

# **Environmental Justice Webinar Series for Tribes and Indigenous Peoples**

## **National PFAS Roadmap – Update for Tribes & Indigenous Peoples**

**January 18, 2022**

**\*Please note that this webinar will be recorded and posted on EPA's webpage for public access.**

# Panelists

- Matt Klasen, PFAS Council Manager, Office of Water, U.S. EPA
- Mark Junker, Tribal Response Coordinator, Sac & Fox Nation Environmental Department, Sac & Fox Nation of Missouri in Kansas and Nebraska
- Danny Gogal, Tribal and Indigenous Peoples Program Manager, Office of Environmental Justice, U.S. EPA (Facilitator)



# PFAS Strategic Roadmap: EPA's Commitments to Action 2021-2024

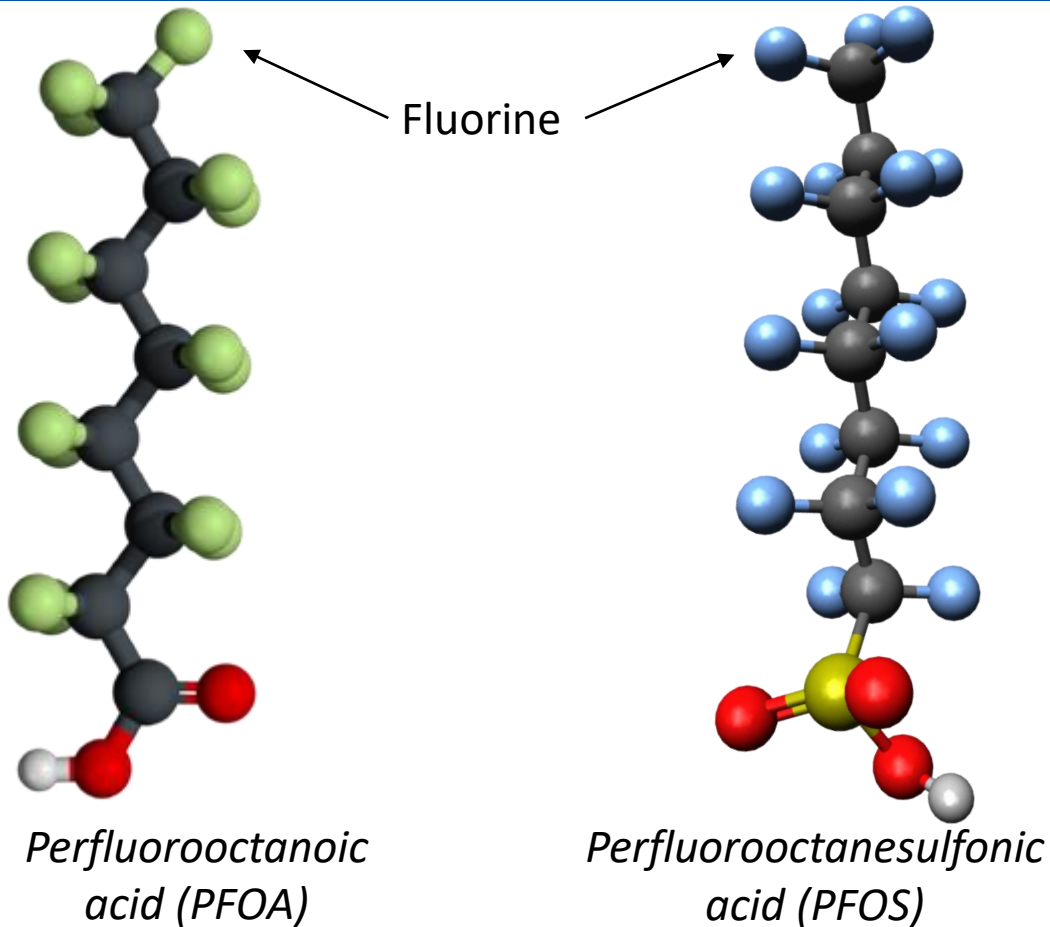
[epa.gov/pfas](https://epa.gov/pfas)

**Matt Klasen, PFAS Council Manager, Office of Water, U.S. EPA**

# Overview of Today's Briefing

- **Background on per- and polyfluoroalkyl substances (PFAS)**
- **EPA Council on PFAS: Roadmap and Early Actions**
- **EPA's Approach to Tackling PFAS: Principles and Goals**
- **Actions: Commitments and Timelines**
- **Next Steps: Engagement and Implementation**

# Per- and Polyfluoroalkyl Substances (PFAS) Background



## A large class of synthetic chemicals

- Features chains of carbon atoms surrounded by fluorine atoms
- Wide variety of chemical structures, from single molecules to polymers

## Used in homes, businesses and industry since the 1940s

- Have been detected in soil, water and air samples
- Most people have been exposed to PFAS

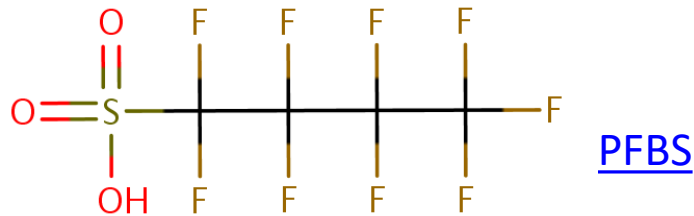
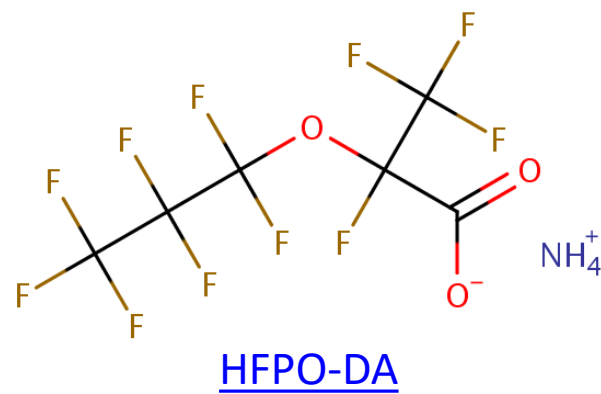
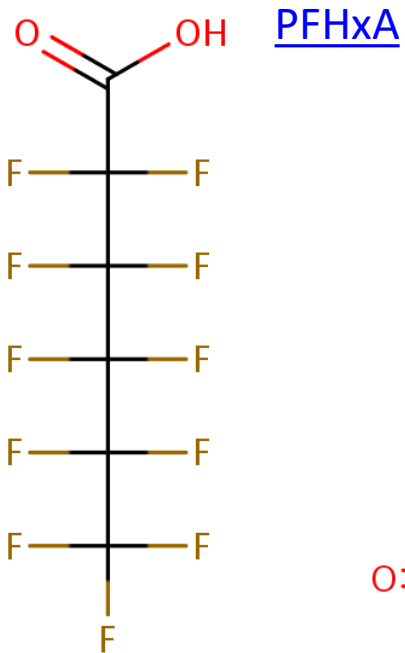
## Some PFAS are known to be PBT

- P = Persistent in the environment
- B = Bioaccumulative in organisms
- T = Toxic at relatively low levels

(parts per trillion)

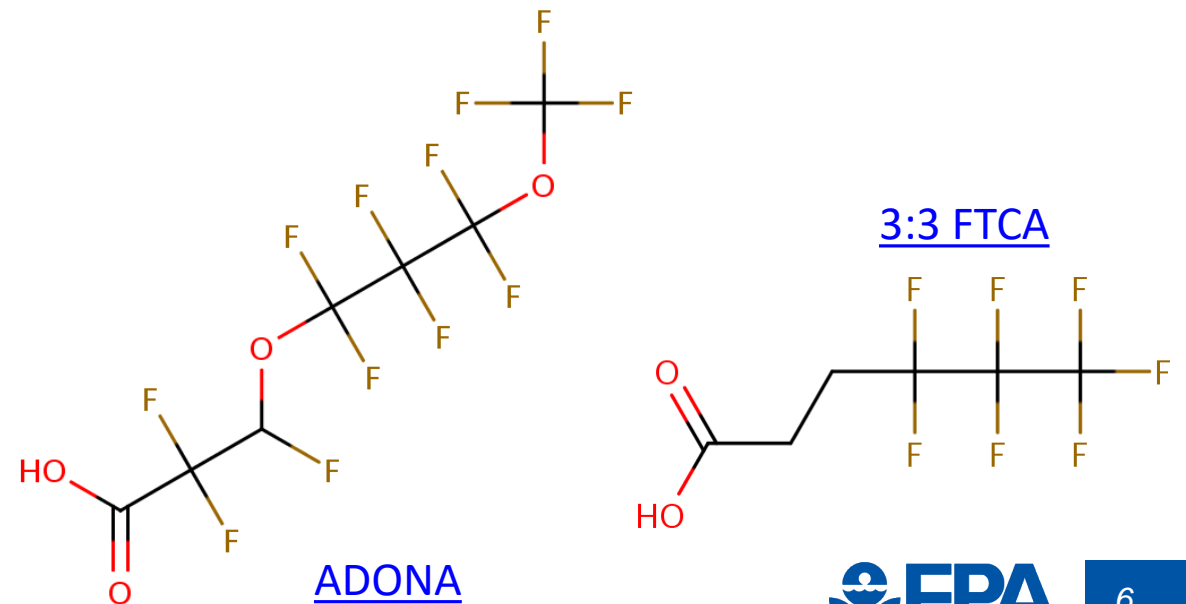
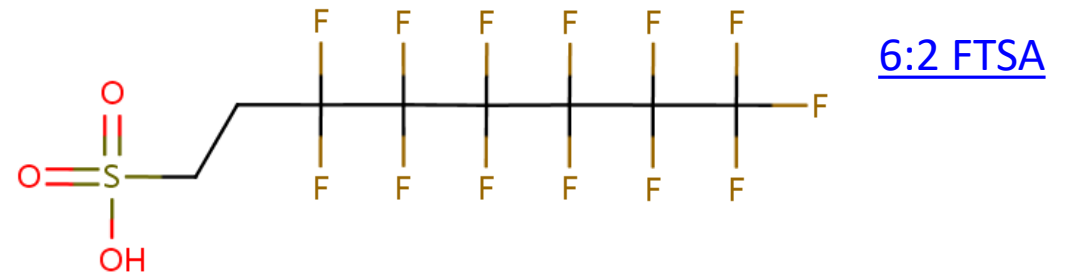
# PFAS Background: Per- and Polyfluorinated Examples

## Perfluorinated Examples



Links to EPA's [CompTox Chemicals Dashboard](#)

