Identifying PFAS In Your Community

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New England PFAS Community Engagement Event
EPA Region 1
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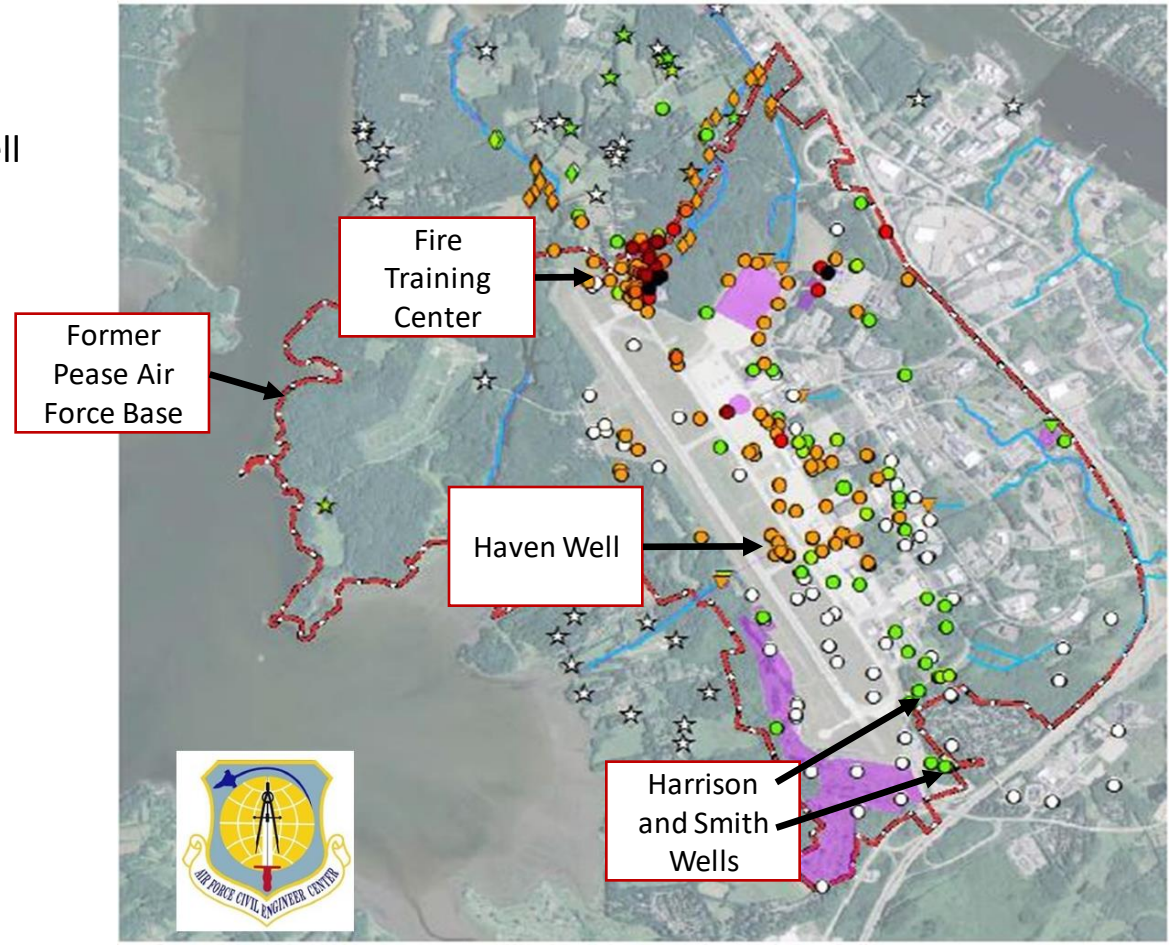
Exeter, New Hampshire

