

North Central Texas Council of Governments

U.S. EPA Actions to Address PFAS (Per- and Polyfluoroalkyl Substances)

**NCTCOG Webinar
August 31, 2021**

*Prepared in cooperation with the
Texas Commission on Environmental Quality and
U.S. Environmental Protection Agency*

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www.nctcog.org/WaterResources

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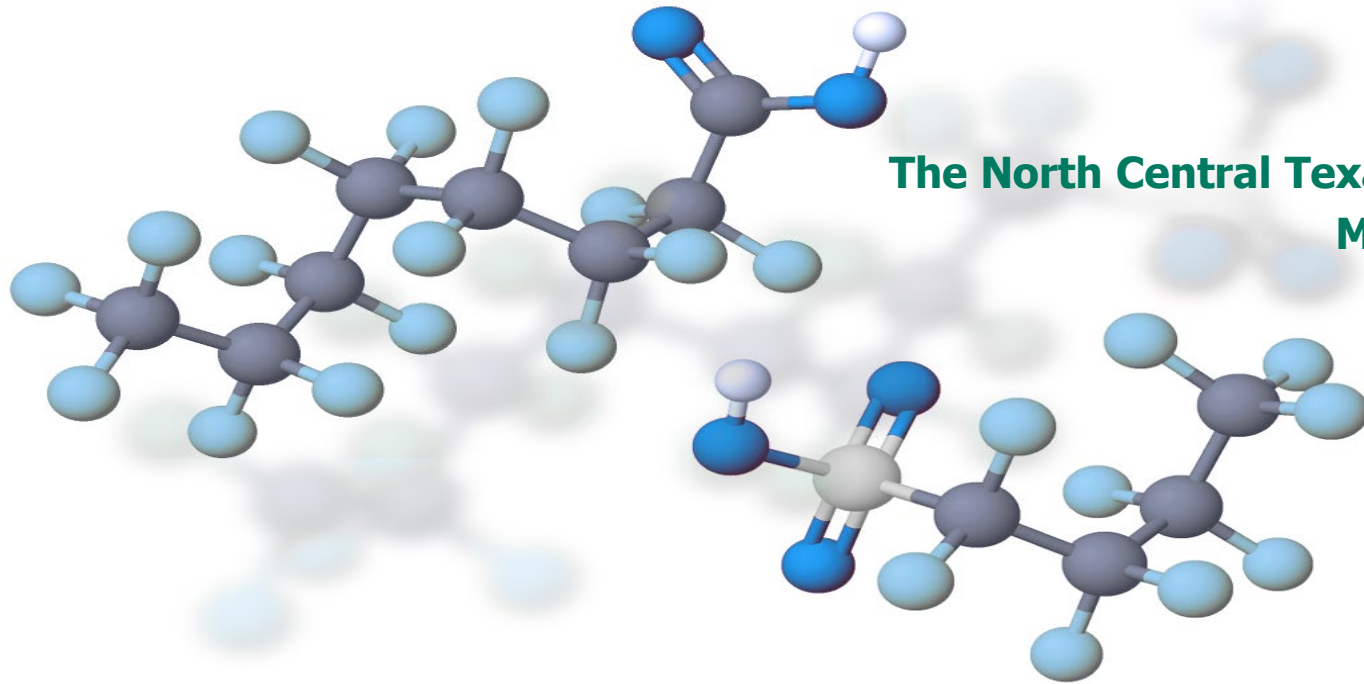
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Speaker Introduction

Michael G. Morton, Ph.D.