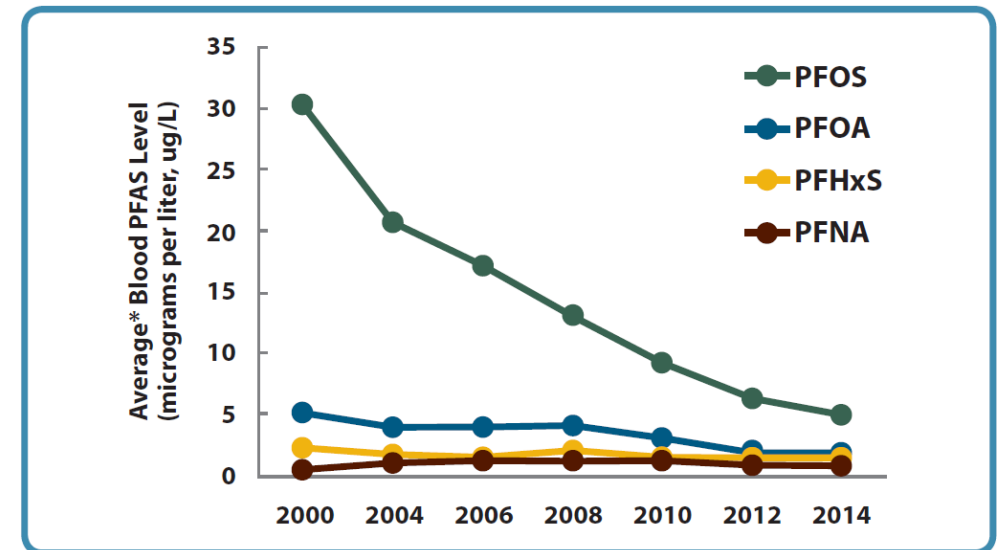
## Polyfluorinated Examples



# PFAS Background: Reasons for Concern

- Known or suspected toxicity, notably for PFOA and PFOS
  - Potential developmental, liver, immune, thyroid effects
- Resist decomposition in the environment and in human bodies
- Used by a variety of industries
- Found in a variety of consumer products
- Most people have been exposed to PFAS

**Blood Levels of the Most Common PFAS in People in the United States from 2000-2014**



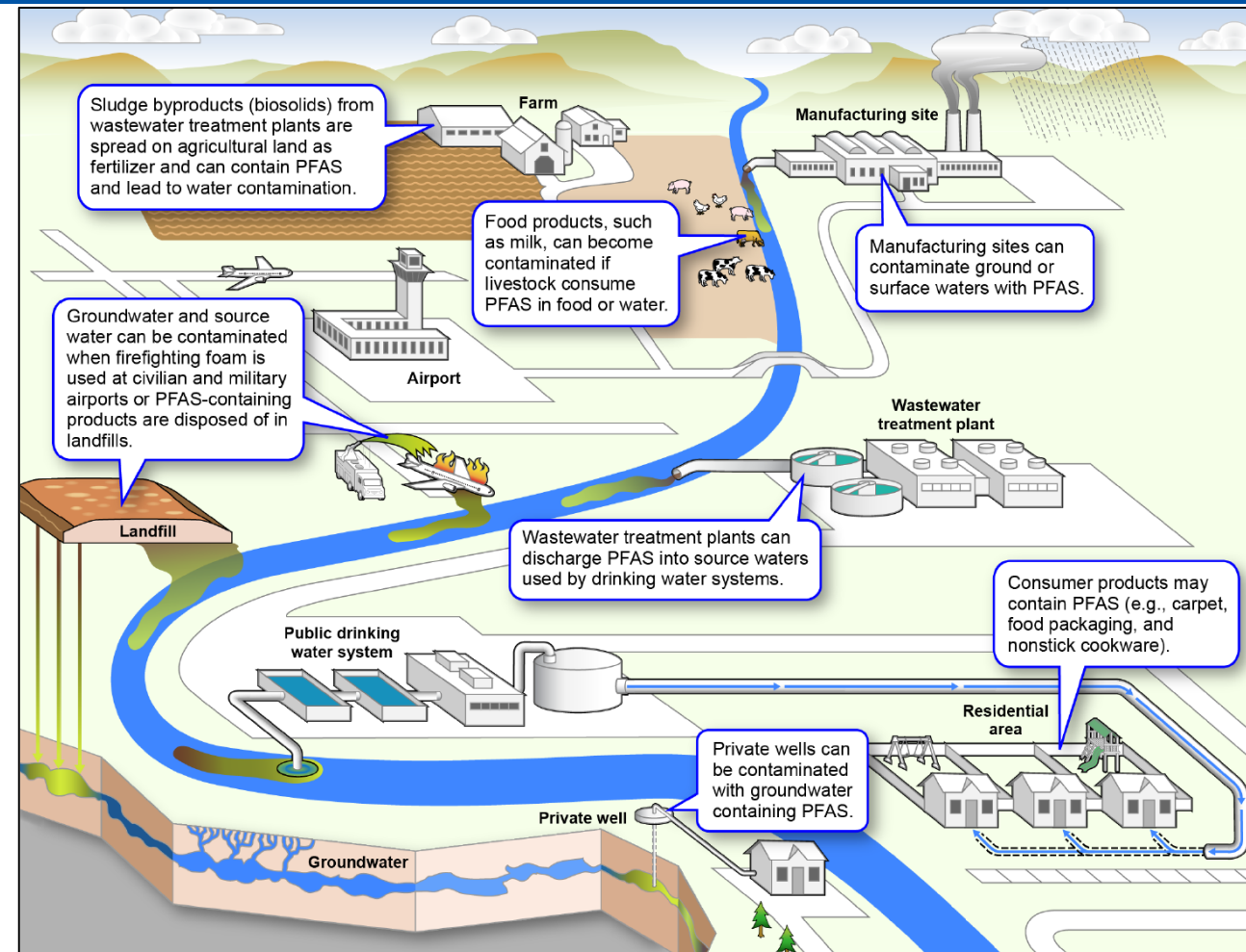
\* Average = geometric mean

**Data Source:** Centers for Disease Control and Prevention. Fourth Report on Human Exposure to Environmental Chemicals, Updated Tables, (January 2017). Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

[https://www.atsdr.cdc.gov/pfas/docs/PFAS\\_in\\_People.pdf](https://www.atsdr.cdc.gov/pfas/docs/PFAS_in_People.pdf)

# PFAS Background: Sources in the Environment

- Direct release into the environment
  - Use of aqueous film-forming foam (AFFF) in training and emergency response
  - Release from industrial facilities
- Landfills and leachates from PFAS-containing products
- Wastewater treatment discharges and biosolids





# EPA Council on PFAS: Roadmap and Early Actions

- EPA Administrator Michael Regan established the EPA Council on PFAS (Council) in April 2021 to develop a bold, strategic, whole-of-EPA strategy to protect public health and the environment from the impacts of PFAS.
- Council is comprised of senior technical and policy leaders from across EPA program offices and Regions - chaired by Assistant Administrator for Water, Radhika Fox and Acting Region 1 Administrator, Deb Szaro.
- Council developed a strategic roadmap for EPA's whole-of-agency approach to tackling PFAS and set timelines for concrete actions.
- Roadmap fills a critical gap in federal leadership, provides a basic floor of federal protection, supports states' ongoing efforts to address PFAS, and builds on existing bold EPA actions to restore scientific integrity and accelerate the pace of research and actions needed to tackle the PFAS crisis and protect American communities.

# EPA's Approach to Tackling PFAS: Principles

**PFAS contamination poses unique challenges, and EPA must use every tool in its tool box. EPA's approach is centered around the following principles:**

- Consider the Lifecycle of PFAS.
- Get Upstream of the Problem.
- Hold Polluters Accountable.
- Ensure Science-Based Decision-Making.
- Prioritize Protection of Disadvantaged Communities.

# EPA's Approach to Tackling PFAS: Goals

## RESEARCH

Invest in research, development, and innovation to increase understanding of PFAS exposures and toxicities, human health and ecological effects, and effective interventions that incorporate the best available science.

## RESTRICT

Pursue a comprehensive approach to proactively prevent PFAS from entering air, land, and water at levels that can adversely impact human health and the environment.

## REMEDiate

Broaden and accelerate the cleanup of PFAS contamination to protect human health and ecological systems.

# Actions: Office of Chemical Safety and Pollution Prevention

- **Publish a national PFAS testing strategy.** Released October 2021.
- **Ensure a robust review process for new PFAS.** Efforts ongoing.
- **Review existing PFAS under TSCA.** Expected Summer 2022 and ongoing.
- **Enhance PFAS reporting under the Toxics Release Inventory.** Expected Spring 2022.
- **Finalize new PFAS reporting under TSCA Section 8.** Expected Winter 2022.

# Actions: Office of Water

- **Undertake nationwide monitoring for PFAS in drinking water.** Final rule published December 2021.
- **Establish a national primary drinking water regulation for PFOA and PFOS.** Proposed rule expected Fall 2022, final rule expected Fall 2023.
- **Publish final toxicity assessment for GenX and five additional PFAS (PFBA, PFHxA, PFHxS, PFNA, PFDA).** GenX published October 2021; others ongoing.
- **Publish health advisories for GenX and PFBS.** Expected Spring 2022.
- **Restrict PFAS discharges from industrial sources through a multi-faceted Effluent Limitations Guidelines program.** Expected 2022 and ongoing.

# Office of Water (Continued)

- **Leverage National Pollutant Discharge Elimination System permitting to reduce PFAS discharges to waterways.** Expected Winter 2022.
- **Publish improved analytical methods.** Expected Fall 2022 and Fall 2024.
- **Publish final recommended ambient water quality criteria for PFAS.** Expected Winter 2022 and Fall 2024.
- **Enhance data availability on PFAS in fish tissue.** Expected Summer 2022 and Spring 2023.
- **Finalize risk assessment for PFOA and PFOS in biosolids.** Expected Winter 2024.

# Actions: Office of Land and Emergency Management and Office of Air and Radiation

## Land and Emergency Management

- **Propose to designate certain PFAS as CERCLA hazardous substances.** Proposed rule expected Spring 2022, Final rule expected Summer 2023.
- **Issue advance notice of proposed rulemaking on various PFAS under CERCLA.** Expected Spring 2022.
- **Issue updated guidance on destroying and disposing PFAS.** Expected Fall 2023.
- **Additional Action: Initiate two rulemakings under RCRA to address PFAS.** Announced October 26, 2021.

## Air and Radiation

- **Build the technical foundation to address PFAS air emissions.** Expected Fall 2022 and ongoing.

# Actions: Office of Research and Development

- **Develop and validate methods to detect and measure PFAS in the environment.** Ongoing actions.
- **Advance the science to assess human health and environmental risks from PFAS.** Ongoing actions.
- **Evaluate and develop technologies for reducing PFAS in the environment.** Ongoing actions.



# Actions: Cross-Program

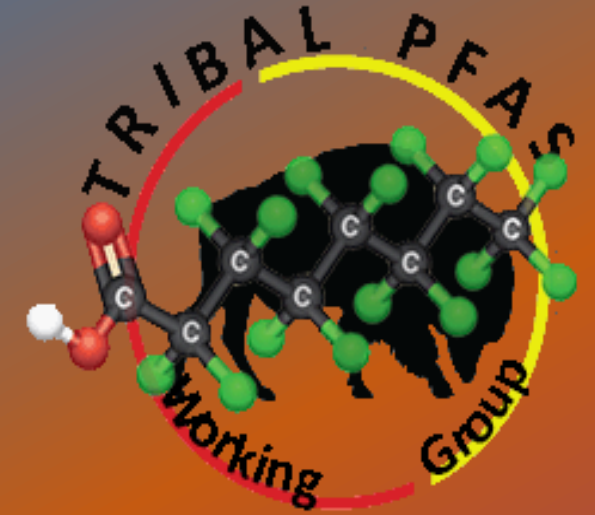
- **Engage directly with affected communities in every EPA Region.** Expected Fall 2021 and ongoing.
- **Use enforcement tools to better identify and address PFAS releases at facilities.** Ongoing actions.
- **Accelerate public health protections by identifying PFAS categories.** Expected Winter 2021 and ongoing.
- **Establish a PFAS voluntary stewardship program.** Expected Spring 2022.
- **Educate the public about the risks of PFAS.** Expected Fall 2021 and ongoing.
- **Issue an annual public report on progress towards PFAS commitments.** Expected Winter 2022 and ongoing.

