

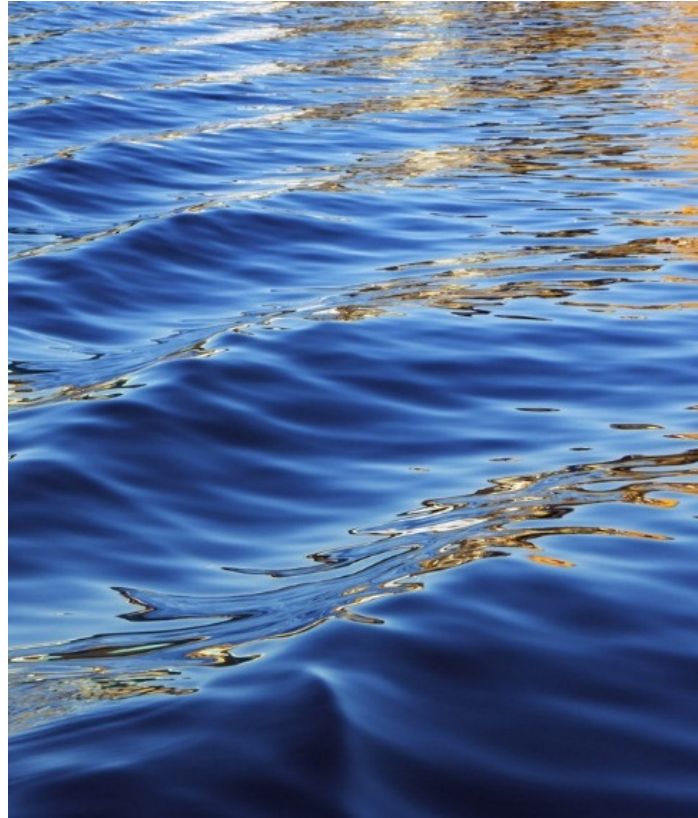


New Hampshire's Progress Towards PFAS Drinking Water Standards

National Governors Association and AAAS
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Views expressed in this presentation are those of the author, and not those of the
New Hampshire Department of Environmental Services.