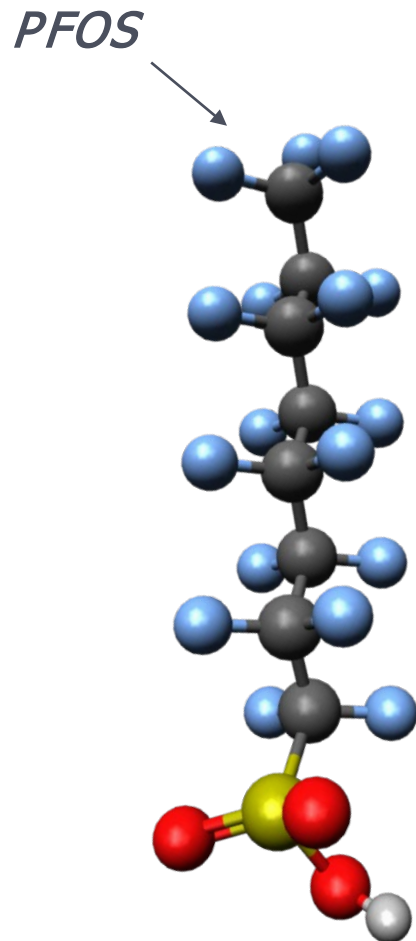
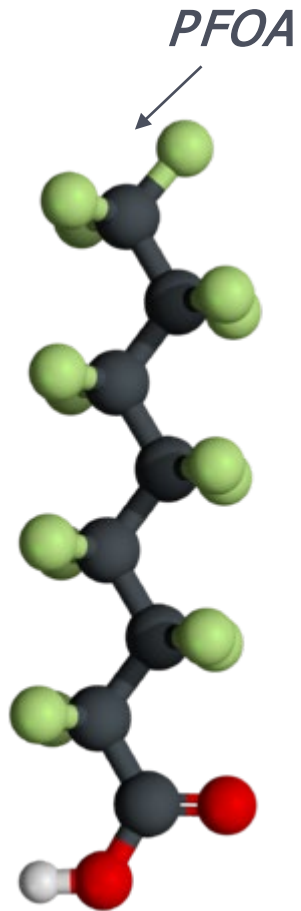
- ▶ Regional Science Liaison to the Office of Research & Development
- ▶ U.S. Environmental Protection Agency, Region 6
Dallas, Texas

EPA's Actions to Address PFAS



The North Central Texas Council of Governments (NCTCOG) Webinar
Michael Morton, EPA-R6 Science Liaison to ORD
August 31, 2021

Per- and polyfluoroalkyl substances (PFAS)



- A very large class of man-made chemicals used for decades
- Two of the most studied PFAS chemicals:
 - perfluorooctanoic acid (PFOA)
 - perfluorooctane sulfonate (PFOS)
 - PFOA voluntarily removed 2002
 - PFOS voluntarily removed by 2015
- Thousands of other PFAS chemicals exist

Background-Sources/Uses

- PFAS are (or have been) found in a wide array of consumer products like cookware, food packaging, stain and water repellants used in fabrics, carpets and outerwear.
- PFAS can also be found at manufacturing and processing facilities, and airports and military installations that use firefighting foams which contain PFAS.
- PFAS are ubiquitous, man-made,
- Widespread PFAS use since the 1950s
- Teflon created in 1938



Background-Health Effects

- Most people have been exposed to PFAS chemicals.
- Detected in 98% of human blood samples National Health and Nutrition Examination Survey (NHANES), CDC (2011–2012)
- Some PFAS chemicals can accumulate and stay in the human body for long periods of time (bioaccumulate).
- Evidence that exposure to certain PFAS may lead to adverse health and environmental effects: hepatotoxicity, immunotoxicity, neurotoxicity, developmental toxicity, carcinogenicity.



EPA's Commitment to PFAS

- In 2019, EPA developed its PFAS Action Plan based on feedback from states, Tribes, stakeholders and the public. It lists actions the Agency plans to take to address PFAS and protect public health.
- President Biden has highlighted the importance of, and his commitment to, tackling PFAS pollution and protecting public health and the environment.
- EPA is committed to taking action to better understand and reduce the potential risks caused by PFAS, including how to safely dispose of and clean up PFAS in the environment.
- EPA's actions to address these chemicals will be underpinned by science.



