



# ***Per- and Polyfluoroalkyl Substances (PFAS): How ATSDR develops and applies the science***

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National Governors Association

Virtual Meeting

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# History and Mandate

1980: CERCLA  
(Superfund Act)  
allowed federal  
authorities to address  
dangers of abandoned  
or uncontrolled  
hazardous waste  
dumps

1985: CERCLA led to  
the creation of ATSDR

ATSDR's top priority:  
Protect people from  
harmful exposures

- Identifies human health effects of hazardous substances
- Works directly with communities
- Responds to environmental health emergencies
- Conducts exposure assessments, public health assessments and studies
- Provides guidance to health departments and practitioners



ATSDR

Protecting  
People's  
Health from  
Environmental  
Hazards

## Core Strategies:

- **Monitoring and investigating** hazardous exposures
- **Partnering** with communities
- **Providing** clinical education and outreach
- **Using** geographic and geospatial expertise
- **Developing** science-based tools and resources



Funded State  
Health  
Departments



ALS  
Registry



Toxicological  
Profiles



Site  
Assessments



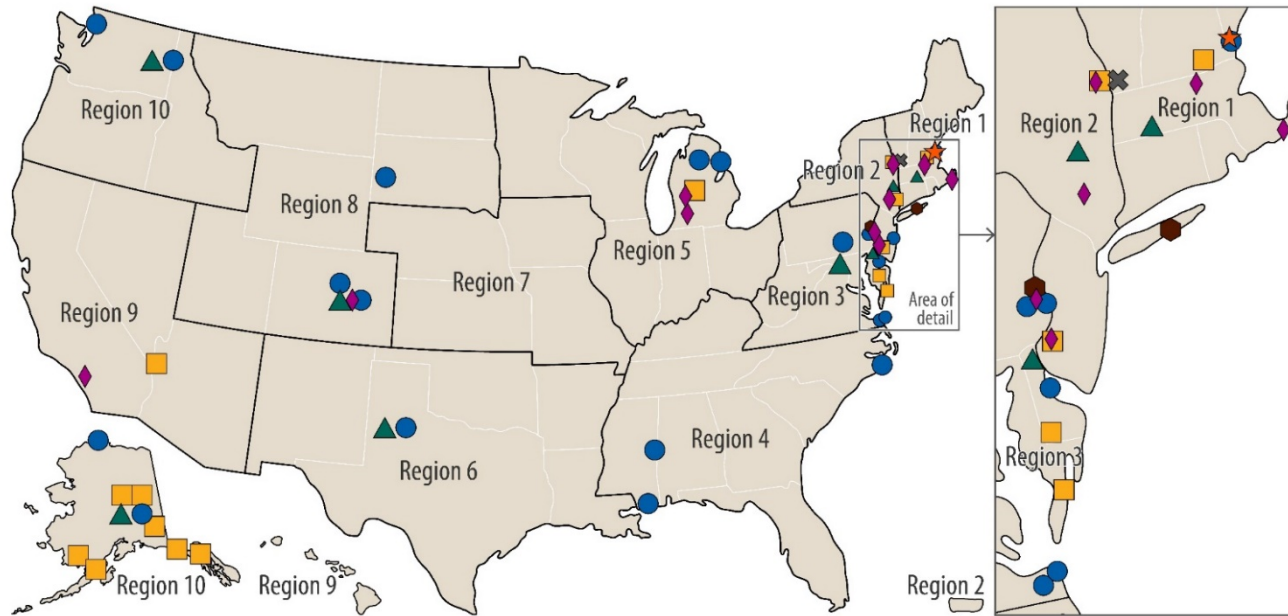
Community  
Engagement



Emerging  
Contaminants

# Current ATSDR PFAS Activities

28 active projects: 9 research studies and site-based activities nationwide

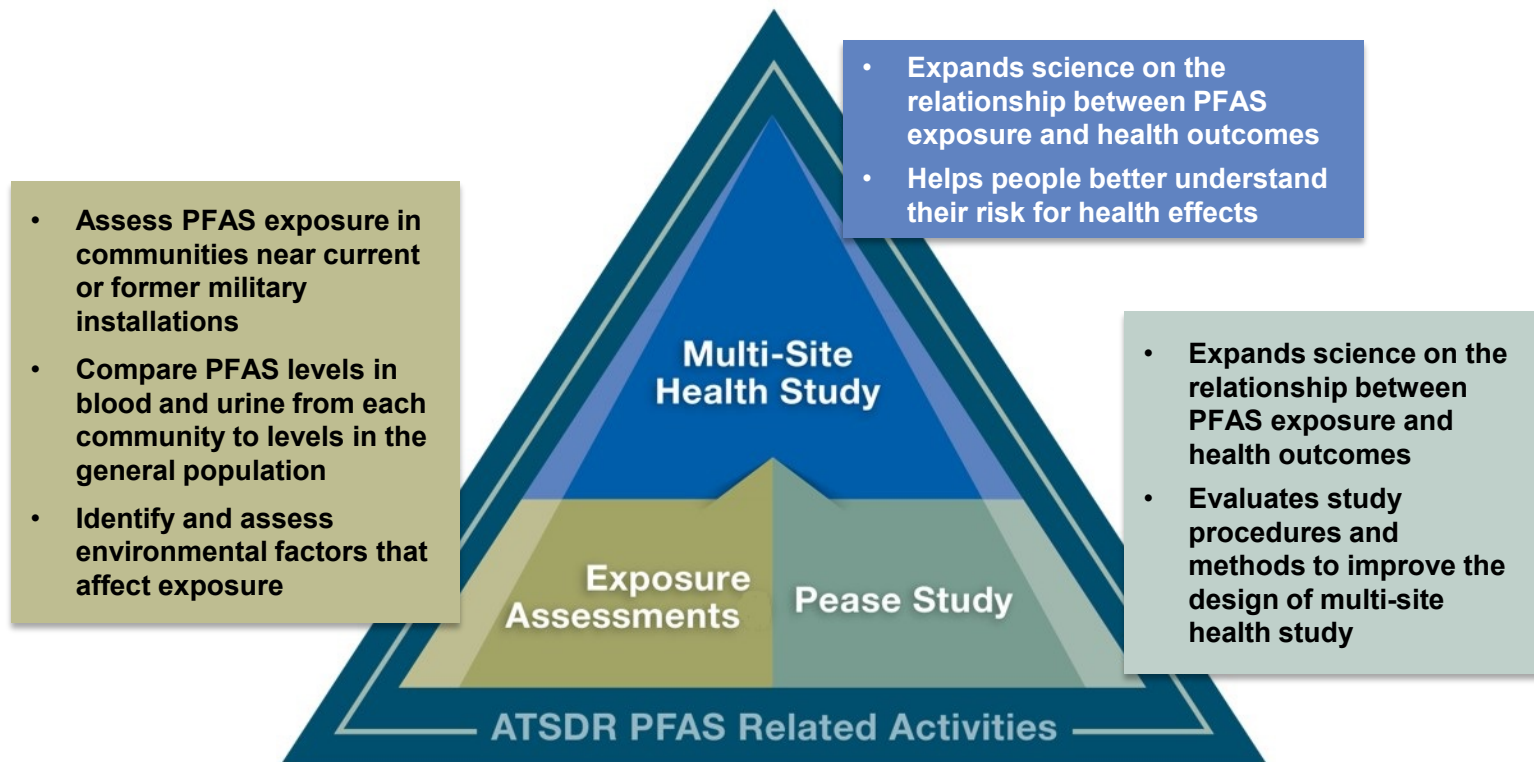


- Orange square: ATSDR or state lead (funded under cooperative agreement)
- Blue circle: ATSDR or state lead (cooperative agreement) and Department of Defense site
- Black cross: ATSDR support of site work conducted by a state not funded by the cooperative agreement program
- Purple diamond: ATSDR-funded Multi-site Study locations
- Green triangle: PFAS Exposure Assessment Site
- Brown circle: PFAS Exposure Assessment Technical Tools (PEAT) Pilot Site
- Orange star: ATSDR-led health study (Pease Site)

## LONG-TERM OBJECTIVES

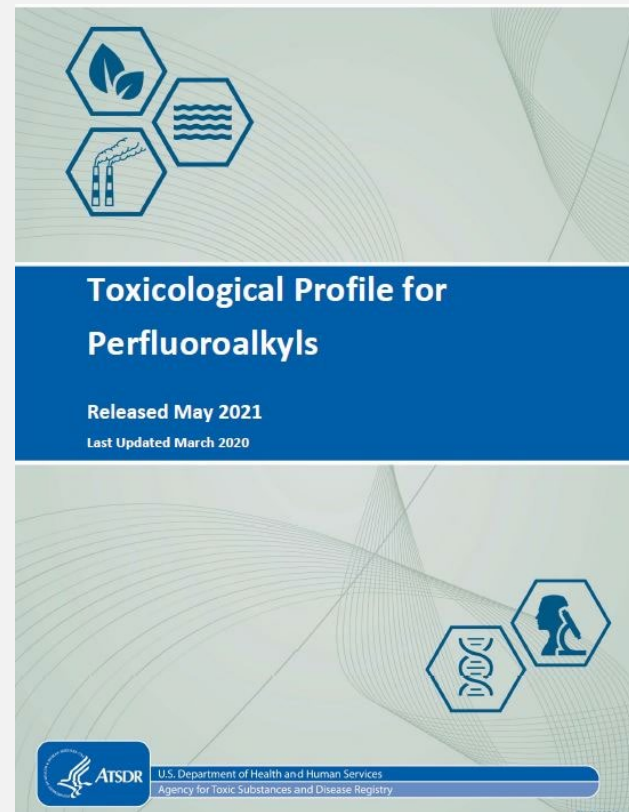
- 1 Understand the where, how, and to what degree exposure is occurring in affected communities
- 2 Examine the relationship between PFAS exposure and health effects
- 3 Identify and implement strategies to prevent and/or reduce exposure