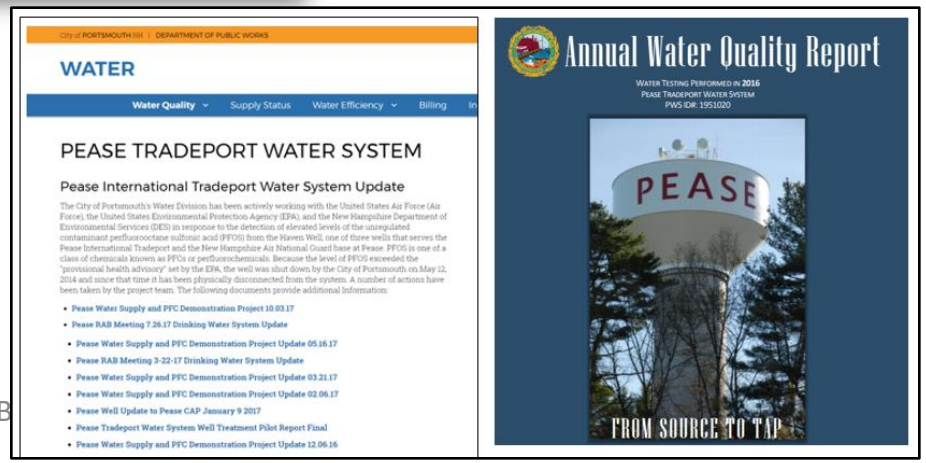
Pease Tradeport Water System PFAS Contamination

- April 2014 – NHDES contacts City of Portsmouth to sample the three Pease Tradeport water system wells for PFAS due to detections at former Fire Training Center and past use of AFFF
- May 12, 2014 – City staff are notified that PFAS levels in Haven Well exceeded the EPA's Health Advisory Standard for PFOS
  - 2,500 ppt (Preliminary Health Advisory = 200 ppt)
- May 12, 2014
  - Haven Well is shut down
  - Portsmouth water supplements water lost from Haven Well
  - Smith and Harrison wells remain in service
- Extensive Monitoring of PFAS by the Air Force's consultant
- July 2015 – EPA Order to Air Force to treat aquifer and wells
- 2015 and 2016 – Preliminary treatment design and treatment piloting studies
- September 2016 – Activated Carbon Filters on Harrison and Smith Wells
- 2017-2018 – Design of treatment system for all three Pease wells
- 2019-2020 – Anticipated construction of final treatment system



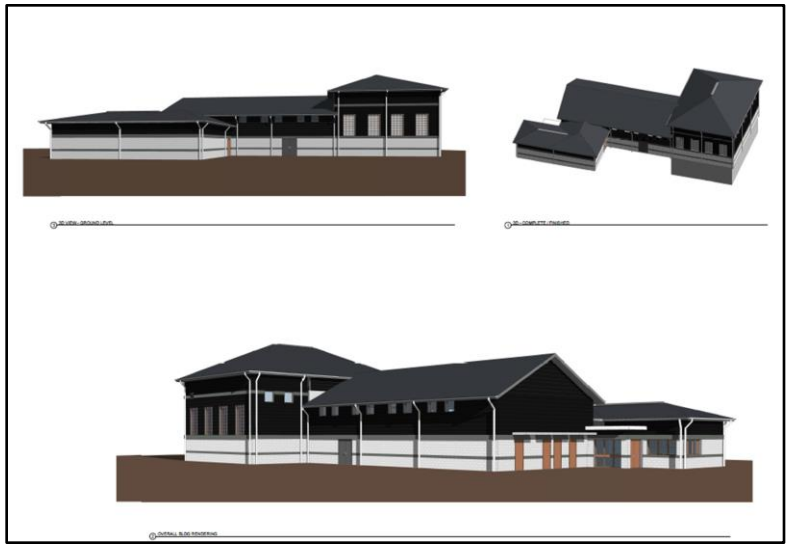
Public Involvement and Outreach:

- Press Releases by NHDES and City
- Public Meeting at Pease – May 28, 2014
- Presentations to Portsmouth City Council and Other Groups
- Federal and State delegation involvement
- “Testing for Pease” Facebook Group Forms
- Haven Well Community Advisory Board
  - 14 public meetings in 2014
- Blood Testing
  - March 31st, 2015 – Public Meeting where NHHS Announces Protocol for Pease Blood Testing
  - Three public meetings announcing blood test results
- ATSDR Community Assistance Panel (CAP)
  - Formed in 2016 to address long-term health concerns
- Pease Restoration Advisory Board (RAB)
  - Reestablished in 2016 – Meets every quarter
- Extensive Information by City and State:
  - www.cityofportsmouth.com
  - Full page dedicated to PFAS in Annual Water Quality Report
- “A lot” of News Coverage!



