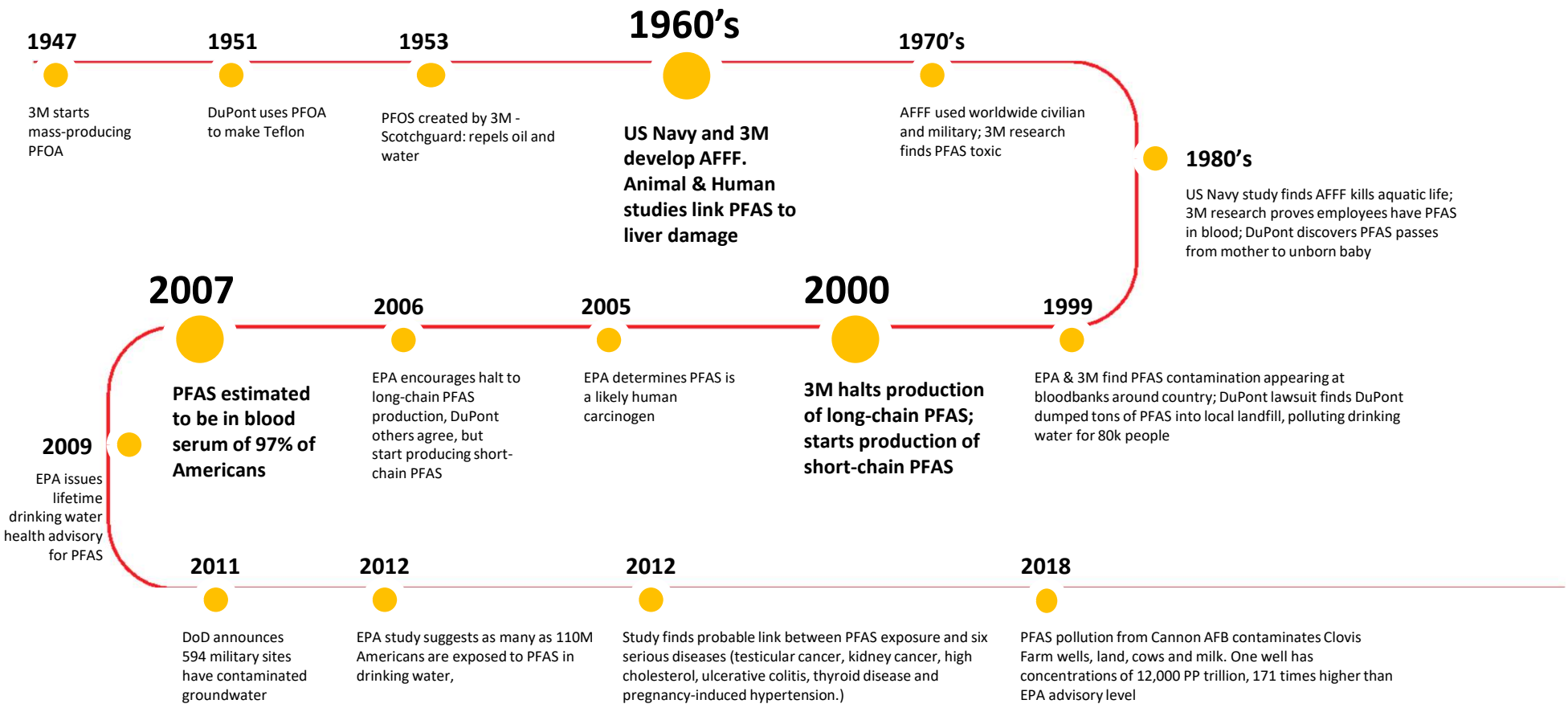


PFBS



6:2 Fluorotelomer acrylate

The History of PFAS



JV1

Sources of PFAS

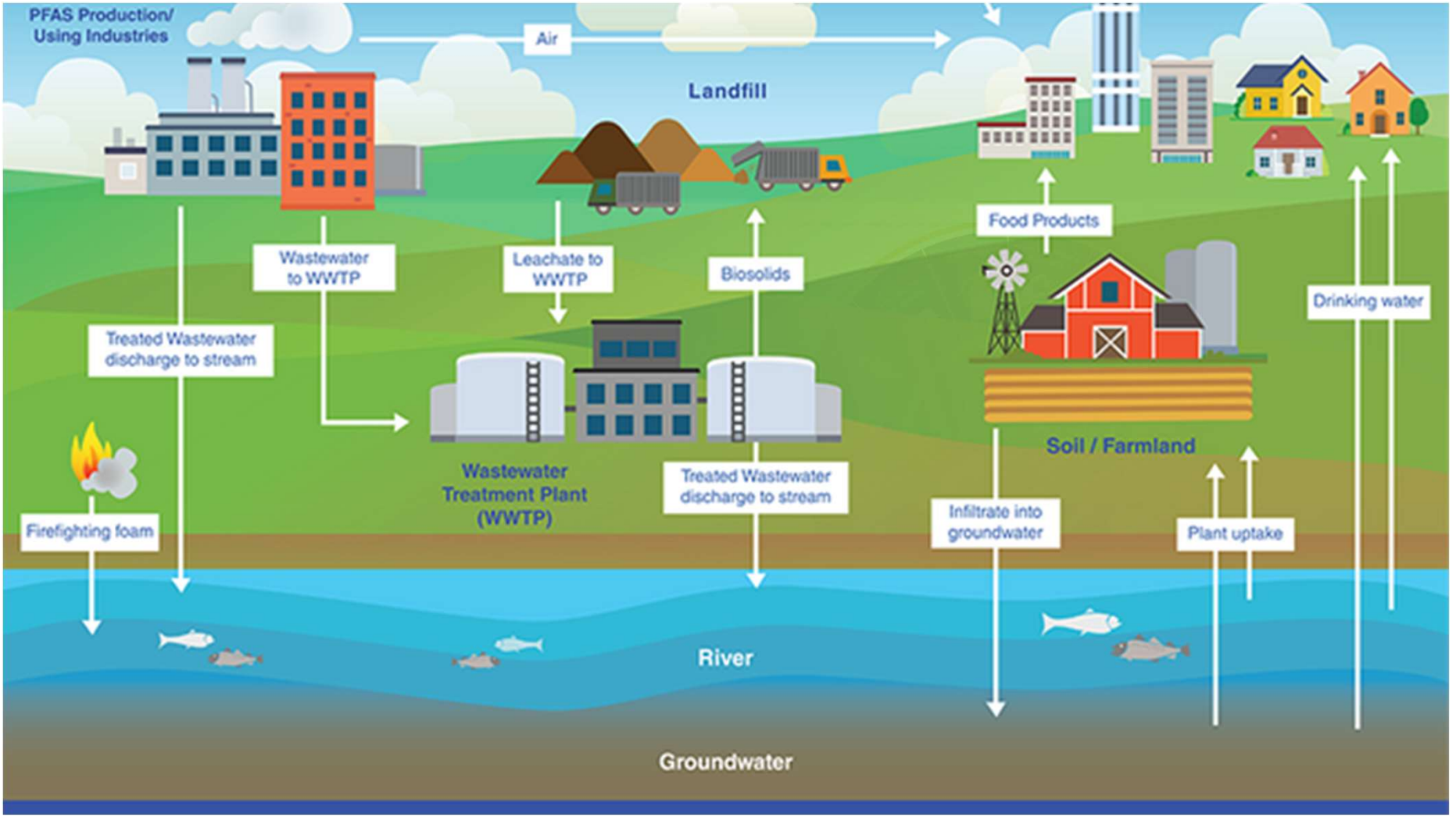
- PFAS manufacturing and processing facilities, airports, and military installations that use firefighting foams are some of the main sources of PFAS.
- Consumer goods including carpets, leather and apparel, textiles, paper and packaging materials, and non-stick cookware.

Slide 8

JV1 Jeff - this slide and the

Jan-Pieter Verheul, 11/27/2023

PFAS: Exposure Routes?



Why are we concerned?