# Next Steps

- **EPA is committed to transparent, equitable, and inclusive engagement with all stakeholders to inform the Agency's work.**
- **EPA is engaged in a national engagement effort as it seeks to partner for progress on PFAS.**
  - **National webinars** to share the strategic roadmap and its actions (held Oct-Nov 2021)
  - **Stakeholder listening sessions** with non-governmental organizations; Congressional stakeholders; federal partners; Tribal, state, and local governments; environmental justice organizations; and industry groups
  - **A focus on impacted communities**, engaging directly with communities in every EPA Region.
- **Through the roadmap, EPA seeks to harness the collective resources and authority across federal, Tribal, state, and local governments to empower meaningful action now.**



# National PFAS Roadmap Update for Tribes & Indigenous Peoples



Mark Junker  
Tribal Response Coordinator  
Sac and Fox Nation of Missouri  
in Kansas and Nebraska  
[mark.junker@sacfoxenviro.org](mailto:mark.junker@sacfoxenviro.org)



# PFAS and Tribes

**FEB 2019**

EPA's PFAS Action Plan

Need for MCLs

Get Hazardous Substance Designation

Groundwater cleanup recommendations

Toxicity values

Analytical tools for managing PFAS risk

Significant new use rules

Enforcement as a way to manage risk

TSCA, SDWA, CERCLA

**May 2020**

Tribal PFAS Working Group (Meet monthly)

**Dec 2020**

Interim Guidance on Disposal and Destruction

**March 2021**

Tribal Waste and Response Priorities Document

**April 2021**

EPA Council on PFAS

**Oct 2021**

EPA PFAS Roadmap

**Interim Guidance on the  
Destruction and Disposal of  
Perfluoroalkyl and Polyfluoroalkyl  
Substances and Materials  
Containing Perfluoroalkyl and  
Polyfluoroalkyl Substances**

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*INTERIM GUIDANCE FOR PUBLIC COMMENT  
DECEMBER 18, 2020*

WORK  
TO ELIMINATE PFAS

### 3. Technologies for the Destruction and Disposal of PFAS and PFAS-Containing Materials

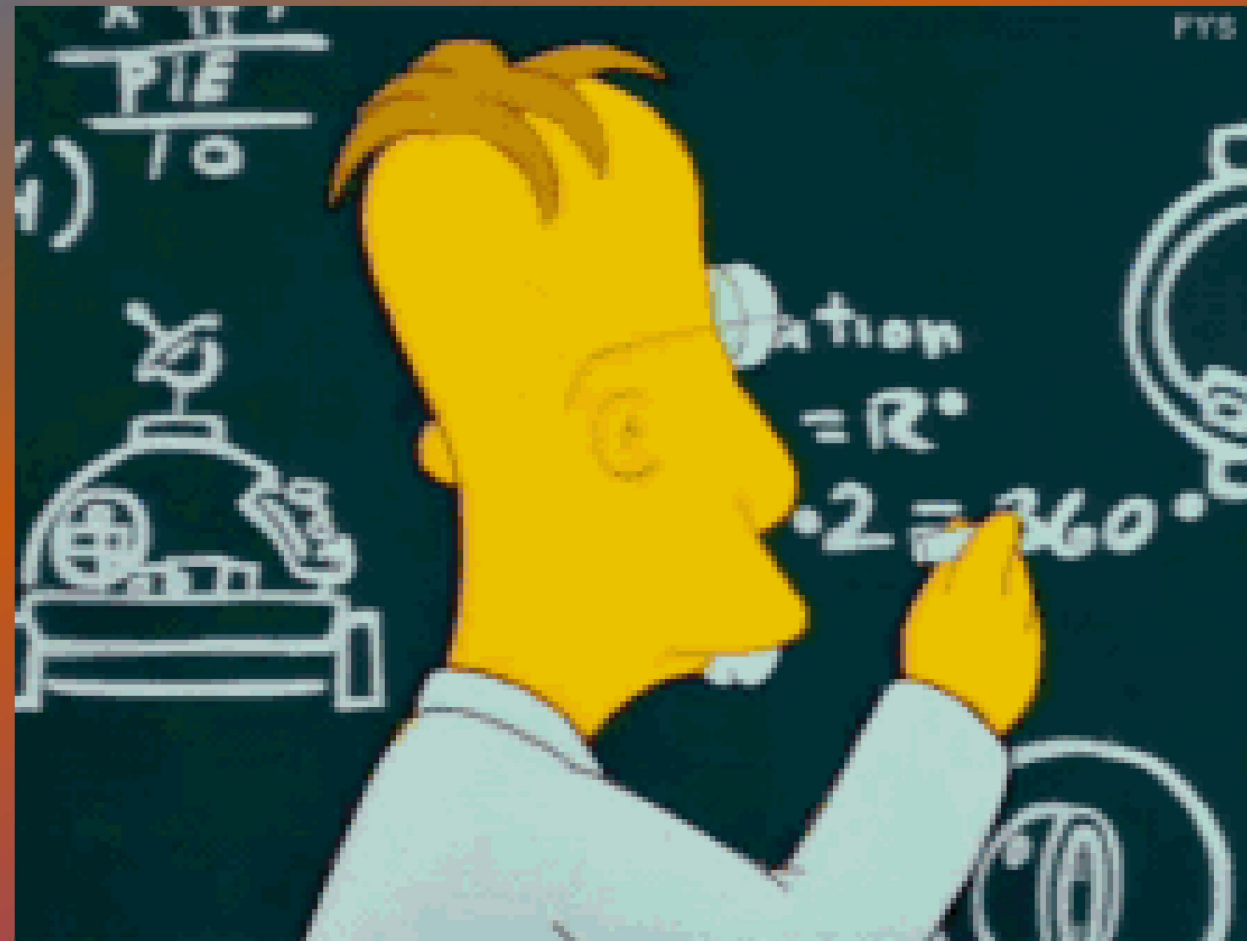
EPA has identified three technological solutions that are commercially available and potentially have the capability to destroy PFAS or manage the migration of PFAS in PFAS-containing materials. These technologies are thermal treatment (Section 3.a), landfilling (Section 3.b), and underground injection control (Section 3.c). Each subsection describes various considerations of these technological solutions, including types of treatment, control devices and corresponding emissions, testing and monitoring, and uncertainties. References appear at the end of each subsection.

#### 3.a Thermal treatment

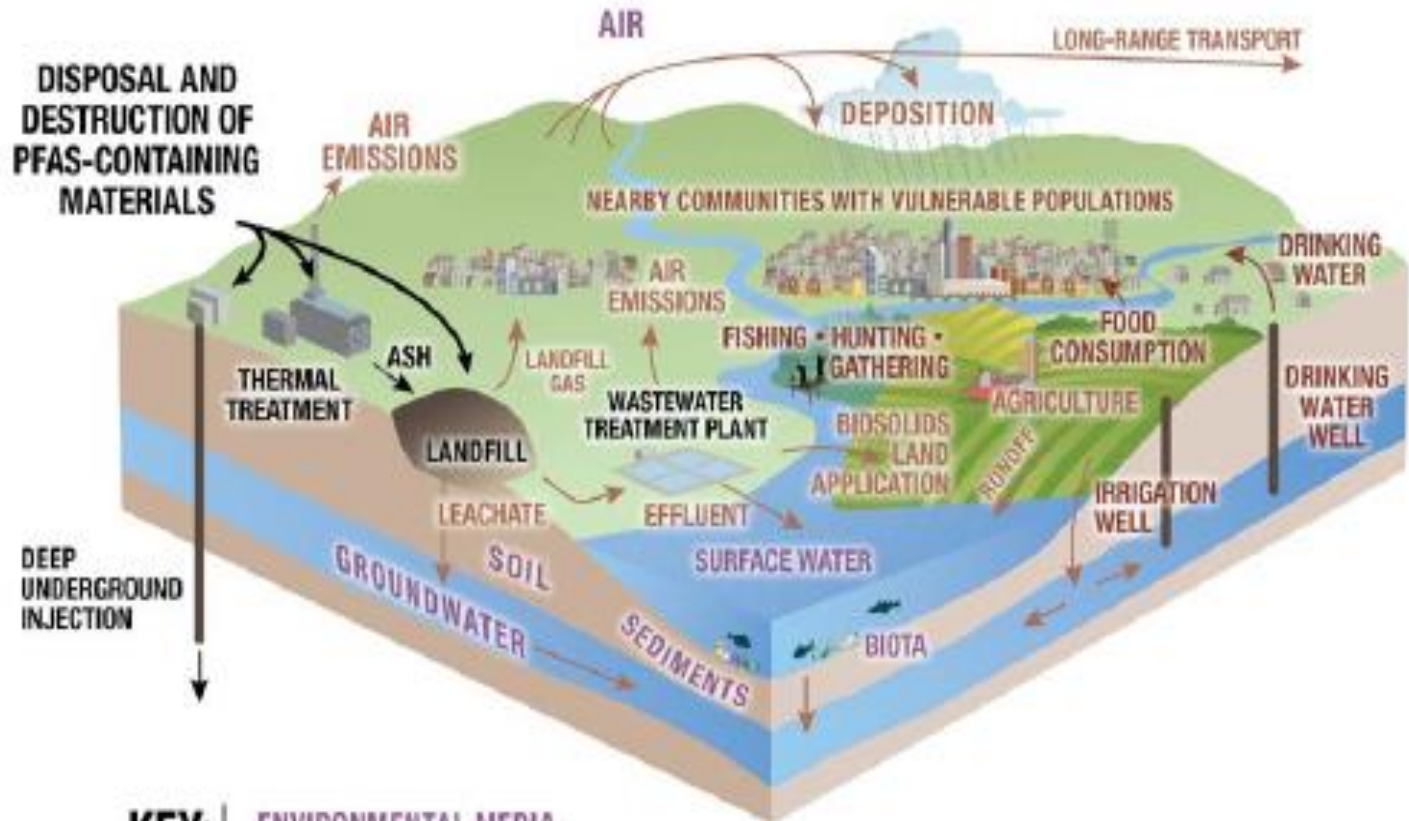
Hazardous waste combustion technologies (commercial incinerators, cement kilns, and lightweight aggregate kilns [LWAKs]) can potentially achieve temperatures and residence times sufficient to break apart the PFAS contained in the waste stream being thermally treated. Permitted hazardous waste facilities have stringent regulatory controls on temperatures and other important operating parameters to achieve a 99.99 percent destruction efficiency for other (non-PFAS) organic chemicals, but information on the efficacy of PFAS destruction in these facilities is currently lacking. EPA currently has no emission characterizations from these sources when they burn PFAS, and is working to develop measurement methodologies and gather information to conclude whether potential PICs are adequately controlled. EPA recognizes that PICs are inevitable (even for nonfluorinated compounds); however, based on the unique characteristics of fluorine combustion chemistry, it needs to be determined whether thermal treatment devices and their associated post-combustion control devices are adequately controlling fluorinated PICs. Given all these factors, there is a current need to continue research activities investigating incineration of PFAS. After sufficient research has been completed to address the related knowledge and data gaps, EPA can make a more informed recommendation on disposal of PFAS compounds and PFAS-containing substances using incineration.