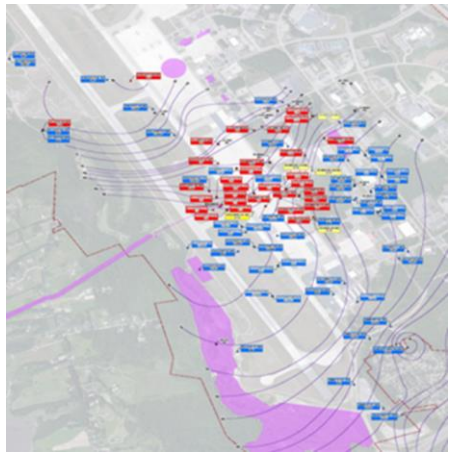
Pease Tradeport Water System PFAS Contamination - Treatment Options

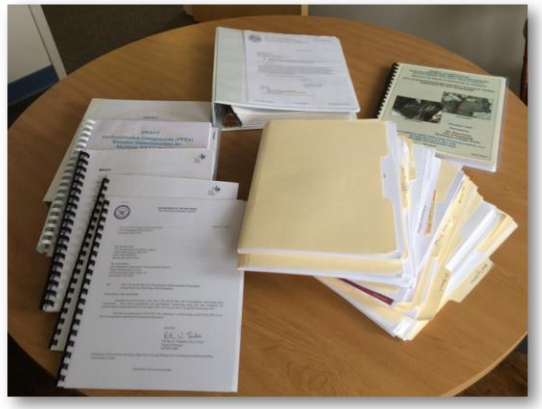
- Investigated other public water systems that treat PFAS
- Piloted Activated Carbon System
- Installed Calgon F-400 Carbon filters on Harrison and Smith wells to Demonstrate effectiveness
- Piloted alternative treatment – resins
- Current design includes resin and carbon filters



Pease Tradeport PFAS Investigation

- Technical Team
  - Air Force Civil Engineering
  - Air Force Engineering Consultants
  - EPA Region 1
  - NHDES Waste Division
  - NHDES Drinking Water and Groundwater Program
  - Pease Development Authority
  - City of Portsmouth Staff and Consultants