Lots of Sources
Widely used in industry and consumer products

Bioaccumulative
Human blood serum levels 100X drinking water concentrations

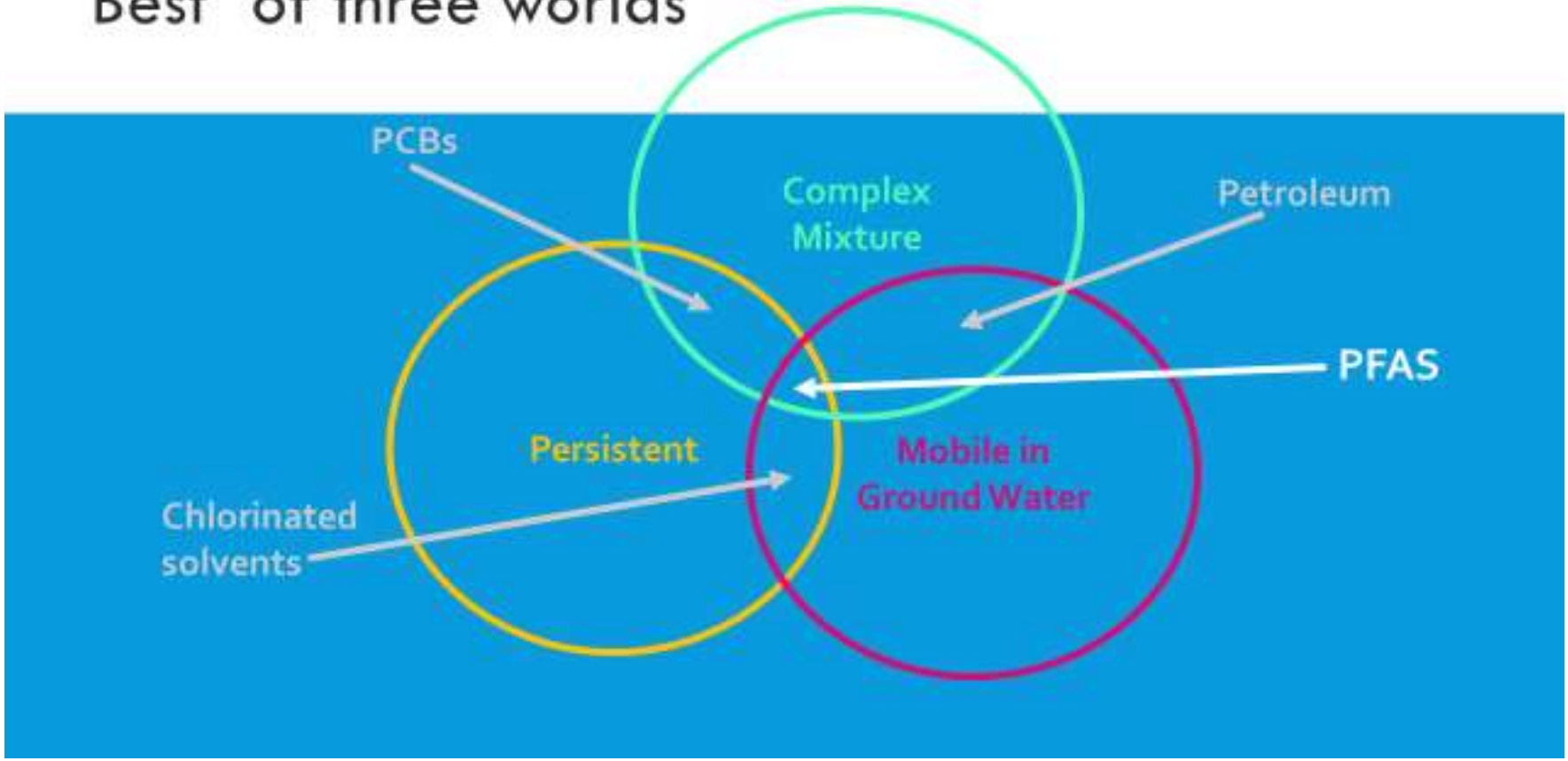
Threat to Infants
Cross the placenta and present in breast milk

Prevalent in Humans
Detectable in blood serum of almost all Americans