Thermal treatment units use high-temperature chemical breakdown or incineration to control pollutants. Incineration is an effective and approved method for destroying certain halogenated organic chemicals including chlorinated solvents, polychlorinated biphenyls (PCBs), dioxin-laden wastes, brominated flame retardants, refrigerants, and ozone-depleting substances (ODSs). Fluorine, like chlorine and bromine, is a halogen; thus, PFAS fall into the category of halogenated chemicals.

LET'S LEARN  
ABOUT  
PFAS



**DISPOSAL AND DESTRUCTION OF PFAS-CONTAINING MATERIALS**



- KEY:**
- ENVIRONMENTAL MEDIA
  - DISPOSAL, DESTRUCTION, AND TREATMENT →
  - POTENTIAL ENVIRONMENTAL RELEASES AND TRANSPORT →
  - POTENTIAL EXPOSURE PATHWAYS AND RECEPTORS →

**PFAS IS HARD**





NATIONAL TRIBAL WATER COUNCIL

February 19, 2021

Peter Wright, Assistant Administrator  
Office of Land and Emergency Management  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave, N.W.  
Washington, DC 20460

Submitted via Federal eRulemaking Portal: <https://www.regulations.gov/>

RE: National Tribal Water Council–Tribal PFAS Working Group (NTWC-TPWG) Comments on “Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances” – Docket ID No EPA-HQ-OLEM-2020-0527

Dear Mr. Wright,

In 2006, the National Tribal Water Council (NTWC) was formed by the U.S. Environmental Protection Agency (EPA) to provide EPA with technical input from Indian Country to strengthen EPA’s coordination with Indian tribes, and to allow EPA to better understand issues and challenges faced by tribal governments and Alaska Native Villages as they relate to EPA water programs and initiatives. The NTWC provides tribes and associated tribal communities and tribal organizations with research and information for decision-making regarding water issues and water-related concerns. Furthermore, the NTWC advocates for the best interests of federally-recognized Indian and Alaska Native tribes and tribally-authorized organizations in matters pertaining to water. The NTWC also advocates for the health and sustainability of clean and safe water, and for the productive use of water for the health and well-being of Indian country. The NTWC takes its role seriously and has provided input to EPA on many water issues since the Council’s inception.

In 2020, the NTWC formed an ad hoc working group named the Tribal PFAS Working Group (NTWC-TPWG) to assist in outreach on Per- and polyfluoroalkyl substances (PFAS) to tribes and tribal members and to advocate for inclusion of tribes and tribal lifeways in policy decisions on PFAS risks and risk management. The NTWC-TPWG is supported by and working in collaboration with the National Tribal Toxics Council (NTTC), the Tribal Science Council (TSC), and the Tribal Waste and Response Steering Committee (TWRSC). These tribal partnership groups (TPGs) are all supported by USEPA.

The NTWC-TPWG members are pleased to submit comments on EPA’s Interim PFAS Destruction and Disposal Guidance (Guidance).

Sincerely,

Ken Norton, Chair  
National Tribal Water Council

Dianne Barton, Chair  
National Tribal Toxics Council

opportunity to comment on the Interim  
d Polyfluoroalkyl Substances and  
ances. Should you or your staff have  
e Hingst, TSC at (402) 857-3347 or Dianne  
laine Wilson, NTWC Project Manager, at  
C-TPWG.

Page Hingst, Vice Chair  
Tribal Science Council

Mark Junker, Chair  
Tribal Waste & Response Steering  
Committee

The data and background that is presented in the Guidance is useful, but we find that it serves more as a progress report than as an official guidance on an issue that is very important to tribal nations.



...the Guidance focuses on only six types of PFAS because of legislation based decisions rather than technical issues. We suggest that a final Guidance should be extended to all PFAS-containing materials. In addition, the land application of biosolids and other wastes (e.g., pulp and paper sludge) containing PFAS is a concerning risk for PFAS migration into the environment. A final Guidance should address this method of PFAS disposal.

The Guidance should include methods to ensure worker's safety.

The Guidance should support the development of a national, publicly available database to document and track the final disposition of the waste.

A federal requirement to monitor PFAS in landfill waste, leachate, condensate and landfill gas should be in place with standardized methods before landfilling is considered a viable option to dispose of PFAS.

The long-term fate and transport of PFAS (including precursors) in the injection zone should be understood before allowing injection into any well (Section 3.c.v). There should be no uncertainty about PFAS contaminant migration, longevity, effects of mixture or interactions with co-contaminants before allowing well injection.

It should be noted that many lifestyle choices that connect Indigenous populations to natural resources, such as hunting, fishing, and gathering are facts oftentimes treaty-protected cultural resources and cannot be changed. The guidance goes on to recognize that consumption of foods and exposure to environmental media that contain higher concentrations of contaminants when combined with intrinsic socioeconomic status can lead to increased susceptibility and predisposition to higher health risks.

...makes no mention of the federal trust responsibility that U.S. EPA and other federal agencies have with respect to Indian Tribes, and the protection of their lands and resources. Federal trust responsibility should be added to the Guidance.

We recommend that EPA add documentation on unique tribal exposures to the tools listed in Guidance Section 4.d. (page 87) on the identification of potentially vulnerable populations. We suggest citing the National Tribal Toxics Council's (NTTC) report "Understanding Tribal Exposures to Toxics" that can be downloaded from the NTTC's website:

<https://tribaltoxics.org/>.

In the section related to guidance on community engagement, we recommend that EPA include language requiring government-to-government consultation where tribal communities are potentially affected.

# PFAS and Emerging Contaminants of Concern

- ✎ The TWAR SC, along with several other TPGs, provided comments on the Interim Guidance on the Destruction and Disposal of PFAS. EPA should ensure they review this comment letter regarding this interim guidance and provide a response to the TWAR SC and the other TPGs.
- ✎ Identify and compile a list of Tribal Nations that are being affected, or have the potential to be affected, by PFAS and make that list available not only to TWAR SC but to other TPGs as well.
- ✎ The EPA Office of Research and Development should prioritize research that involves bioaccumulation in subsistence food that could impact Tribes. This includes fish, wildlife/ game and culturally sensitive plants.



**Tribal Waste and Response  
Steering Committee  
2021 Priorities**

April 2021

# PFAS and Emerging Contaminants of Concern (2)



Tribal Nations need easier access to the PFAS Analytical Tool. Currently, accessing the tool requires going through a difficult approval process.



Provide appropriate and plain language outreach materials to Tribal Nations to use to inform their members of the hazards of PFAS.



Create a clearinghouse of PFAS data that Tribes can access to better understand risks, remedies and fate and transport of emerging contaminants

# EPA Council on PFAS



**Tribal Waste and Response  
Steering Committee**  
PO Box 15004  
Flagstaff, AZ 86011  
928-523-3840  
<http://www7.nau.edu/itep/main/twarsc/Home/Index>

**Chair**

Mark Junker, Sac and Fox  
Nation of Missouri

**Vice Chair**

Rebecca Stevens, Coeur  
d'Alene Tribe

**Members**

Victoria Flowers, Oneida  
Nation

Page Hingst, Santee Sioux  
Nation

Tracy Horst, Choctaw Nation

Summer King, Quapaw Nation

Virginia LeClere, Prairie Band  
Potawatomi Nation

Rob Roy, La Jolla Band of  
Luiseño Indians

John Wheaton, Nez Perce  
Tribe

May 4, 2021

Deb Szaro  
Acting Regional Administrator  
USEPA Region 1

Good morning,

Last week a number of Tribal Environmental Professionals were truly heartened to hear that Administrator Regan issued a memo laying out the framework for the EPA Council on PFAS. We would like to congratulate you on being selected to lead this council. As a member of two EPA Tribal Partnership Groups devoted to working with EPA to protect human health and the environment in Indian Country, I would also encourage you to look at selecting several Tribal representatives when forming this new council.

In the past Tribal input has often come from second hand information or been a box checked deep into the process. With the new administration's commitment to more meaningful consultation a seat on the PFAS Council would lend instant credibility to these words while ensuring that indigenous voices and knowledge are incorporated from the council's inception. We have been actively seeking knowledge and solutions regarding PFAS and emerging contaminants and welcome the opportunity to share with you while continuing to learn. We also witnessed recently that engaging Tribes early can avoid problems further down the line and improve the communication process. The Tribal PFAS Working Group has been working with several states including Minnesota and Washington to better understand their best management practices surrounding PFAS contamination and remediation.

We would truly appreciate the opportunity to speak to you about the subject and explore how this might work in collaboration with EPA professionals.

Thank you and we look forward to hearing from you soon.

Respectfully

*Mark Junker*

# EPA Council on PFAS

May 10, 2021

Chairman Mark Junker  
Sac and Fox Nation of Missouri  
Tribal Waste and Response Steering Committee  
PO Box 15004  
Flagstaff, AZ 86011

Dear Chairman Junker:

Thank you for your May 4th letter regarding the newly created EPA Council on PFAS. I appreciate your interest in EPA's PFAS efforts. I am honored to co-lead this council and work collaboratively to address the public health and environmental risks of these chemicals.

As you mentioned, the Biden-Harris Administration is committed to meaningful consultation with our tribal partners. While the EPA Council on PFAS is an internal group of senior officials from across the agency, the council wants to ensure that indigenous voices and knowledge are incorporated. To that end, the council will provide engagement opportunities to facilitate an exchange of information. We welcome tribal input, including the knowledge and solutions you have learned, during that engagement.

The council is dedicated to meeting the needs of our partners. We know that PFAS has affected many tribal communities and we applaud the efforts of the Tribal PFAS Working Group in actively engaging and pursuing solutions. Your experience will be invaluable to the council's efforts and we look forward to communicating future opportunities for collaboration.

Sincerely,



Deborah A. Szaro  
Acting Regional Administrator



# PFAS Roadmap Goals

## Research



Build the evidence base on individual PFAS and define categories of PFAS to establish toxicity values and methods.



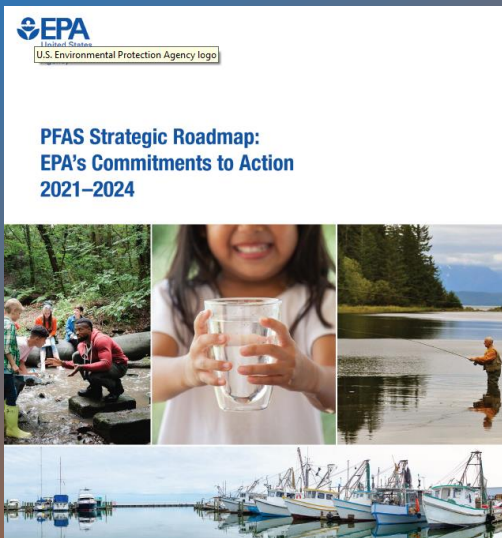
Increase scientific understanding on the universe of PFAS, sources of environmental contamination, exposure pathways, and human health and ecological effects.



Expand research on current and emerging PFAS treatment, remediation, destruction, disposal, and control technologies.



Conduct research to understand how PFAS contribute to the cumulative burden of pollution in communities with environmental justice concerns.



# PFAS Roadmap Goals (2)

## Restrict



Use and harmonize actions under all available statutory authorities to control and prevent PFAS contamination and minimize exposure to PFAS during consumer and industrial uses.



Place responsibility for limiting exposures and addressing hazards of PFAS on manufacturers, processors, distributors, importers, industrial and other significant users, dischargers, and treatment and disposal facilities.