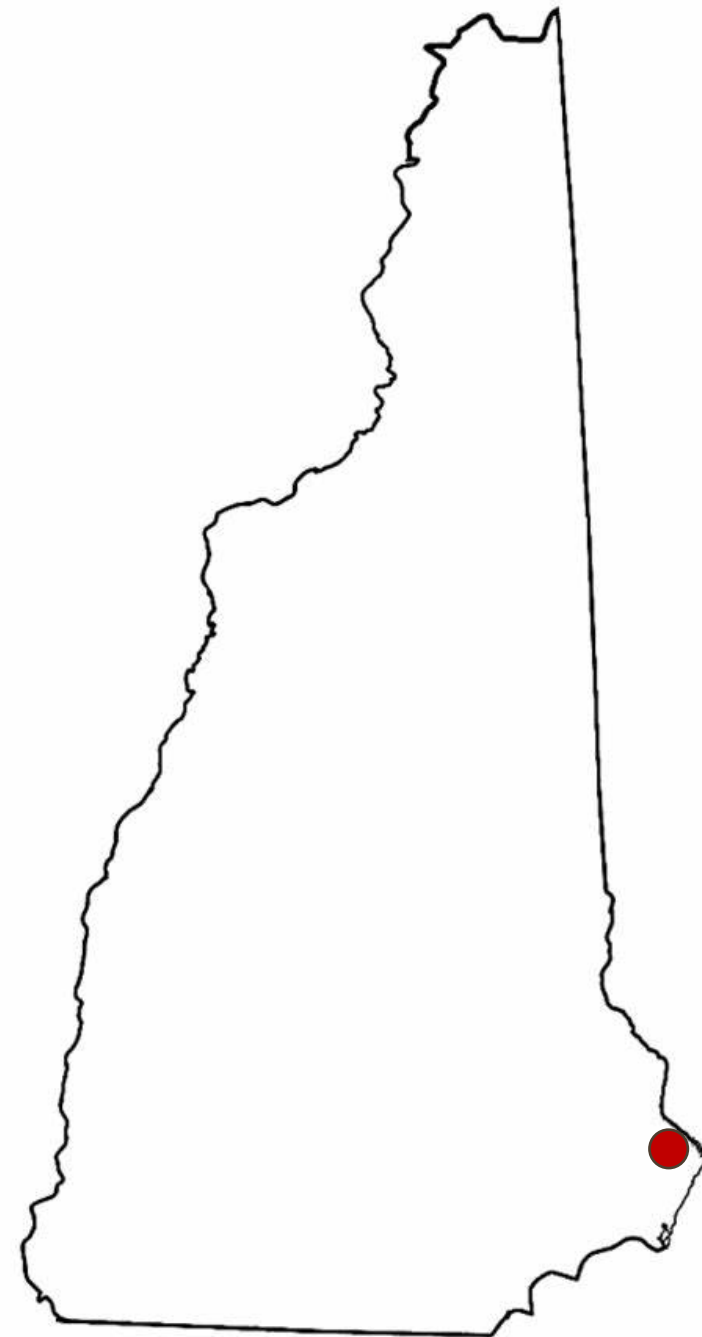
Presentation Goals

- Provide high-level overview of PFAS & New Hampshire.
- Describe how NH established drinking water standards for 4 PFAS.
- Highlight some multidisciplinary issues related to risk assessment and regulation of PFAS.



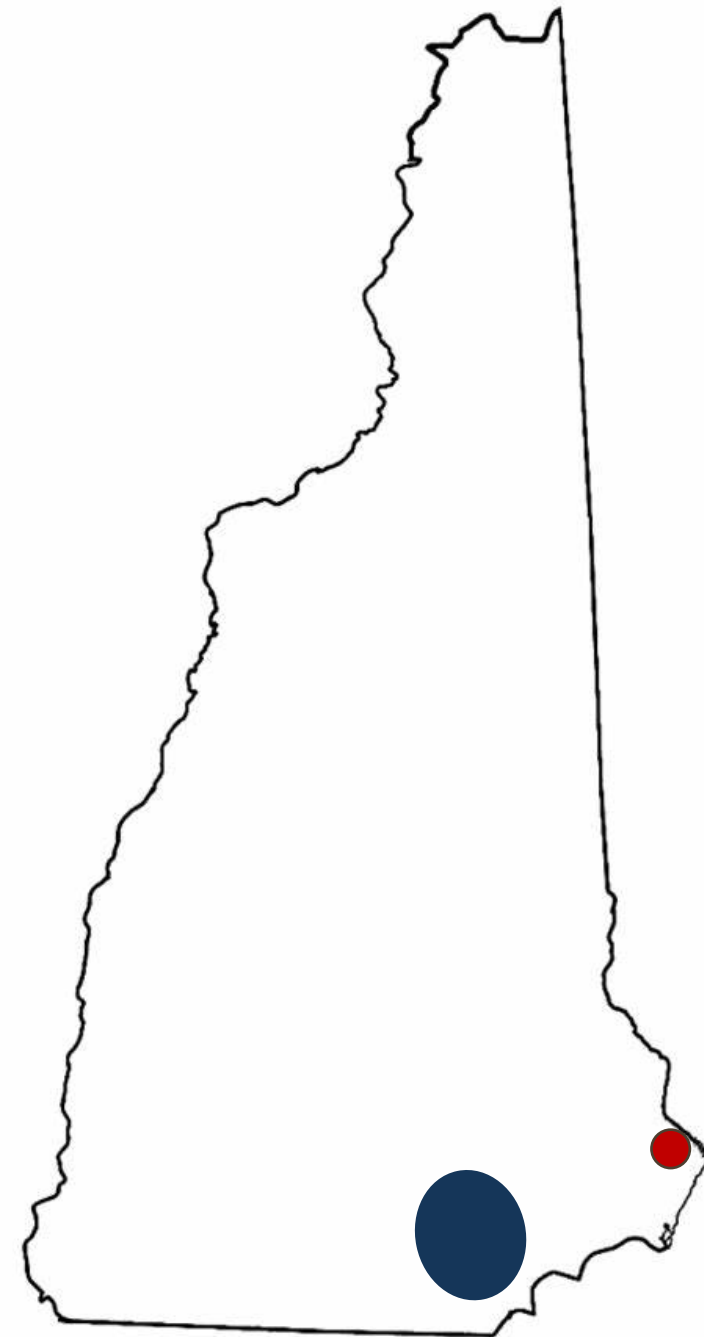
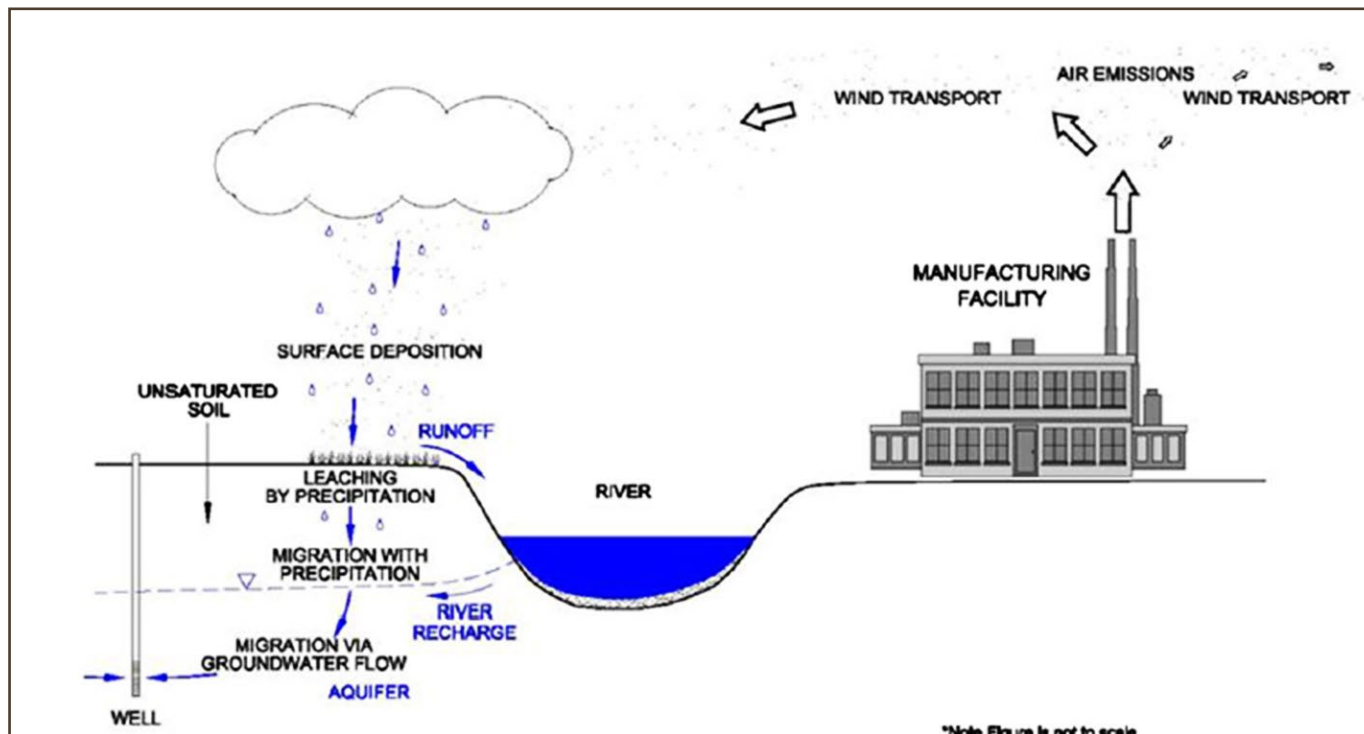
PFAS & New Hampshire