Persistent in Body
Half life for PFOS in humans is 6-9 years

Plumes Travel Miles
Highly water soluble
Extremely resistant to degradation

"Best" of three worlds



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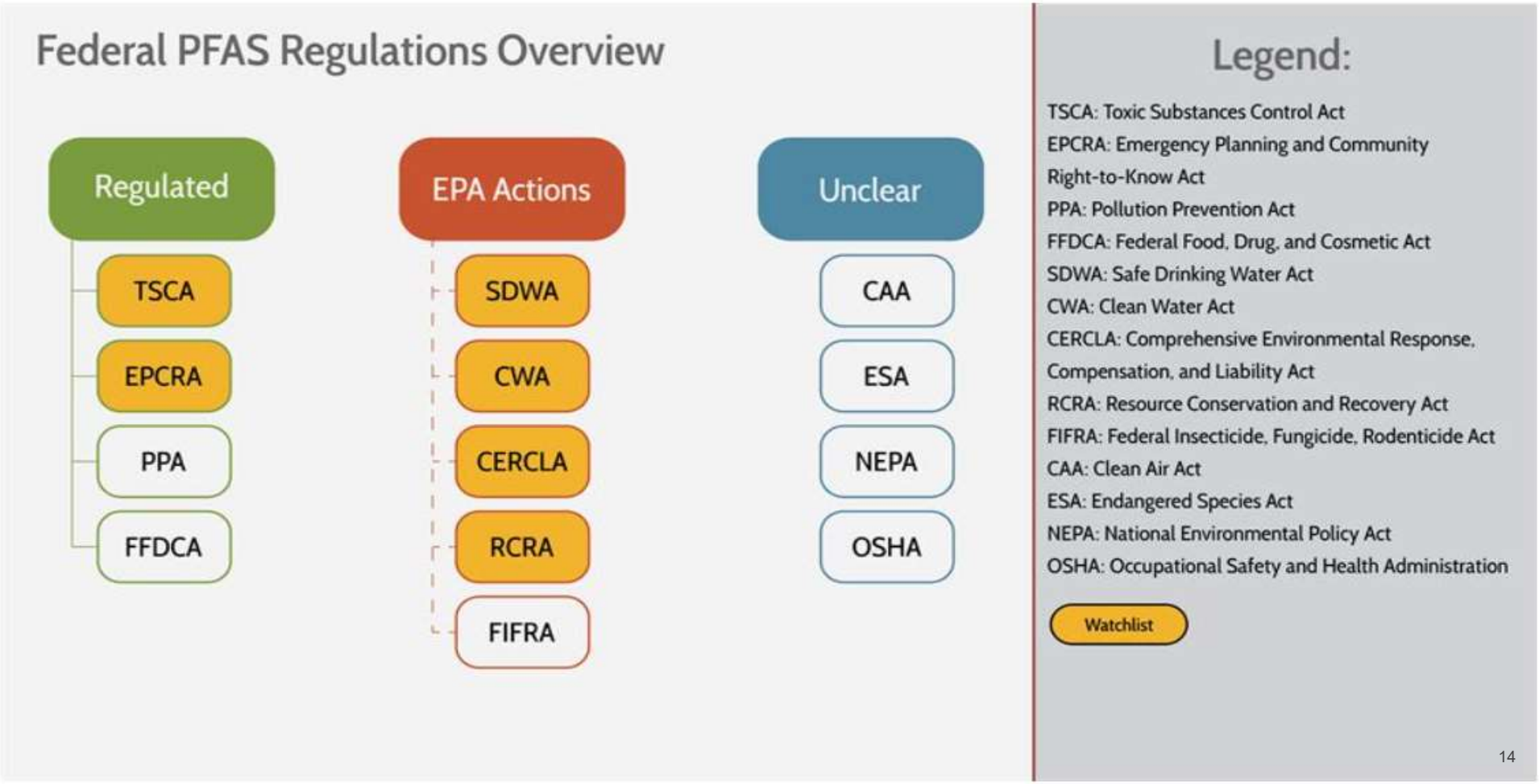
Regulatory History/Current Outlook