Establish voluntary programs to reduce PFAS use and release.



Prevent or minimize PFAS discharges and emissions in all communities, regardless of income, race, or language barriers.

# PFAS Roadmap Goals (3)

## Remediate



Harmonize actions under all available statutory authorities to address PFAS contamination to protect people, communities, and the environment.



Maximize responsible party performance and funding for investigations and cleanup of PFAS contamination.



Help ensure that communities impacted by PFAS receive resources and assistance to address contamination, regardless of income, race, or language barriers.



Accelerate the deployment of treatment, remediation, destruction, disposal, and mitigation technologies for PFAS, and ensure that disposal and destruction activities do not create new pollution problems in communities with environmental justice concerns.

# EPA Council on PFAS

Consider the Lifecycle of PFAS

Get Upstream of the Problem

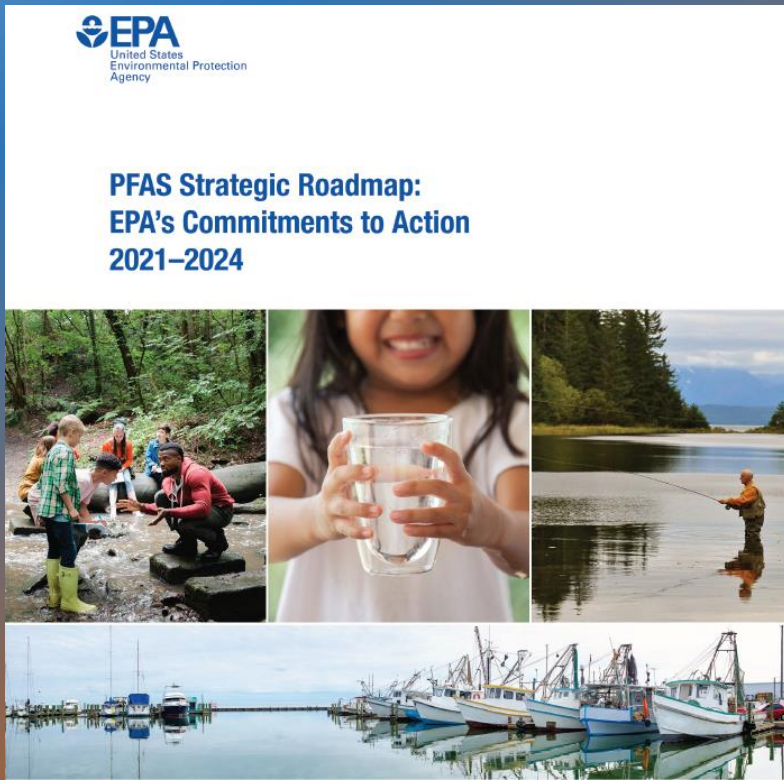
Prevent PFAS from entering the environment

Hold Polluters Accountable

Ensure Science-Based Decision-Making

Prioritize Protection of Disadvantaged  
Communities

*When taking action on PFAS, EPA will ensure that disadvantaged communities have equitable access to solutions.*



# A Note from EPA Administrator Michael S. Regan

This roadmap will not solve our PFAS challenges overnight. But it will turn the tide by harnessing the collective resources and authority across federal, Tribal, state, and local governments to empower meaningful action now.

## Introduction

Every level of government—federal, Tribal, state, and local—needs to exercise increased and sustained leadership to accelerate progress to clean up PFAS contamination, prevent new contamination, and make game-changing breakthroughs in the scientific understanding of PFAS. The EPA Council on PFAS developed this strategic roadmap to lay out EPA's whole-of-agency approach to addressing PFAS. To deliver needed protections for the American people, the roadmap sets timelines by which the Agency plans to take specific actions during the first term of the Biden-Harris Administration. The strategic roadmap builds on and accelerates implementation of policy actions identified in the Agency's 2019 action plan and

**Publish final recommended ambient water quality criteria for PFAS**  
Expected Winter 2022 and Fall 2024

Additionally, EPA will support Tribes in developing water quality standards that will protect waters under Tribal jurisdiction under the same framework as waters in adjacent states. Aquatic life criteria are expected in Winter 2022, and human health criteria are expected Fall 2024.

**Monitor fish tissue for PFAS from the nation's lakes and evaluate human biomarkers for PFAS**

Expected Summer 2022

States and Tribes have highlighted fish tissue data in lakes as a critical information need. Food and water consumption are important pathways of PFAS exposure, and PFAS can accumulate in fish tissue.

**Finalize list of PFAS for use in fish advisory programs**  
Expected Spring 2023

EPA will publish a list of PFAS for state and Tribal fish advisory programs that are either known or thought to be in samples of edible freshwater fish in high occurrence nationwide. This list will serve as guidance to state and Tribal fish tissue monitoring and advisory programs so that they know which PFAS to monitor and how to set fish advisories for PFAS that have human health impacts via fish consumption. This information will encourage

**Propose to designate certain PFAS as CERCLA hazardous substances  
Proposed rule expected Spring 2022; Final rule expected Summer 2023**

EPA is developing a Notice of Proposed Rulemaking to designate PFOA and PFOS as Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substances. Such designations would require facilities across the country to report on PFOA and PFOS releases that meet or exceed the reportable quantity assigned to these substances. The hazardous substance designations would also enhance the ability of federal, Tribal, state, and local authorities to obtain information regarding the location and extent of releases. EPA or other agencies could also seek cost recovery or contributions for costs incurred for the cleanup. The proposed rulemaking will be available for public comment in Spring 2022. The Agency commits to conducting robust stakeholder engagement with communities near PFAS-contaminated sites.

**Office of Air and Radiation  
Build the technical foundation to address PFAS air emissions  
Expected Fall 2022 and Ongoing**

The Clean Air Act requires EPA to regulate emissions of hazardous air pollutants (HAPs), which are pollutants that are known or suspected to cause cancer or other serious health effects. At present, EPA actively works with Tribal, state, and local governments to reduce air emissions of 187 HAPs to the environment. While PFAS are not currently listed as HAPs under the Clean Air Act, EPA is building the technical foundation on PFAS air emissions to inform future decisions. EPA is conducting ongoing work to:

**Educate the public about the risks of PFAS  
Expected Fall 2021 and Ongoing**

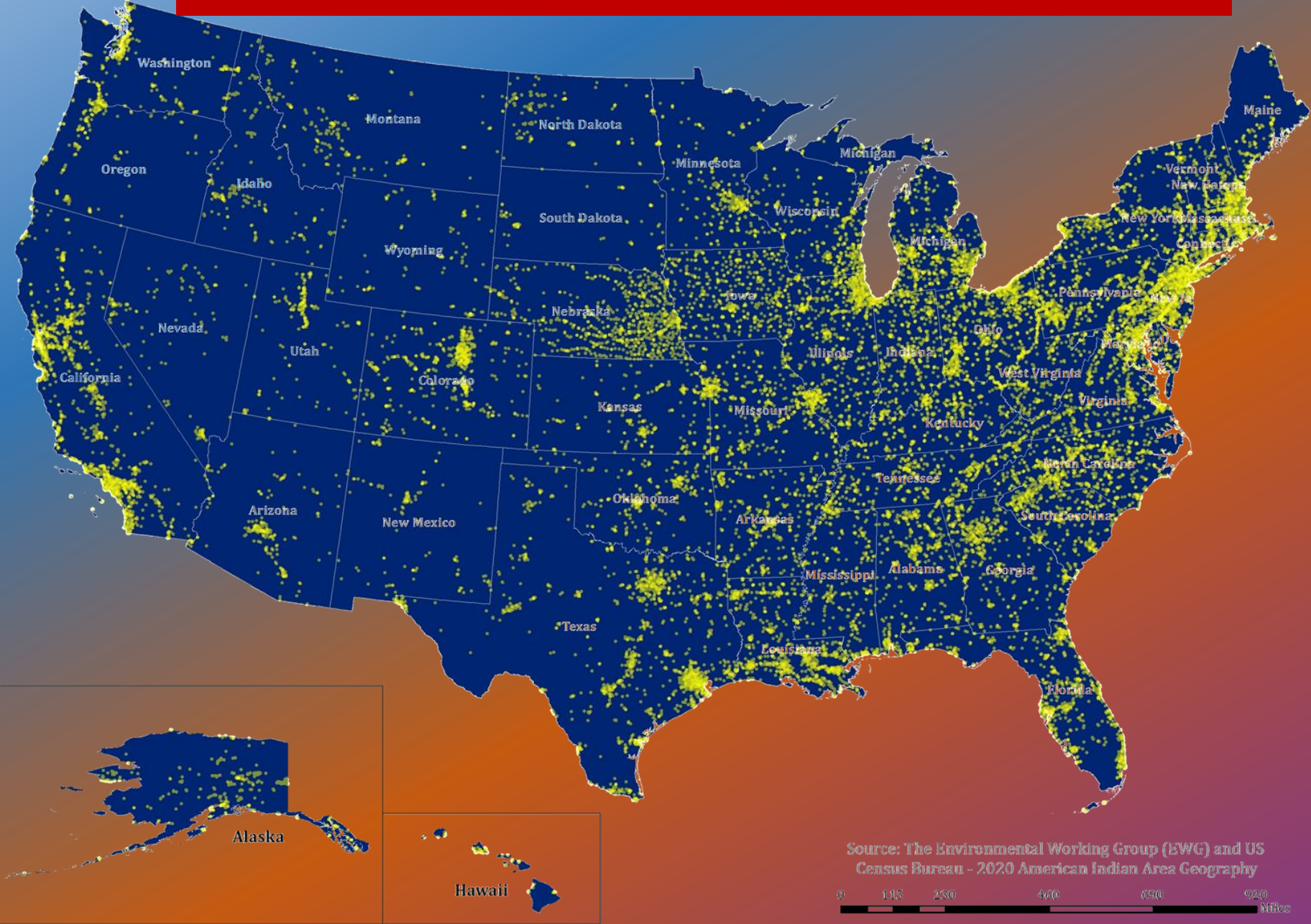
Addressing PFAS contamination is a critical part of EPA's mission to protect human health and the environment. This important mission cannot be achieved without effectively communicating with communities, individuals, businesses, the media, and Tribal, state, and local partners about the known and potential health risks associated with these chemicals. When EPA communicates risk, it is the Agency's goal to provide meaningful, understandable, and actionable information to many audiences. To accomplish this goal, EPA will make available key explainers that help the public understand what PFAS are, how they are used, and how

	PFAS Roadmap	TWAR SC Priorities	PFAS WG Priorities
<b>Research &amp; Outreach</b>	Build the evidence base on individual PFAS and define categories of PFAS to establish <b>toxicity values</b> and methods.	Tribal Nations need easier access to the PFAS Analytical Tool. Currently, accessing the tool requires going through a difficult approval process.	Identify Tribes that are impacted by PFAS.
	Increase <b>scientific understanding</b> on the universe of PFAS, sources of environmental contamination, exposure pathways, and human health and ecological effects.	Create a clearinghouse of PFAS data that Tribes can access to better understand risks, remedies and fate and transport of emerging contaminants	Develop a database and map. To access the map, please visit: <a href="https://www.ewg.org/interactive-maps/PFAS_tribal_lands/map/">https://www.ewg.org/interactive-maps/PFAS_tribal_lands/map/</a>
	Expand research on current and emerging PFAS treatment, remediation, destruction, disposal, and control technologies.	Provide appropriate and plain language outreach materials to Tribal Nations to use to inform their members of the hazards of PFAS.	Establish a Tribal PFAS Working Group webpage.
	Conduct research to understand how PFAS contribute to the <b>cumulative burden of pollution</b> in communities with environmental justice concerns	Identify and compile a list of Tribal Nations that are being affected, or have the potential to be affected, by PFAS and make that list available.	Identify funding opportunities for PFAS research.
		ORD should prioritize research that involves bioaccumulation in subsistence food that could impact Tribes. (fish, wildlife/ game and culturally sensitive plants)	
<b>Restrict</b>	Use and harmonize actions under all available statutory authorities to control and prevent PFAS contamination and minimize exposure to PFAS.		
	Place responsibility for limiting exposures and addressing hazards of PFAS on manufacturers, processors, distributors, importers, industrial users, dischargers, etc.		
	Establish voluntary programs to reduce PFAS use and release.		
	Prevent or minimize PFAS discharges and emissions in all communities, regardless of income, race, or language barriers.		