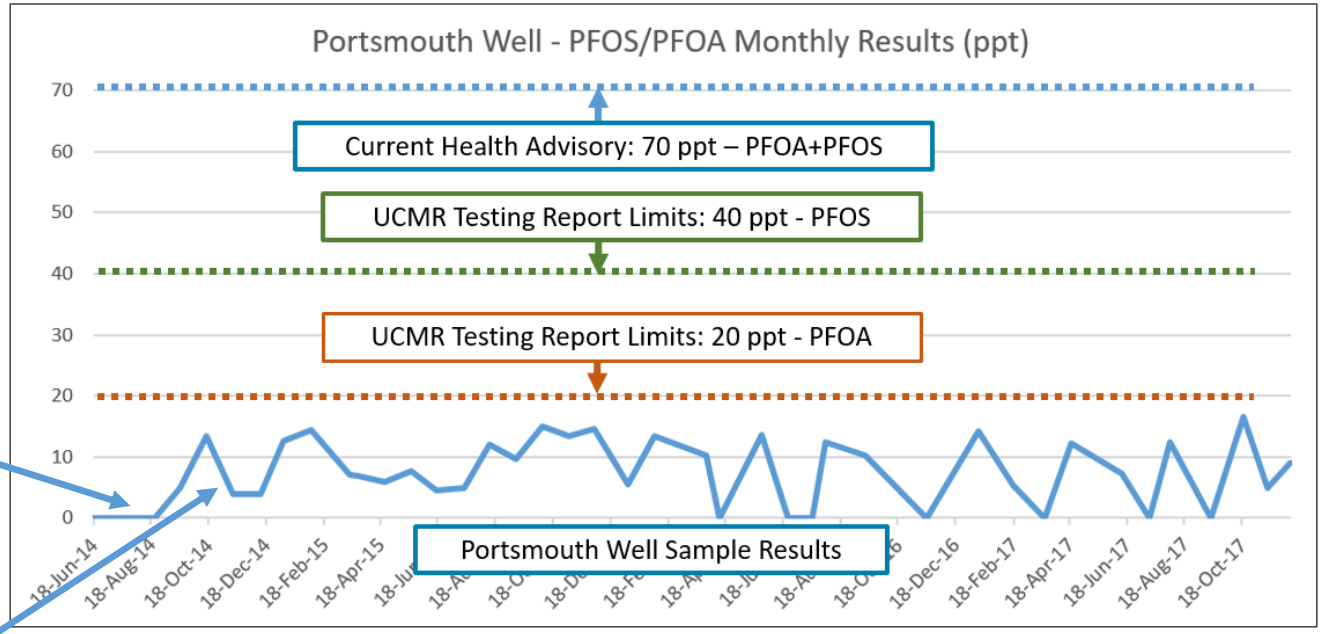


Over Four Years of Data and Analysis

- The third Unregulated Contaminant Monitoring Rule (UCMR 3) was published on May 2, 2012.
- This monitoring provides a basis for future regulatory actions to protect public health
- Applied to water systems serving over 10,000 people.
- 6 PFAS compounds sampled:
  - PFBS - Perfluorobutane Sulfonate
  - PFHpA - Perfluoroheptanoic Acid
  - PFHxS - Perfluorohexane Sulfonate
  - PFOA - Perfluoro-n-Octanoic Acid
  - PFNA - Perfluorononanoic Acid
  - PFOS - Perfluorooctane Sulfonate
- Pease Technical Group opted to sample for 23 compounds and also use lower detection levels
- 4 years of sampling:
  - Initially, sampling every week
  - Currently sampling monthly at some wells and quarterly at others
- No discernable plume or increasing trend in the wells
- Hydrogeological modeling and additional monitoring sites continue to fill the gaps in analysis
- Monitoring data posted on City's Website

Sampling of Portsmouth Water Sources

- All water sources sampled initially in May 2014 and again in 2015 as part of the EPA's Unregulated Contaminant Monitoring Program (UCMR3) – Two Rounds of Sampling:
  - Surface Water - "non detect"
  - Madbury Wells - "non detect"
  - Portsmouth Well - "non detect"
  - Collins Well - "non detect"
  - Greenland Well - "non detect"
- When resampled using lower detection limits (same as Pease sampling), some sources show low levels of detections