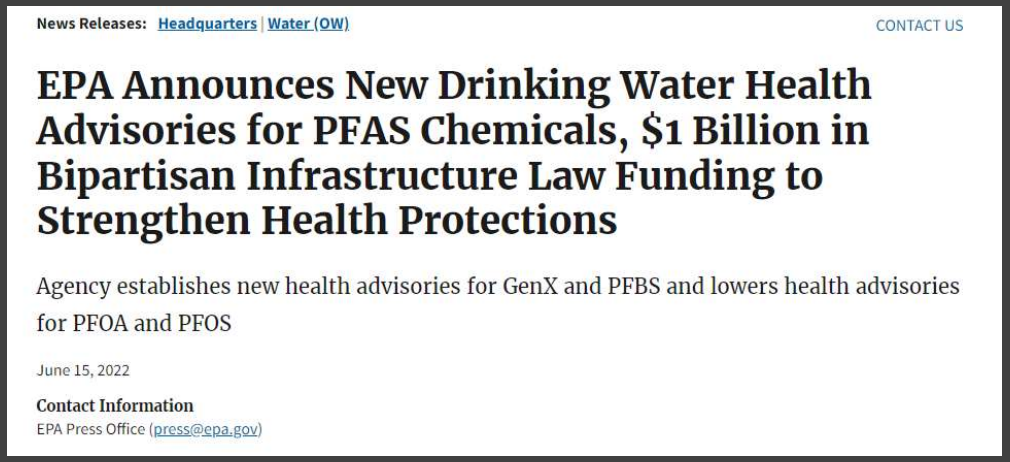
EPA's PFAS Strategic Roadmap

- October 18, 2021 – EPA announced the PFAS Strategic Roadmap
- Three central directives: Research, Restrict, Remediate
- Research – increase understanding of PFAS
- Restrict – preventing PFAS from entering the environment
- Remediate – broaden and quicken cleanup of PFAS contamination
- Details EPA plans from 2021 to 2024 with expected dates
- Updates provided in EPA Virtual Listening Sessions

PFAS: The Path Forward



EPA is moving forward with proposing a PFAS national drinking water regulation in Fall 2022



News Releases: Headquarters | Water (OW) CONTACT US

EPA Announces New Drinking Water Health Advisories for PFAS Chemicals, $1 Billion in Bipartisan Infrastructure Law Funding to Strengthen Health Protections

Agency establishes new health advisories for GenX and PFBS and lowers health advisories for PFOA and PFOS

June 15, 2022

Contact Information
EPA Press Office (press@epa.gov)

PFAS in drinking water – proposed standards

- EPA proposed National Drinking Water Standards for PFAS on March 14, 2023
- First legally enforceable PFAS drinking water standards
- Applies to public water systems and non-transient non-community water systems
- Does not apply to private drinking water wells or transient non-community water systems
- Comment deadline was May 30, 2023

PFAS Compound	Maximum Contaminant Level
PFOA	4.0 ppt
PFOS	4.0 ppt
PFNA	1.0 Hazard Index
PFHxS	
PFBS	
GenX Chemicals (aka HFPO-DA)	

$$\text{Hazard Index} = \frac{GenX\ conc.}{10\ ppt} + \frac{PFBS\ conc.}{2000\ ppt} + \frac{PFNA\ conc.}{10\ ppt} + \frac{PFHxS\ conc.}{9.0\ ppt}$$