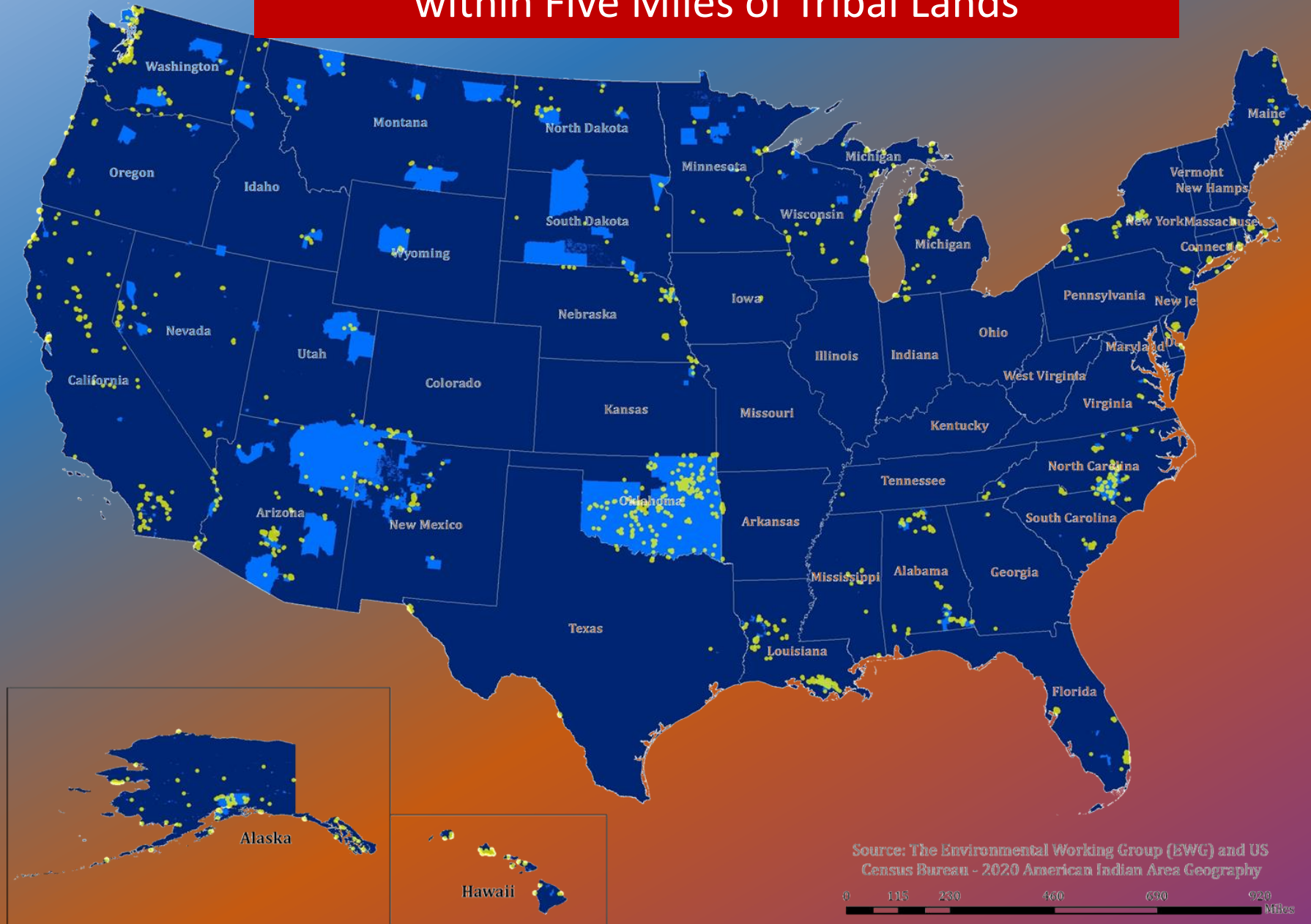
	PFAS Roadmap	TWAR SC Priorities	PFAS WG Priorities
<b>Remediate</b>	Harmonize actions under all available statutory authorities to address PFAS contamination to protect people, communities, and the environment.	The TWAR SC, along with several other TPGs, provided comments on the Interim Guidance on the Destruction and Disposal of PFAS. EPA should ensure they review this comment letter regarding this interim guidance and provide a response to the TWAR SC and the other TPGs.	Obtain more information on PFAS disposal. What levels are dangerous? Provide recommendations for Tribes
	Maximize responsible party performance and funding for investigations and cleanup of PFAS contamination.		
	Communities impacted by PFAS receive resources and assistance to address contamination, regardless of income, race, or language barriers.		
	Deployment of treatment, remediation, destruction, disposal, and mitigation technologies for PFAS to communities with environmental justice concerns.		



# Known and Potential PFAS Contamination Sites



# Known and Potential PFAS Contamination Sites within Five Miles of Tribal Lands



# Known and Potential PFAS Contamination Sites Within Five Miles of Tribal Lands

## Top 20 States

State	Source of PFAS Contamination							Total
	Airport	Drinking Water	Industry	Known User	Landfill	Military	Sewage	
<b>OK</b>	2	1	201	0	56	6	59	325
<b>CA</b>	5	7	160	0	37	3	27	239
<b>LA</b>	0	0	184	0	23	0	24	231
<b>AK</b>	19	1	174	2	9	5	16	226
<b>WA</b>	4	1	121	0	50	3	18	197
<b>AZ</b>	5	3	109	1	32	5	29	184
<b>WI</b>	2	1	118	0	5	3	12	141
<b>FL</b>	1	1	106	1	24	0	4	137
<b>NC</b>	1	18	53	2	13	1	27	115
<b>NV</b>	2	0	78	0	14	1	4	99
<b>NY</b>	1	1	55	2	23	3	13	98
<b>AL</b>	1	6	49	0	22	0	17	95
<b>MI</b>	4	18	44	2	14	0	12	94
<b>NE</b>	2	0	37	0	37	1	2	79
<b>NM</b>	2	0	55	0	10	0	10	77
<b>HI</b>	8	0	42	0	11	0	7	68
<b>MA</b>	0	5	36	0	3	1	3	48
<b>NJ</b>	0	17	11	0	11	1	2	42
<b>OR</b>	1	0	21	0	5	2	13	42
<b>MN</b>	0	0	34	0	4	0	3	41

Source: The Environmental Working Group (EWG) and US Census Bureau – 2020 American Indian Geography



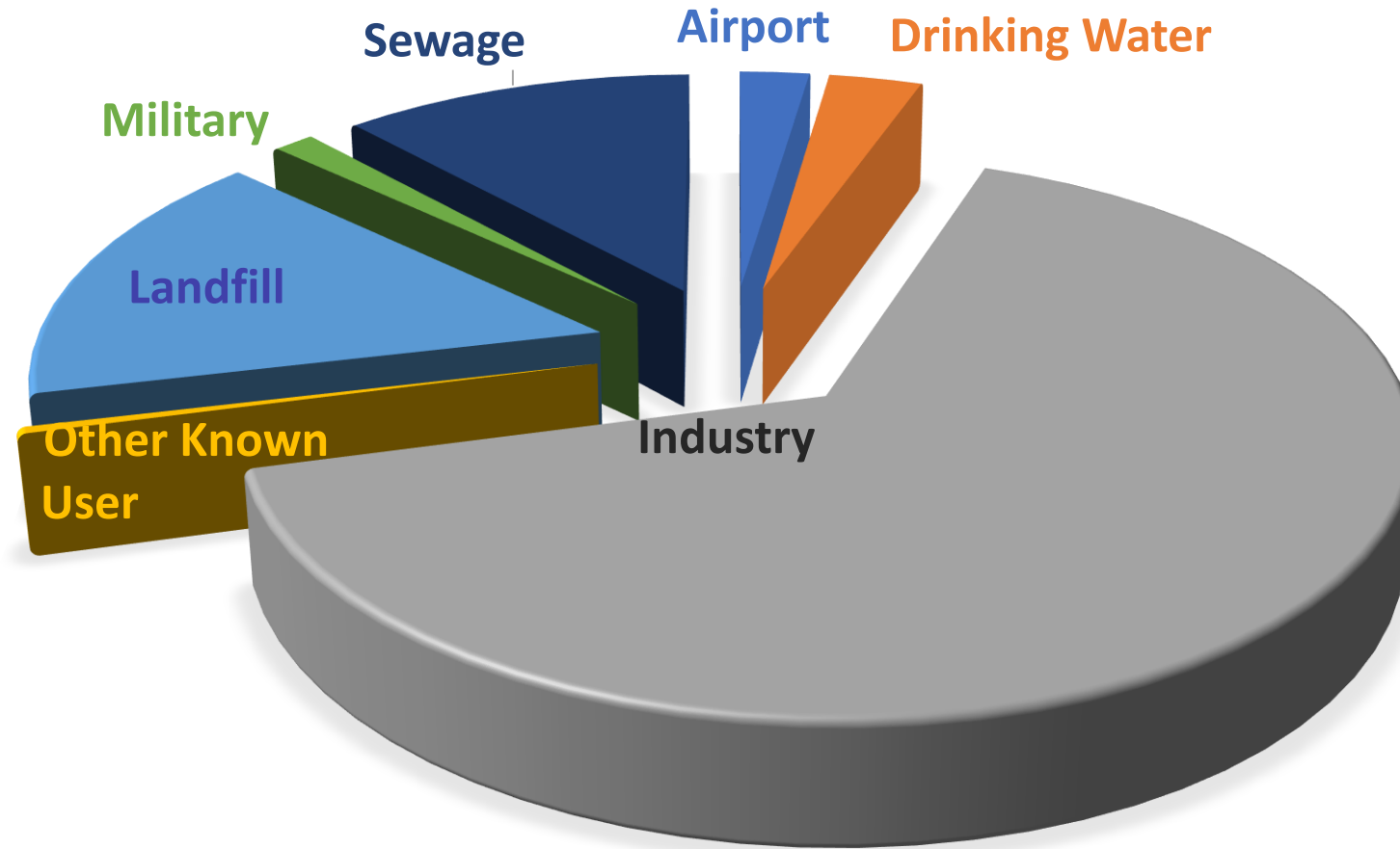
## Known and Potential PFAS Contamination Sites Within Five Miles of Tribal Lands