- Aqueous Film Forming Foam (AFFF) at the **former Pease Air National Guard Base** (2014)
 - Especially PFOS & PFHxS



PFAS & New Hampshire

- Industrial air emissions from facilities in **Merrimack and Southern NH** (2016)
 - Especially PFOA



New Hampshire's Legislative Response

2016 – New Hampshire adopted the EPA's 70 ng/L (PFOA+PFOS) as emergency groundwater standard

2016 to 2017 – Several Activities Including:

- Delivered bottled water to homeowners or made connections to public water
- Sampled statewide to identify the scope of the problem
- Worked with Air Force to provide drinking water treatment at Pease

2018 – Senate Bill 309 passes the House, Senate & Governor's Office NHDES Shall:

- Establish Drinking Water Limits
- Regulate Air-to-Groundwater Pollution Sources
- Develop a Plan and Budget for Regulating PFAS in Surface Water

2020 – Omnibus legislation passes NH State House, Senate & Governor's Office

- Codified four PFAS MCLs into law
- Requires health insurance to cover PFAS blood testing
- \$50,000,000 loan fund



2019– MCL Litigation

- Local Water District & 3M
- Injunction against enforcement
- Pertained to interpretation of legislation

What are the NH drinking water limits for PFAS?

- 12 ng/L for PFOA (Perfluorooctanoic acid)
- 15 ng/L for PFOS (Perfluorooctane sulfonic acid)
- 11 ng/L for PFNA (Perfluorononanoic acid)
- 18 ng/L for PFHxS (Perfluorohexane sulfonic acid)

These are New Hampshire's **Maximum Contaminant Levels** (MCL) and **Ambient Groundwater Quality Standards** (AGQS).

These limits were developed for sensitive segments of the population.

- ✓ Pregnant/lactating women and their infants
- ✓ Individuals who consume a lot of water
- ✓ Individuals with chronic exposure (several years to decades)
- ✓ Accounting for additional sources of exposure (e.g. consumer products and food)

For more information about the NHDES PFAS MCLs: https://www4.des.state.nh.us/nh-pfas-investigation/?page_id=1036

Results - Public Water Systems

SOURCES SAMPLED	SOURCES WITH PFAS DETECTIONS	SOURCES EXCEEDING NH MCL
1550	425	114
	28%	7%

Impacts approx. at least 192,000 people or 26% of NH residents that obtain drinking water from a public water system.