PFAS in drinking water – proposed requirements

The proposed rule would require affected water systems to do the following within three years of promulgation:

- **Monitoring**
  - Groundwater systems serving <10,000 people must sample twice per year at least 90 days apart. Frequency is subject to change based on testing results
  - Previously collected data may be used to satisfy requirement
- **Notification**
  - Affected water systems must notify the public of detections of PFAS exceeding maximum contaminant levels within 30 days
- **Reduction of PFAS Levels**
  - Systems with PFAS exceedances must provide acceptable drinking water through treatment or other methods such as source remediation or connecting to an uncontaminated water system

Designating Certain PFAS Chemicals as Hazardous Substances under CERCLA

- EPA is proposing to designate to perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), including their salts and structural isomers as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- The proposed rule was posted for public comment between September 6, 2022, and November 7, 2022. EPA received over 64,000 comments
- The final rule was initially estimated to go into effect in August 2023. On June 13, 2023, EPA changed its estimate to February 2024
- EPA may regulate seven additional PFAS and/or categories of PFAS as hazardous substances under CERCLA, as announced in an April 13, 2023, Advance Notice of Proposed Rulemaking

CERCLA PFAS Listing: Consequences?

- Potentially delay ongoing cleanups if PFAS believed to be present
- Additional sites could become Superfund sites
- Potentially reopening Superfund sites, even where cleanup has been completed
- Increased remediation costs
- Increased litigation

Final Rule to Enhance PFAS Toxics Release Inventory Reporting

- In October 2023, EPA released a final rule that will improve reporting on PFAS to the Toxics Release Inventory (TRI)
- Eliminates:
  - the de minimis exemption for purposes of the threshold calculations
  - the use of Form A
  - listing ranges for reporting releases
- Removes the de minimis exemption for all chemicals of special concern (PFAS, PBTs and others) for purposes of the supplier notification requirements

88 FR 74360

Final Rule to Require Reporting for PFAS Manufactured and Used in the United States

- In October 2023, EPA published a final rule under TSCA that will provide EPA, its partners, and the public with the largest-ever dataset of PFAS manufactured and used in the United States
- This final rule will require all manufacturers (including importers) of PFAS and PFAS-containing articles in any year since 2011 to report information to EPA on PFAS uses, production volumes, disposal, exposures, and hazards

88 FR 70516

Other Federal (EPA) Developments

- TSCA
  - Issuing the first Toxic Substances Control Act PFAS test order under the National PFAS Testing Strategy (June 2022)
  - January 2023 – EPA proposed a significant new use rule to prevent anyone from resuming use of inactive PFAS without EPA review. Comment period closed in April
  - June 2023 – EPA released a framework for addressing new and new use PFAS. Framework will ensure that before these chemicals are allowed into commerce, EPA will complete evaluation

Other Federal (EPA) Developments (cont'd)

- Clean Water Act
  - December 2022 – EPA issued a memo providing guidance to states on using the NPDES permitting program to reduce PFAS pollution
  - 2022– EPA proposed aquatic life criteria for PFOA and PFOS
  - Publishing a new draft method to measure organic fluorine (Apr. 2022)
  - Issuing the fifth Unregulated Contaminant Monitoring Rule to improve EPA's understanding of the frequency that 29 PFAS are found in the nation's drinking water systems and at what levels (Dec. 2021)
  - January 2023 – EPA released its final ELG Plan 15 focusing on ELGs and pretreatment standards for reducing PFAS in discharges from landfills

Other Federal (EPA) Developments (cont'd)

- RCRA
  - Initiating rulemaking to propose adding four PFAS chemicals as RCRA hazardous constituents and clarify that RCRA corrective action process can address PFAS contamination (Oct. 2021)
- Cleanup
  - Adding five PFAS to EPA's Contaminated Site Cleanup Tables (May 2022)

Washington's Chemical Action Plan

- The Departments of Ecology and Health developed a statewide Chemical Action Plan (CAP) for PFAS, published in November 2021. The plan summarizes what is known about PFAS contamination in Washington and recommends actions to address contamination and human exposure.
- Recommendations include expanded testing and mitigation for PFAS in drinking water, reduction of PFAS uses that release PFAS into food, drinking water, or the environment, and additional evaluation of PFAS in waste streams (landfill leachate, biosolids, sewage treatment outfalls, etc.)