PFAS Contamination	Locations within 5 miles of Tribal Lands	Total Locations	Percent of Total Locations in Indian Country
Drinking Water Detection	91	1,660	5%
Other Known Users	11	57	19%
Military Facilities	38	327	12%
Suspected Industry Release	1,921	29,960	6%
Suspected Sewage Release	356	4,901	7%
Suspected Landfill Release	470	6,393	7%
Suspected Airport Release	68	519	13%
<b>Total</b>	<b>2,955</b>	<b>43,817</b>	<b>7%</b>

Source: The Environmental Working Group (EWG) and US Census Bureau – 2020 American Indian Geography



# SOURCES OF PFAS CONTAMINATION



# Known and Potential PFAS Contamination Sites Within Five Miles of Tribal Lands

## Top 20 States

State	Source of PFAS Contamination							Total
	Airport	Drinking Water	Industry	Known User	Landfill	Military	Sewage	
<b>OK</b>	2	1	201	0	56	6	59	325
<b>CA</b>	5	7	160	0	37	3	27	239
<b>LA</b>	0	0	184	0	23	0	24	231
<b>AK</b>	19	1	174	2	9	5	16	226
<b>WA</b>	4	1	121	0	50	3	18	197
<b>AZ</b>	5	3	109	1	32	5	29	184
<b>WI</b>	2	1	118	0	5	3	12	141
<b>FL</b>	1	1	106	1	24	0	4	137
<b>NC</b>	1	18	53	2	13	1	27	115
<b>NV</b>	2	0	78	0	14	1	4	99
<b>NY</b>	1	1	55	2	23	3	13	98
<b>AL</b>	1	6	49	0	22	0	17	95
<b>MI</b>	4	18	44	2	14	0	12	94
<b>NE</b>	2	0	37	0	37	1	2	79
<b>NM</b>	2	0	55	0	10	0	10	77
<b>HI</b>	8	0	42	0	11	0	7	68
<b>MA</b>	0	5	36	0	3	1	3	48
<b>NJ</b>	0	17	11	0	11	1	2	42
<b>OR</b>	1	0	21	0	5	2	13	42
<b>MN</b>	0	0	34	0	4	0	3	41

# Known and Potential PFAS Contamination Sites Within Five Miles of Tribal Lands

## Top 20 Counties

State	Source of PFAS Contamination						Total	
	Airport	Drinking Water	Industry	Other Known User	Landfill	Military		Sewage
Maricopa, AZ	0	2	82	0	11	0	10	105
Tulsa, OK	1	0	65	0	11	2	9	88
Nome, AK	1	0	75	0	0	0	0	76
Broward, FL	1	1	60	2	8	0	3	75
Terrebonne, LA	0	0	60	0	4	0	4	68
Lafourche, LA	0	0	55	0	2	0	4	61
Pierce, WA	0	1	38	0	13	0	4	56
Hillsborough, FL	0	0	41	0	12	0	1	54
King, WA	1	18	53	2	13	1	27	115
Riverside, CA	1	1	31	0	7	0	6	46
Brown, WI	1	0	42	0	0	0	2	45
Contra Costa, CA	0	0	37	0	6	0	2	45
Honolulu, HI	1	0	28	0	9	0	5	43
St. Mary, LA	0	0	32	0	5	0	4	41
Bernalillo, NM	0	0	31	0	7	0	1	39
Milwaukee, WI	0	0	36	0	0	0	2	38
Matanuska-Susitna	0	0	35	0	0	1	0	36
Niagra, NY	1	0	18	0	10	1	1	31
Sebastian, AR	1	0	24	0	4	1	1	31
Washoe, NV	1	0	26	0	1	1	2	31

# Known and Potential PFAS Contamination Sites Within Five Miles of Tribal Lands

## Top 20 Tribal Lands

Name	Source of PFAS Contamination							Total
	Airport	Drinking Water	Industry	Other Known User	Landfill	Military	Sewage	
<b>United Houma STDSA</b>	0	0	123	0	11	0	12	146
<b>Cherokee OTSA</b>	1	0	60	0	16	3	17	97
<b>Creek OTSA</b>	0	0	59	0	9	0	11	79
<b>Nome ANSVA</b>	1	0	73	0	0	0	0	74
<b>Gila River</b>	0	0	51	0	10	0	5	66
<b>Lumbee STDSA</b>	1	8	28	2	6	1	12	58
<b>Tampa Reservation</b>	0	0	41	0	12	0	1	54
<b>Ponca (NE) Trust Land</b>	2	0	38	0	9	1	2	52
<b>Chickasaw OTSA</b>	0	0	34	0	6	0	9	49
<b>Choctaw OTSA</b>	1	0	31	0	8	1	7	48
<b>Puyallup</b>	0	0	29	0	12	0	6	47
<b>Lytton Rancheria</b>	0	0	38	0	6	0	2	46
<b>Cheyenne &amp; Arapahoe OTSA</b>	0	1	28	0	10	0	6	45
<b>Oneida (WI)</b>	1	0	42	0	0	0	2	45
<b>Salt River</b>	0	2	33	0	3	0	6	44
<b>Knik ANVSA</b>	1	0	36	0	0	3	1	41
<b>Muckleshoot Off-Reservation Trust</b>	1	0	30	0	8	0	2	41
<b>Forest County</b>	0	0	37	0	0	0	2	39
<b>Potawatomi Off-Reservation Trust</b>	0	0	37	0	0	0	2	39
<b>Ho-Chunk Off-Reservation Trust</b>	1	1	26	0	3	1	5	37
<b>Echota Cherokee SDTSA</b>	0	4	17	0	7	0	3	31



## About the Map

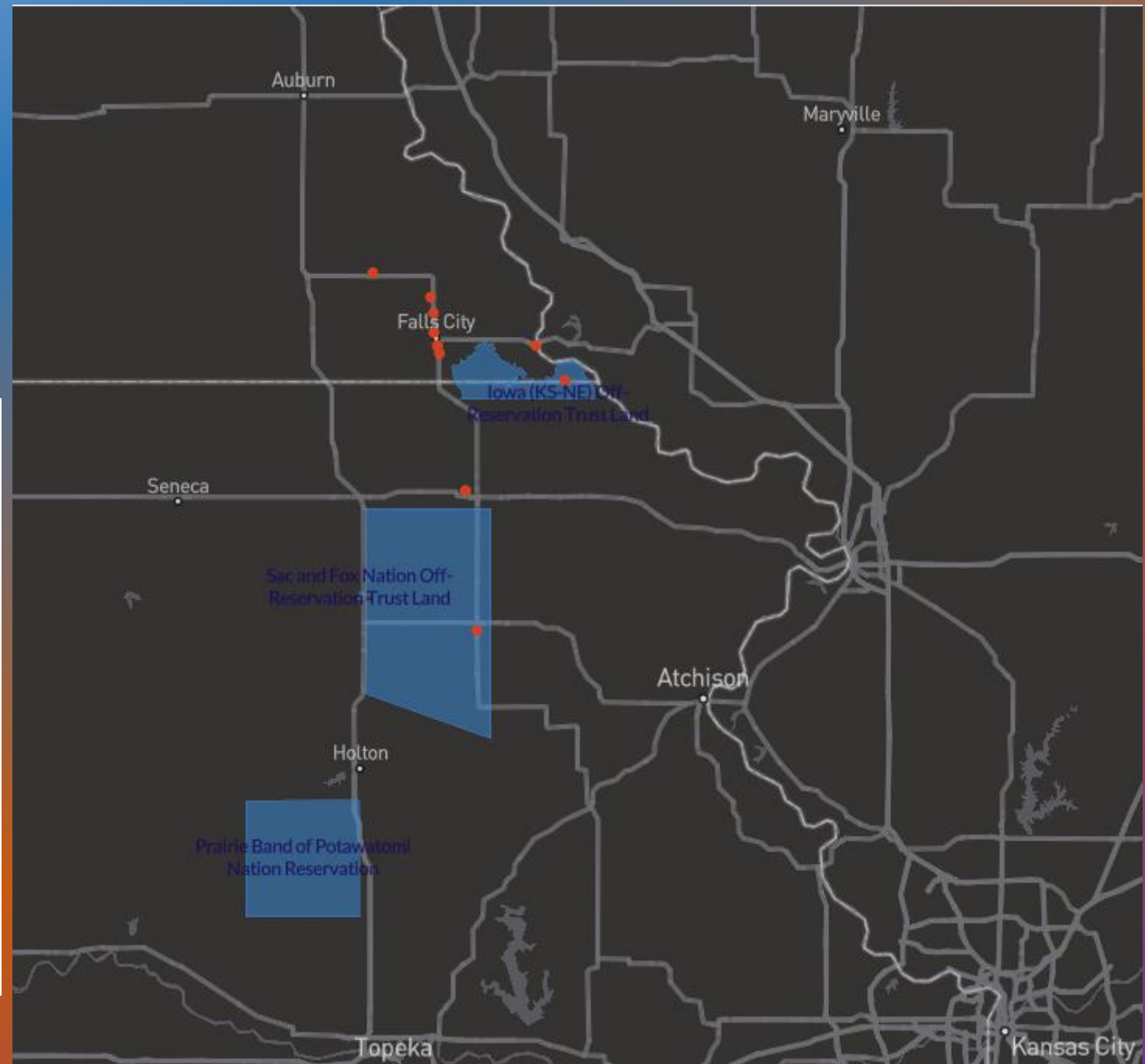
### PFAS contamination across Tribal Lands (August 16, 2021)

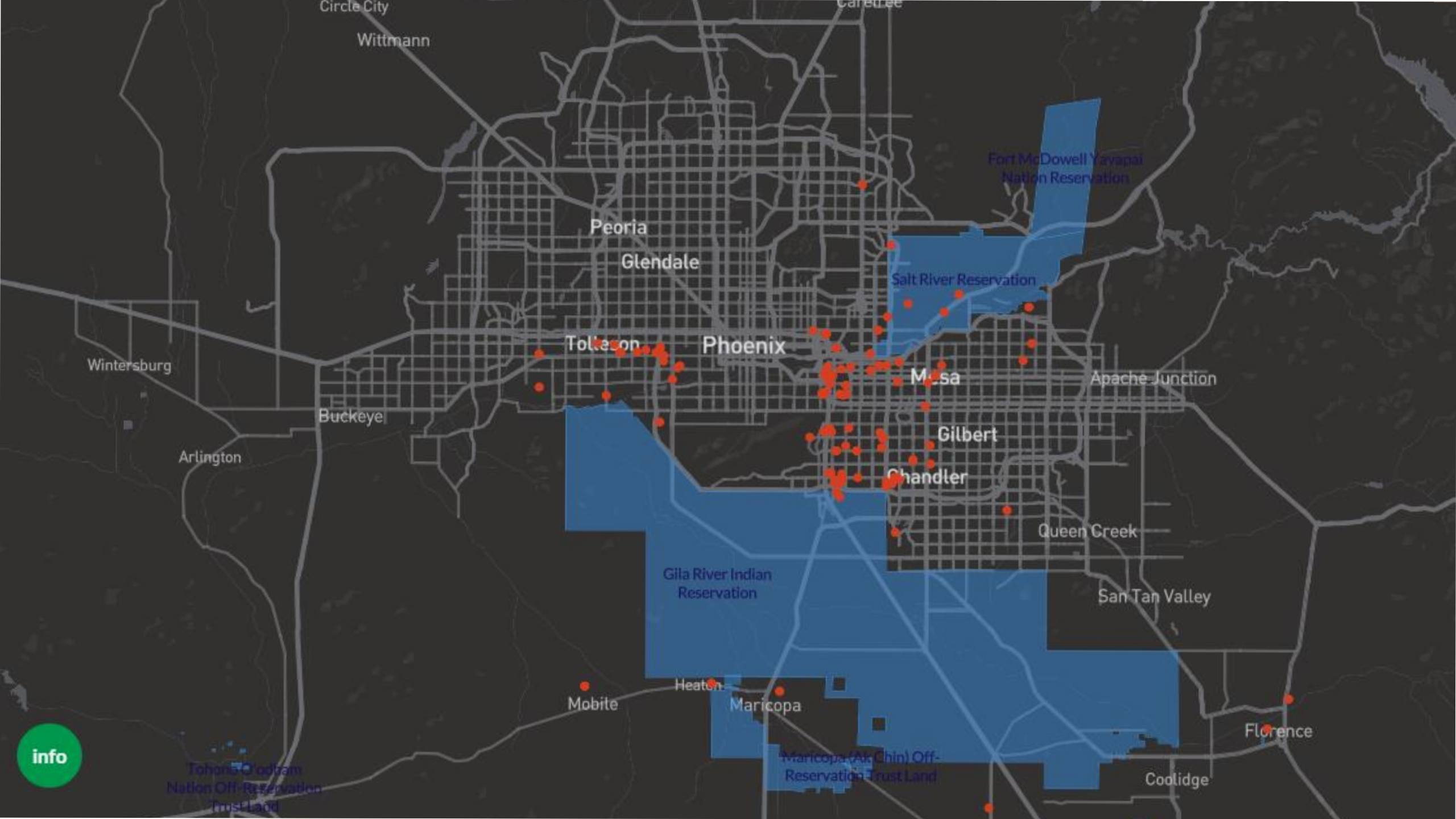
140 confirmed, 2,815 suspected PFAS contamination sites within five-mile boundaries of Tribal Lands