EPA Council on PFAS

- On April 27, 2021, Administrator Michael S. Regan created the "EPA Council on PFAS".
- Charged with development of strategic plan: "PFAS 2021-2025 – Safeguarding America's Waters, Air and Land", a multi-year strategy to deliver critical public health protections to the American public.
- Expected to prioritize partnerships and collaboration within EPA and with our federal, state, tribal and local partners
- The EPA Council on PFAS charged to make initial recommendations within 100 days of its establishment.
- <https://www.epa.gov/newsreleases/epa-administrator-regan-establishes-new-council-pfas>



Highlighted Actions

PFAS Toxicity Assessments

- In November 2020, EPA published the final Toxicity Assessment for Perfluorobutane Sulfonic Acid (CASRN 375-73-5) and Related Compound Potassium Perfluorobutane Sulfonate (CASRN 29420-49-3) also known as GenX Chemicals. <https://www.epa.gov/pfas/genx-toxicity-assessments-documents>
- EPA is developing human health toxicity assessments for five additional PFAS (PFBA, PFHxA, PFHxS, PFNA and PFDA) under the agency's IRIS Program.
- The draft Perfluorobutanoic Acid (PFBA) risk assessment was recently released for a 60-day public comment period.
 - Federal Register Notice Aug 23, 2021.
https://cfpub.epa.gov/ncea/iris_drafts/recordisplay.cfm?deid=350051

EPA/635/R-20/424a External Review Draft

www.epa.gov/iris

Toxicological Review of Perfluorobutanoic Acid (PFBA) and Related Compound Ammonium Perfluorobutanoic Acid

[CASRN 375-22-4 CASRN 10495-86-0]

August 2021

Integrated Risk Information System
Center for Public Health and Environmental Assessment
Office of Research and Development
U.S. Environmental Protection Agency
Washington, DC

Highlighted Actions

PBFS Toxicity Assessment

- On April 8, 2021, EPA released an updated toxicity assessment for perfluorobutane sulfonic acid (PFBS)
- The revised assessment fixes the errors in the version issued earlier this year, was developed by EPA career scientists, and upholds the values of scientific integrity.
- Stakeholders can use the assessment, along with specific exposure and other relevant information, to determine if and when it is necessary to take action to address potential health risks associated with human exposures to PFBS

More information can be found at www.epa.gov/pfas



EPA/600/R-20/345F | April 2021 | www.epa.gov/pfas

Human Health Toxicity Values for Perfluorobutane Sulfonic Acid (CASRN 375-73-5) and Related Compound Potassium Perfluorobutane Sulfonate (CASRN 29420-49-3)



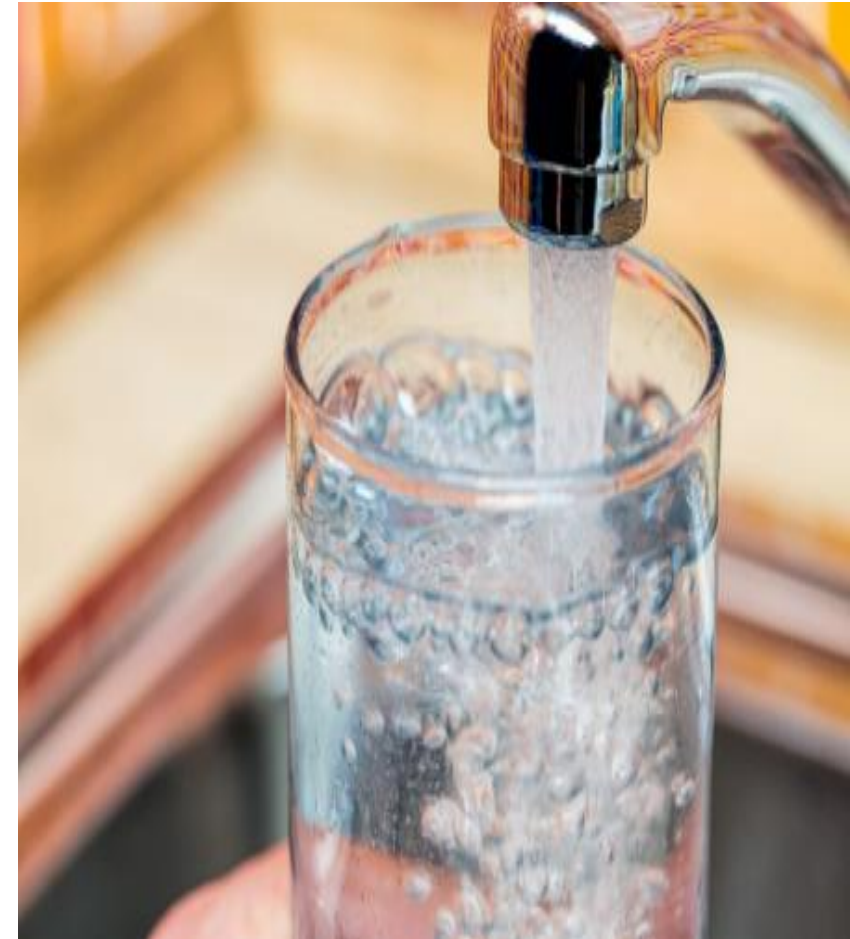
Office of Research and Development
Center for Public Health and Environmental Assessment