Washington Regulation of PFAS

- RCW 70A.400: no use of PFAS fire fighting foam for training; sale of PFAS fire fighting foam prohibited (some exceptions)
- RCW 70A.222: conducting alternatives assessment to see if safer alternatives to PFAS in food packaging. Restrictions begin in February 2023
- RCW 70A.350 – PFAS is a priority chemical class, identifying consumer products that are a significant source of PFAS, reduce exposure to people and sensitive species
- DOH rulemaking -- Set drinking water State Action Levels (SAL) for 5 PFAS compounds, includes requirements for monitoring, recordkeeping and reporting, and follow-up actions
- MTCA – Ecology issued a draft Guidance for Investigating and Remediating PFAS, out for public comment in December 2022

Washington Regulation of PFAS in Consumer Products

- Restricts the use of PFAS in certain: (1) food packaging and (2) consumer products
  - No quantity threshold
- February 2023: wraps, plates, food boats, pizza boxes
- May 2024: bowls, bags/sleeves, cups
- 2025: carpets and rugs
- 2026: indoor furniture
- 2025: rulemaking for water-resistant clothing and gear, apparel, ski wax, car wax, floor sealants, nonstick cookware, personal care products, cosmetics, and firefighter PPE

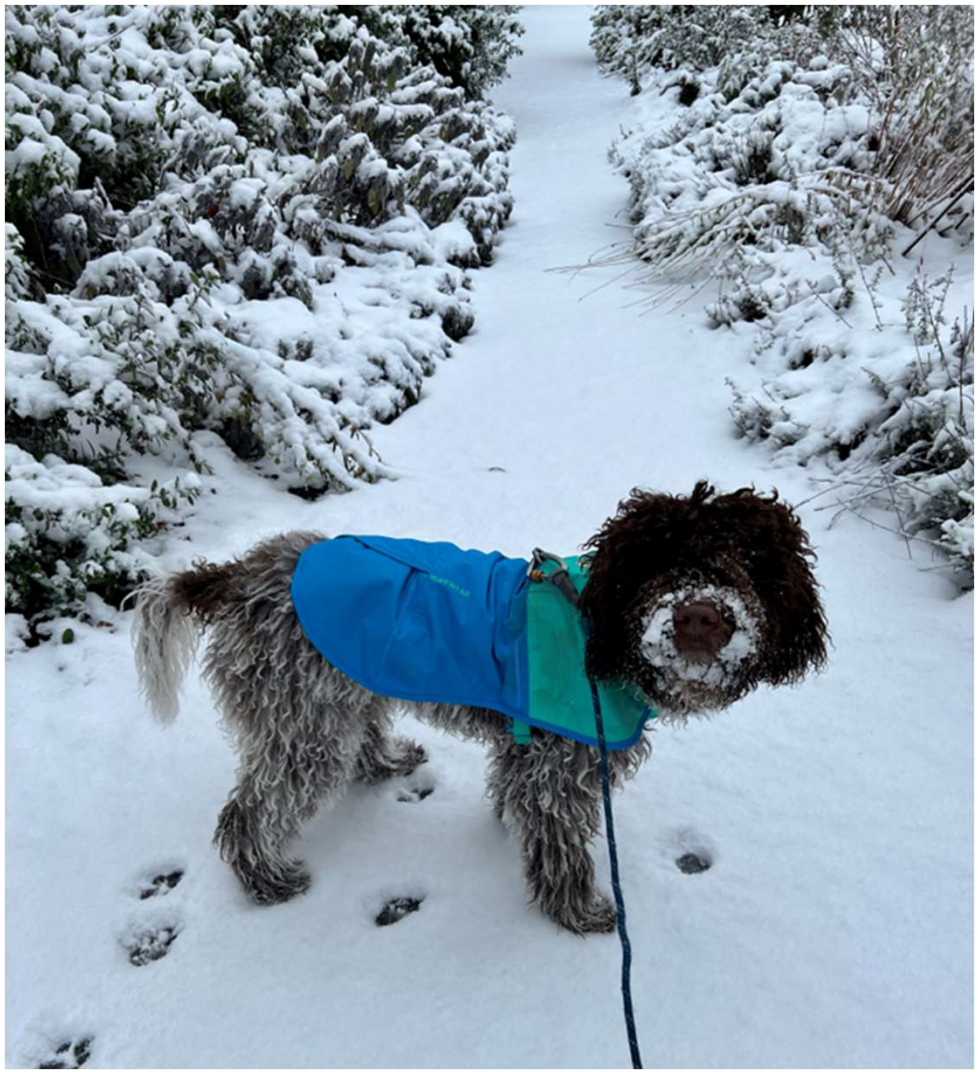
Oregon – Regulation of PFAS

- Oregon Health Authority (OHA) is supporting EPA UCMR5 testing
- OHA has also established health advisories for PFAS:

PFAS Compound	**Oregon Drinking Water Health Advisory Levels (HALs)*** parts per trillion (ppt) or nanograms per liter (ng/L)
PFOS	30 ppt
PFOA	30 ppt
PFNA	30 ppt
PFHxS	30 ppt

- Oregon DEQ has designated PFAS as one of 60 priority chemical classes for its Toxics Reduction Strategy