PFAS Impacts are Present Throughout New Hampshire

Updated: June 8, 2021

PFAS SAMPLES

Data in NHDES' Environmental Monitoring Database (EMD) ~ 14220 samples

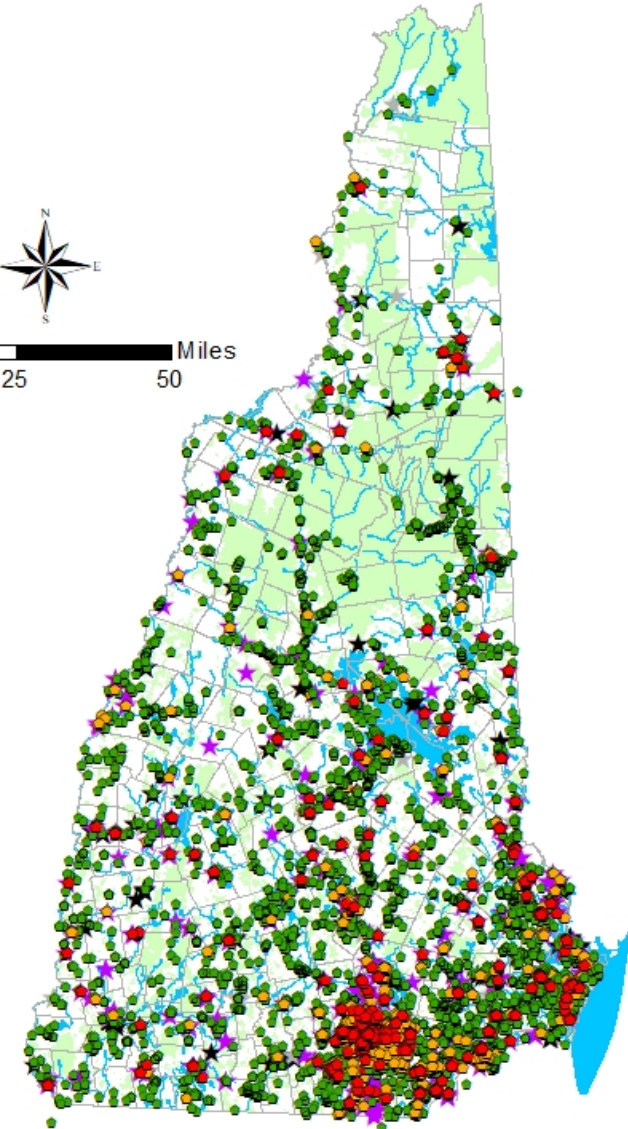
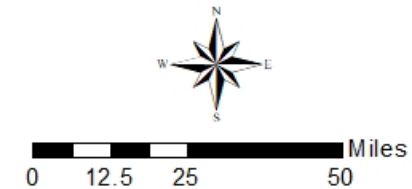
- ◆ PFOA+PFOS > 70 ppt
- ◆ PFAS > AGQS / MCL
- ◆ PFAS ≤ AGQS / MCL

PFAS SITES

Data in NHDES' Onestop Database ~ 415 sites

- ★ Site with PFAS > AGQS
- ★ Site with PFAS Detections
- ★ Site with PFAS Screening No Detections

- Political Boundary
- Major Waterbody
- Conservation Land



Figures Courtesy of **Brandon Kernen**, Drinking Water & Groundwater Bureau, and **Derek Bennett**, MtBE Remediation Bureau

Implications for Residential Well Users

Residential wells are not regulated like public water systems.

Testing and treatment are distinct challenges.

Risk communication needs.

- Can I use the water for non-drinking purposes (e.g. bathing, irrigation, cleaning)?
- What are my individual risks from drinking the water for several years?
- What can my physician do to help me?
- Is this a moving goal post?

For more information about treatment and NHDES Responses:

<https://www4.des.state.nh.us/nh-pfas-investigation/>

Broader Issues Related to PFAS Standards

Waste Management



- Certain PFAS are still used in commercial products.
- This ends up in landfills.
- Little toxicity data to assess newer PFAS and precursor compounds.

Other Media




- Risk assessment of fish, shellfish and game.
- Public demand to understand risk to irrigated crops.

Surface Water



- Currently no Surface Water criteria for PFAS.
- Wildlife toxicity data is not keeping pace with occurrence data.
- Full plan to develop SW Standards is available at:
<https://www4.des.state.nh.us/nh-pfas-investigation/?p=1183>



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