Highlighted Actions

Drinking Water

Lifetime Health Advisory (May 2016) of 70 ppt for total PFOA and PFOS

- Feb 2021, EPA reissued the final determinations to regulate PFOA and PFOS in drinking water. <https://www.epa.gov/ccl/regulatory-determination-4>
 - Reg proposal to be published for public comment by 3/2023
 - Final rule within 18 months after published proposal
- EPA repropoed the fifth Unregulated Contaminant Monitoring Rule (UCMR5)
 - require monitoring for 29 PFAS chemicals (methods 533, 537.1)
 - sampling to occur during 2023 - 2025
 - public comment period closed 5/10/2021
 - currently reviewing public comments
 - the proposed UCMR 5 would require all systems serving 3,300 or more people and a representative sample of systems serving fewer than 3,300 to perform monitoring



Highlighted Actions

Water

- On July 30, 2021, EPA published final versions of SW-846 Methods 3512 and 8327 for 24 PFAS in surface water, groundwater, and wastewater.
- Methods multi-lab validated in surface water, groundwater and wastewater.
- Method 3512 is an aqueous sample preparation method.
- Method 8327 is a liquid chromatography/tandem mass spectrometry PFAS determination method.
 - Website: <https://www.epa.gov/hw-sw846/sw-846-update-vii-announcements#PhaseII8327>
 - Method 3512: <https://www.epa.gov/hw-sw846/sw-846-test-method-3512-solvent-dilution-non-potable-waters>
 - Method 8327: <https://www.epa.gov/hw-sw846/sw-846-test-method-8327-and-polyfluoroalkyl-substances-pfas-liquid-chromatographytandem>



Highlighted Actions

Wastewater

- EPA also re-signed an action to solicit data on the presence and treatment of PFAS in wastewater discharges from PFAS formulators and manufacturers
- Under the Clean Water Act, EPA is evaluating if wastewater discharges from industrial sources of PFAS warrant regulation through national Effluent Limitation Guidelines.
- In November 2020, EPA released an interim strategy to provide guidance on how to address potential PFAS discharges for EPA-issued NPDES permits.
 - Includes permit requirements for phased-in monitoring and best management practices when PFAS are expected to be present in point source wastewater discharges.
 - Includes permit requirements for phased-in monitoring and stormwater pollutant control when PFAS are expected to be present in stormwater discharges.



Highlighted Action

Surface Water Protection

EPA plans to develop national Clean Water Act human health and aquatic life criteria for PFAS, as data supports

Biosolids

EPA will be developing risk assessments for PFOA and PFOS to understand any potential health impacts



Highlighted Actions

Toxics

- The 2020 National Defense Authorization Act added certain PFAS to the list of chemicals covered by the Toxics Release Inventory (**TRI**) and provided a framework for additional PFAS to be added to TRI on an annual basis.
- On July 1, 2021, reporting forms on the 172 PFAS chemicals for reporting year 2020 were due.
- On July 30, 2021, published preliminary TRI data that included the first-ever reporting on per-and polyfluoroalkyl substances (PFAS).
- EPA received a total of 89 TRI reporting forms for 44 discrete PFAS chemicals filed by 38 individual facilities. The preliminary data indicate facilities managed over 700,000 pounds of production-related waste of PFAS during 2020.
- In January 2021, EPA issued final guidance documents outlining which imported articles are covered by the agency's July 2020 Significant New Use Rule (**SNUR**). In July 2020, EPA published a final SNUR to ensure that new uses of certain persistent long-chain PFAS chemicals in surface coatings cannot be manufactured or imported into the United States without notification and review under TSCA.