California Regulation of PFAS in Consumer Products



- California Health and Safety Code requires: (1) manufacturers of cookware to list the presence of PFAS and (2) prohibits the manufacture, distribution, sale, or offer for sale of any textile articles
  - 2023: cookware
  - 2025: textile ban, disclosed in outdoor apparel
  - 2028: ban in outdoor apparel for severe wet conditions
- Proposition 65 – requires consumer warnings

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Litigation Outlook

Evolution of PFAS Litigation

- Lots of litigation
- Early cases
  - Class actions alleging personal injury and/or property damage
  - Focus on releases from plants operated by companies that manufactured PFAS
- Later cases
  - Cases brought by water utilities and states alleging contamination of drinking water sources, harm to natural resources, etc.
  - Aqueous Film-Forming Foam Multi-District Litigation
  - Consumer protection

Litigation Trends

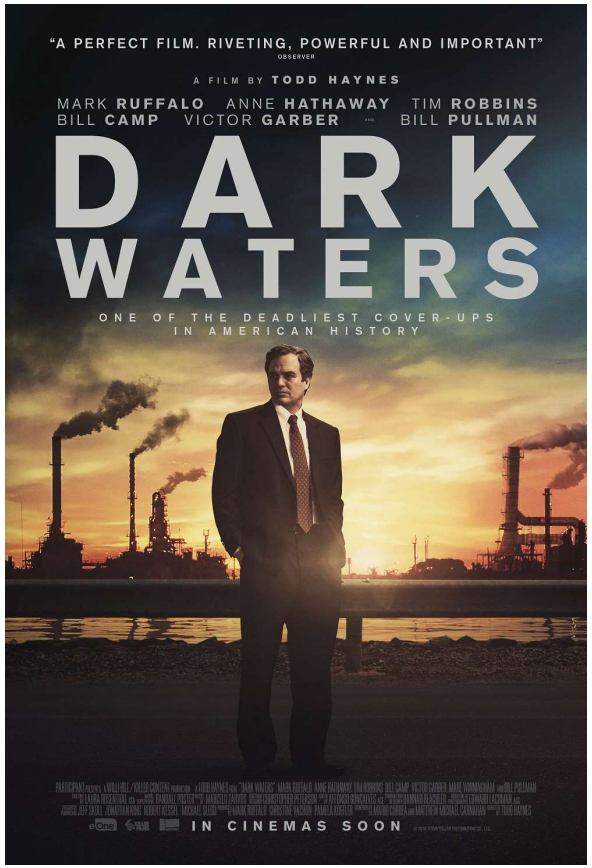
- Litigation is expanding to new categories of defendants
  - PFAS manufacturers were early targets
  - Increasing attention to downstream users
  - Other potential defendants include wastewater treatment plants, landfill operators, and potentially property owners
- Additional types of claims on the horizon
  - Early cases focused on common law claims
  - Expansion to other types of claims
    - CERCLA/RCRA
    - Drinking water contamination
    - Consumer protection and false advertising

Leach v. E.I. Du Pont De Nemours & Co.

- From Dark Waters (2019) CREDITS: TM & © Universal (2019) Cast: Bill Camp, Mark Ruffalo Screenwriter: Mario Correa, Matthew Michael Carnahan Director: Todd Haynes

Leach v. E.I. Du Pont De Nemours & Co.

- Filed in 2001, West Virginia state court
- 80,000 class members
- Alleged personal injury from water contaminated by PFOA due to DuPont Teflon plant
- Unprecedent 2005 settlement that required DuPont to fund health study to analyze link between PFAS and certain diseases
- DuPont then settled with remaining plaintiffs for $671 million



Zimmerman v. 3M

- Filed in December 2017, Western District of Michigan
- Produce shoes treated with Scotchguard
- PFAS discharged at tannery and dumped at landfills, contaminating drinking water
- March 2023: **$54 million settlement** for negligence based on property damage

Saunders v. Sappi North America

- Filed in 2021, putative class action in District of Maine
- Claims: medical monitoring, strict liability, nuisance, negligence, willful and wanton conduct
- Paper mills produced sludges, which were applied to farmland as fertilizer under the state's biosolids program

Orange County Water District v. 3M

- Filed in 2020 by 11 water agencies against 3M, DuPont, and DECRA Roofing
- Claims: torts, product liability, CA water code, declaratory relief
- Downstream company also named as defendant
- Damages may exceed $1 billion in cleanup costs
- Transferred to AFFF MDL

Consumer Protection and False Advertising

GMO FREE USA V. COVER GIRL COSMETICS

- Filed in 2021, District of Columbia Superior Court
- 2022 dismissed: alleged misrepresentations are mere "puffery" about the defendants' "philosophy and aspirations"
  - "Our products have an environmental role to play in building a sustainable future"
  - "To respond to evolving social and environmental challenges, we intend to keep sustainability at the heart of product innovation"
  - "Our ambition is to put sustainability at the heart of innovation"
  - "COVERGIRL continues to make good-for-you makeup and skincare, prioritizing the health of our consumers and the planet"

COVERGIRL®

Consumer Protection and False Advertising

DICKENS V. THINX

- Consolidated in 2022, class action in Southern District of New York
- December 2022: $5 million settlement, no admission of guilt or wrongdoing

At its core, Thinx Inc. was founded to provide safe, comfortable, and sustainable options for people with periods and bladder leaks. Customer safety is important to us, and so is your trust. That's why we'll always be honest and transparent about how our products are made. From rigorous absorbency testing, to objective third-party tests of our finished products, here are all the steps we take to uphold the highest standards of product safety.