PFAS Sampling of Public Water Systems in New Hampshire

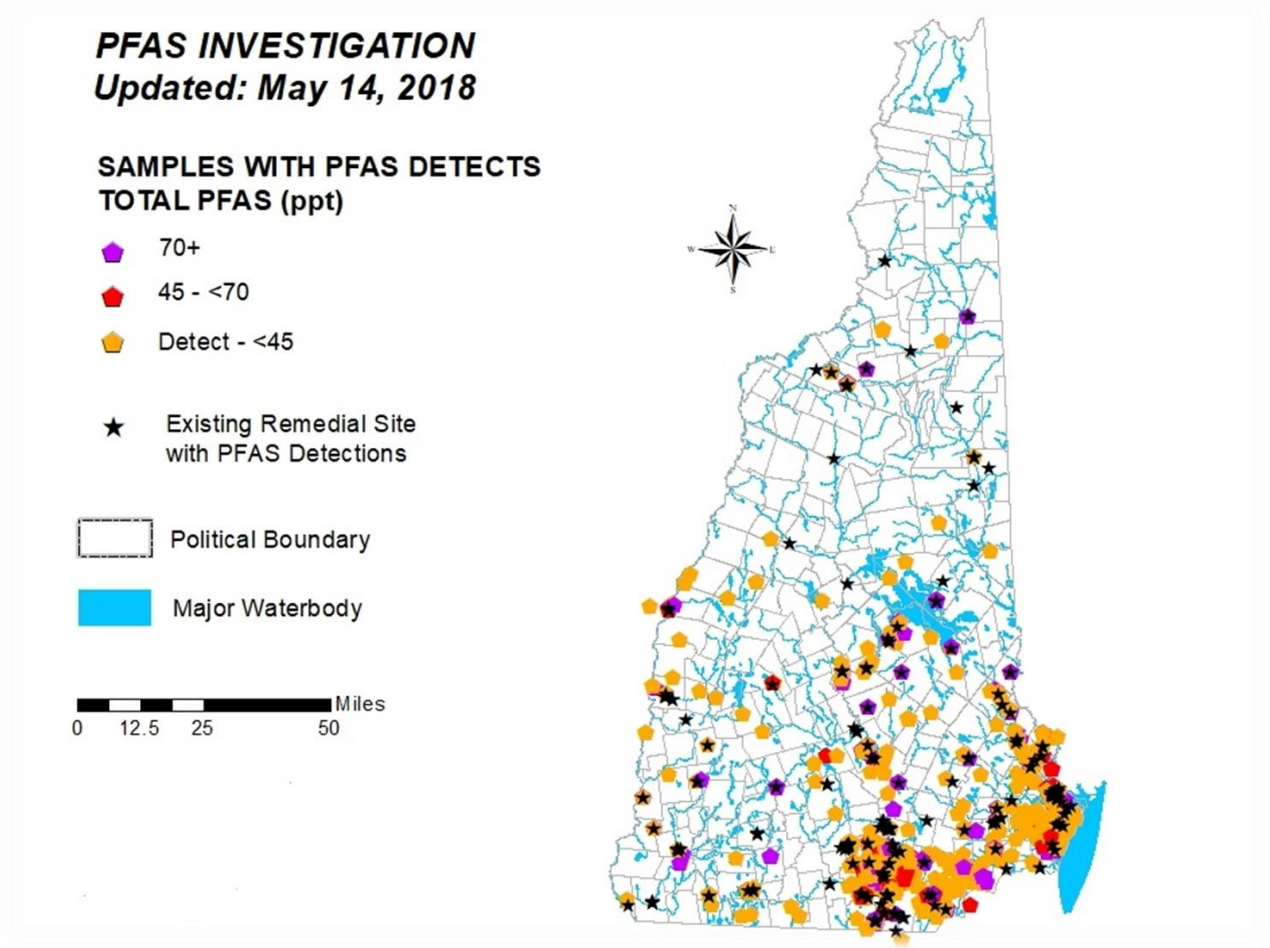
- 23 Systems Sampled as part of the UCMR3 Program
- 3/23 systems had detections
  - 13%
- July 19, 2016 letter request from NHDES to voluntarily sample again using lower detection limits and include more analytes
- 12/15 systems that resampled had detections:
  - 80%

PWSName	UCMR Detect	PFAS Detect with Lower Reporting Limits or Longer List of Analytes
Aquarion Water - NH	Yes	Yes
Chesterfield Central School	No	Not Sampled
Concord Water Department	No	Not sampled
Cow Hill Wellhouse	No	No
Derry Water Department	No	Yes (via Manchester testing)
Dover Water Department	Yes	Yes
Exeter Water Department	No	Not Sampled
Hudson Water Department	No	Yes
Keene Water Department	No	No
Laconia Waterworks	No	Yes
Lebanon Water Department	No	Not Sampled
Littleton Water & Light Dept.	No	Not Sampled
Lower Bartlett Water Pct.	No	No
Manchester Waterworks	No	Yes
Merrimack Village District	Yes	Yes
N. Walpole Village District/ Low	No	Not Sampled
Pennichuck Waterworks	No	Yes
Portsmouth Waterworks	No	Yes
Rochester Water Department	No	Yes
Salem Water Department	No	Yes
Seabrook Water Department	No	Yes
Somersworth Waterworks	No	Not Sampled
UNH - Durham Water System	No	Yes

* Information from: Brandon Kernen, NHDES

New Hampshire's PFAS Investigation

- Voluntary Public Water Supply Sampling
- Class B Foam Outreach – Letters & online forms
- Waste Sites Sampling
- Groundwater Discharge Permit Sites
- Wastewater/ Biosolids Assessment
- Surface Water Sampling
- Sampling at other suspected sites:
  - Air deposition
  - Car washes
  - Fire Departments with their own wells



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How Do you Identify PFAS In Your Community?...

Sample for It…