# ATSDR PFAS Exposure Assessments and Studies



# Toxicological Profile for Perfluoroalkyls

- By Congressional mandate, the Agency for Toxic Substances and Disease Registry (ATSDR) produces toxicological profiles for chemical substances found at National Priorities List (NPL) sites.
- Each peer-reviewed Tox Profile reflects a comprehensive and extensive evaluation, summary, and interpretation of available toxicological and epidemiological information on a substance.



## Minimal Risk Levels (MRLs)

- When sufficient data exist, ATSDR will derive MRLs
  - MRLs for PFOA, PFOS, PFNA, and PFHxS are published in ATSDR's Toxicological Profile.
- An MRL is an estimate of the amount of a chemical a person can eat, drink, or breathe each day without a detectable risk to health.
- MRLs are developed for health effects other than cancer.
- MRLs can be converted into drinking water concentrations for adults and children called Environmental Media Evaluation Guides (EMEGs).
- **MRLs and EMEGs are NOT intended to define clean-up or action levels.**
- These values are screening tools used to help public health professionals decide where to look more closely.
  - ATSDR sets each MRL well below a value that is likely to cause a health effect.
  - If an exposure is above an MRL, ATSDR conducts further evaluation to determine if the exposure might harm human health.



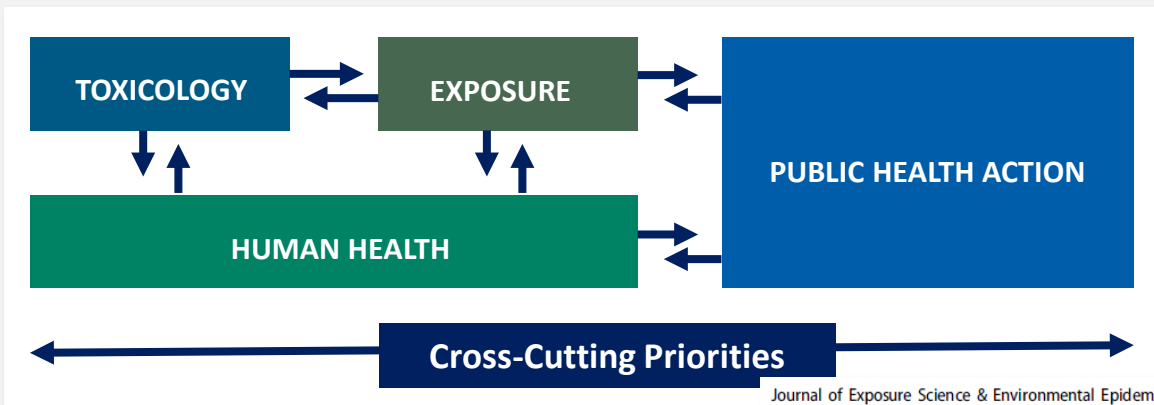
## Additional ATSDR PFAS Activities

- Collaboration with EPA on non-drinking water sources of exposure
- Impact of PFAS exposure on viral susceptibility and illness
- PFAS clinical guidance and NASEM engagement
- Conduct analysis using previously collected data to look for associations between PFAS exposure and cancer



# NCEH/ATSDR PFAS Research Framework

In 2019, NCEH/ATSDR developed a comprehensive research framework to capture the broad range of PFAS-related research activities conducted or supported internally and by other federal agencies



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PERSPECTIVE

Advancing per- and polyfluoroalkyl substances (PFAS) research: an overview of ATSDR and NCEH activities and recommendations

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# Thank you

<https://www.atsdr.cdc.gov/pfas>



For more information, contact NCEH/ATSDR  
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TTY: 1-888-232-6348      [www.atsdr.cdc.gov](http://www.atsdr.cdc.gov)      [www.cdc.gov](http://www.cdc.gov)  
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