Are Thinx free of harmful chemicals?

Absolutely! We take customer health and safety seriously, which is why all Thinx Inc. products are rigorously tested for harmful chemicals, and independently certified through STANDARD 100 by OEKO-TEX®, which includes REACH requirements [20.HUS.04850 | HOHENSTEIN HTTI]. We're proud to say that third party testing has never revealed any harmful chemical levels in Thinx Inc. products.

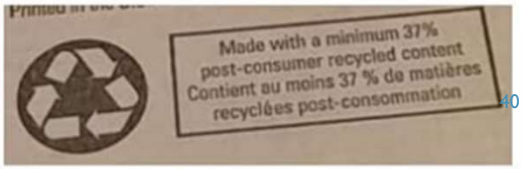
Consumer Protection and False Advertising

GRUEN v. CLOROX

- Filed in 2022, class action pending Northern District of California
- Burt's Bees:

MCDOWELL v. MCDONALD'S

- Filed in 2022, class action pending in Northern District of Illinois
- McDonald's products and packaging are "safe" and "sustainable"



CERCLA/RCRA?

- Potentially casts a wide net
  - Definition of PRPs
  - Joint and several liability
  - No minimum concentration required
  - Imminent and substantial endangerment
- Easier to prove than tort claims
  - No fault required
  - Retroactive
  - Defenses are few and narrowly construed

Due Diligence and Next Steps

Procurement

- Be aware of PFAS in your supply chain
- Include provisions addressing PFAS contamination and prohibitions in contract language
- Get/Give supplier notifications letters
- Evaluate PFAS alternatives

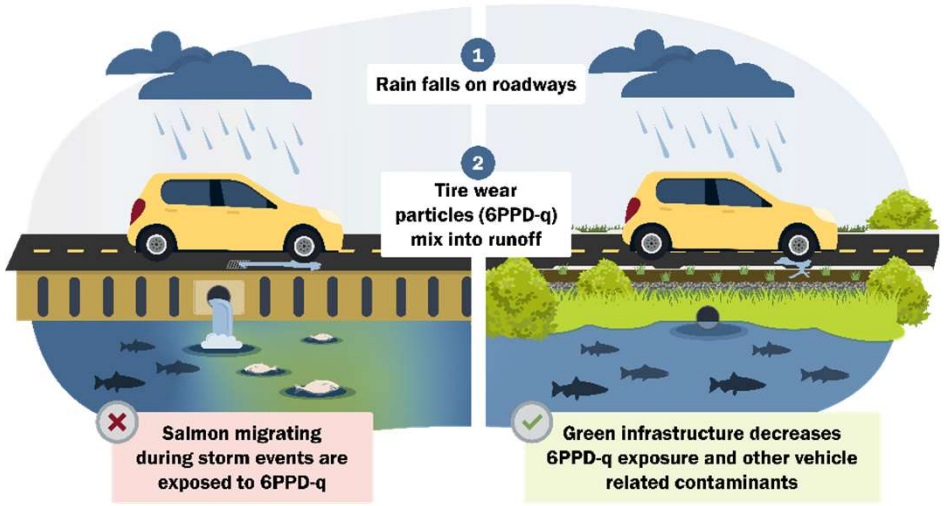
Due Diligence

- Understand what environmental surveys have been completed in your area and whether local soil/groundwater has been impacted by PFAS
- Consider including PFAS surveys in Phase I/Phase II when seeking to acquire property (but PFAS is currently not a REC under CERCLA)
- Follow changes to state and federal PFAS rules and regulations
- Environmental Audits re: PFAS

Worker Health & Safety

- Implement measures designed to protect workers from PFAS exposure
- Sample private drinking water wells (under privilege)
- Evaluate voluntary steps to reduce, eliminate, or use alternatives to PFAS chemicals

Emerging Contaminants – What is in the Future?



Picture from Department of Ecology - https://ecology.wa.gov/Waste-Toxics/Reducing-toxic-chemicals/Addressing-priority-toxic-chemicals/6PPD

Tire anti-degradant (6PPD) and 6PPD-quinone. The chemical 6 p-phenylenediamine prevents automotive tires from degrading and helps them last longer. When 6PPD is exposed to air, it reacts with ozone to create 6PPD-quinone (aka 6PPD-q). 6PPD-q is lethal to coho salmon and can contaminate water systems.

Questions?

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