Highly toxic fluorinated compounds known as PFAS, or per- and polyfluoroalkyl substances, are now detected in the environment and people worldwide, and across the United States. Thousands of locations in the U.S. have confirmed PFAS pollution in the water, and tens of thousands of industrial or municipal sites are either known to produce and/or use PFAS or are a suspected source for PFAS releases into air and water.

This map compiles data on confirmed and suspected PFAS contamination sources within five miles of Tribal Land boundaries in the United States. The GIS layer representing Tribal Lands comes from the U.S. Census [2020 American Indian Area Geography](#) data, serving only as a proxy for Tribal Lands and not constituting an endorsed or official boundary.

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info

## History of PFAS in Minnesota

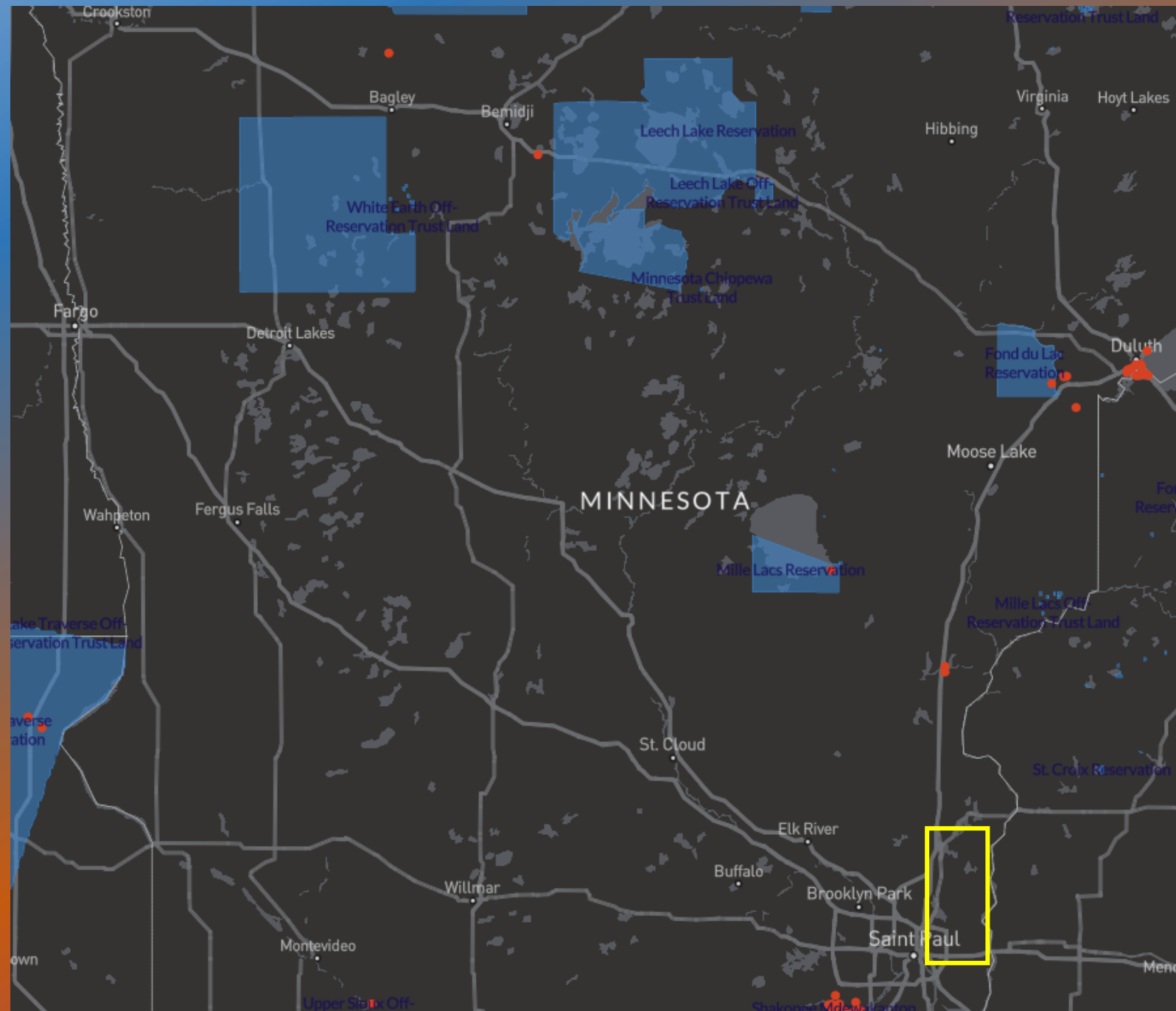
- ✦ Area of concern is east of the twin cities
- ✦ 3M plant in Washington County (groundwater)
- ✦ Lake Elmo -fish advisory.

## Wildlife in Michigan and Wisconsin

- ✦ Michigan - levels were high for deer near an AFB
- ✦ Do not eat advisory for deer and wild game organs.
- ✦ Wisconsin - Not as high as Michigan.

## Minnesota DNR

pilot project of sampling whitetail deer and waterfowl.



## Priorities for 2022

### 1 Identify tribes that are impacted by PFAS.

In 2021, the Tribal PFAS Working Group invited tribal representatives during the monthly calls to provide testimonials on how PFAS have impacted tribal lands and resources. The working group plans to continue to reach out to tribes and learn more about the effects of PFAS contamination.

### 2 Enhance the database and the map to reflect updated information.

With assistance from the Environmental Working Group, an interactive map was developed on PFAS contamination across Tribal lands. The TPWG plans to continue to provide updated information for the database and map. [https://www.ewg.org/interactive-maps/PFAS\\_tribal\\_lands/map/](https://www.ewg.org/interactive-maps/PFAS_tribal_lands/map/)

### 3 Enhance and promote the Tribal PFAS Working Group webpage with current publications, presentation videos, research, and resources.

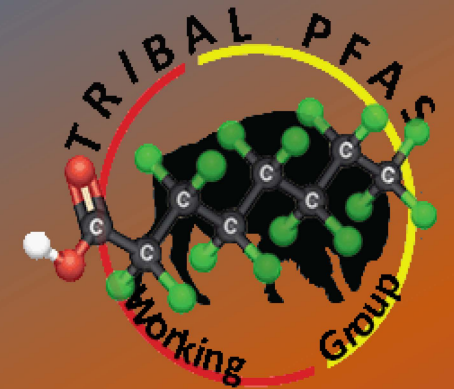
The Tribal PFAS Working Group webpage was launched in 2021 to provide up-to-date information on PFAS. To access: [www7.nau.edu/itep/main/ntwc/Issues/PFAS](http://www7.nau.edu/itep/main/ntwc/Issues/PFAS)

### 4 Advocate for and identify funding opportunities for tribal PFAS science needs, such as monitoring, testing, research, etc.

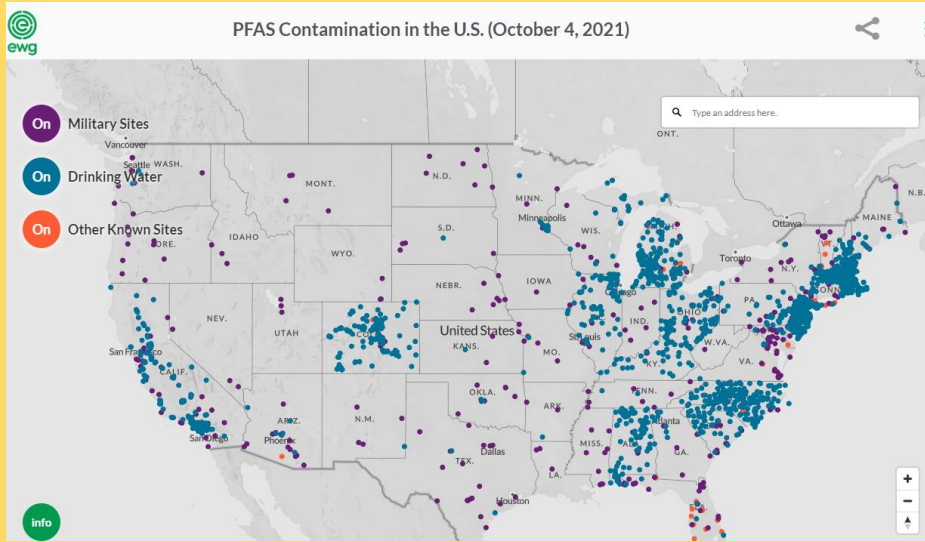
As more research is being conducted on PFAS, it is imperative for tribes to keep up-to-date on information on PFAS. Tribes need to learn more about monitoring technology, testing methods, and related research in order to protect human health and the environment.

### 5 Create opportunities for the Tribal PFAS Working Group to collaborate with the EPA Council on PFAS.

On April 27, 2021, the EPA Council on PFAS was created to better understand and reduce the potential risks caused by PFAS chemicals. The TPWG was briefed on the EPA's Strategic PFAS Roadmap and looks forward to future opportunities to collaborate. To learn more about the EPA Council on PFAS, please visit: <https://www.epa.gov/pfas>



[https://www.ewg.org/interactive-maps/pfas\\_contamination/map/](https://www.ewg.org/interactive-maps/pfas_contamination/map/)



<https://www.youtube.com/watch?v=9W74aeuqsiU>



# Questions and Answers Period & Evaluation

- Please type your questions in the Q and A pod.
- We would appreciate your feedback on the webinar and ask that you complete the short online survey. Link posted in the Q and A pod:  
<https://forms.gle/1EJUYYBs7JxG4ssR8>

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