Highlighted Actions

Cleanup

- In December 2019, EPA issued Interim Recommendations for Addressing Groundwater Contaminated with PFOA and PFOS for federal cleanup programs (e.g., CERCLA and RCRA), helpful to states and tribes.
 - Recommends a screening level of 40 ppt to determine if PFOA and/or PFOS is present at a site at a level that may warrant further attention.
- On 1/14/2021, EPA signed the Advance Notice of Proposed Rulemaking (ANPRM) for consideration of additional authorities for addressing PFAS including the designation of PFAS as hazardous substances. The ANPRM **was not published** and is under review.
- Designating PFOA and PFOS as CERCLA hazardous substances would provide additional authority to address PFOA/PFOS under CERCLA, including the ability to require responsible parties to carry out and/or pay for response actions, and for EPA to recover costs associated with these cleanups.



Highlighted Actions

Cleanup

- On 12/18/2020, EPA released new interim guidance on the destruction and disposal of PFAS and materials containing PFAS for public input. Public comment period closed 2/22/21 and comments are under review.
- EPA received over 5,000 comments on the interim guidance which the agency is reviewing and preparing an approach to address the public input.
- EPA continues to assess the viability of thermal and non-thermal destruction technologies.
- Under the NDAA, the interim guidance on the destruction and disposal of PFAS will be updated in 2023.



Highlighted Actions

Research

- Developing additional toxicity assessments where data are available
- Applying high-throughput toxicology testing to study the toxicity of the larger universe of PFAS and fill in data gaps
- Validating analytical methods (for surface water, ground water, wastewater, soils, sediments and biosolids); developing new methods for ambient air and emissions; and improving laboratory methods to discover unknown PFAS
 - status on EPA's method development can be found at: www.epa.gov/water-research/pfas-analytical-methods-development-and-sampling-research



Highlighted Actions

Research

- Funding research to better understand the potential impacts of PFAS on water quality in rural and agricultural areas
- Evaluating the effectiveness of technologies and evaluating methods for managing the end-of life disposal of PFAS-contaminated materials
- Developing databases and models to characterize sources and understand how PFAS moves through the environment to impact people and ecosystems
- Working to develop tools and technologies for remediating impacted areas



Highlighted Actions

Research

- In May 2019, EPA awarded approximately \$3.9 million through two grants for research that will improve understanding of human and ecological exposure to PFAS in the environment. The research will also promote a greater awareness of how to restore water quality in PFAS-impacted communities.
- In September 2019, we awarded nearly \$6 million to fund research by eight organizations to expand understanding of the environmental risks posed by PFAS in waste streams and to identify practical approaches to manage the potential impacts as PFAS enters the environment.
- In August 2020, we awarded \$4.8 million in funding for federal research helping to identify potential impacts of PFAS to farms, ranches, and rural communities.
 - <https://www.epa.gov/research-grants> Science to Achieve Results (STAR)

Highlighted Action: Collaboration

EPA is collaborating with many federal and state partners including:

- Environmental Council of the States (ECOS) to ensure state priorities are addressed.
- USDA and FDA to examine the impacts of PFAS on agriculture, rural communities, and food supplies.
- National Institute of Environmental Health Sciences' (NIEHS) National Toxicology Program on assessing PFAS toxicity.
- DOD on analytical methods and approaches for PFAS cleanup.



Summary

- EPA is committed to:
 - Listening to the public
 - Working collaboratively with states, tribes, water systems and local communities
 - Identifying flexible and pragmatic approaches that will deliver critical public health protections
- Will build on a strong foundation of science
- Will harmonize environmental authorities to address the impacts of PFAS on public health and the environment



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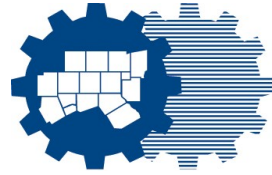
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Questions?



Wrap-Up

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Thank you for attending!

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