



TESTING *for* PEASE

# Pease PFAS Non Target Analysis Proposal

Portsmouth City Council Meeting | October 1, 2018

Andrea Amico | Alayna Davis | Michelle Dalton | Lindsey Carmichael

## What is non target analysis?

- While targeted analyses using liquid chromatography - tandem mass spectrometry (LC-MS/MS) can capture and quantify many known PFASs, non-targeted high resolution mass spectrometry (HRMS), such as liquid chromatography quadrupole time-of-flight mass spectrometry (LC-QToF-MS), can simultaneously quantify pre-selected (and targeted) PFASs while also looking for PFASs for which no analytical standards are available.
- LC-QToF-MS PFAS analyses look for:
  - known (targeted) PFASs;
  - suspect PFASs that may be in a sample;
  - true "unknown unknowns."

## Brief History

- **Jun 2017** – paper published by Dr Chris Higgins & others on non target analysis and identifying other PFAS in water not normally tested for.
- **Nov 2017** – TFP members meet w/city officials to request city participate in non target analysis w/Dr Higgins. Mayor Blalock writes letter to EPA requesting technical assistance.
- **Dec 2017** – EPA responds and does not commit to providing technical assistance for non target analysis at Pease.
- **Jan 2018** – TFP applies for a local grant through Seacoast Women's Giving Circle (SWGCG).

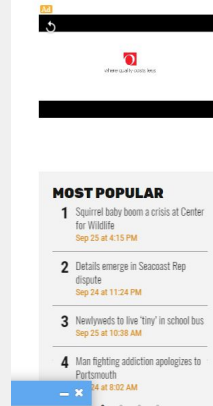


## Brief History

- **Mar 2018** – TFP presents to City Council on non target analysis at Pease & advocates for school filters
- **May 2018** – TFP is awarded a \$24,000 grant from Seacoast Women's Giving Circle and part of the funds can be used for non target analysis work
- **Jul 2018** – TFP meets with city DPW staff (Brian & Al) to discuss our Pease Non Target Analysis Proposal
- **Aug 2018** – TFP revises sampling schedule based on July meeting with the city and construction plans
- **Sept 2018** – TFP invited to present proposal to city council on 10/1



### Seacoast Women's Giving Circle announces grant recipients



BUY PHOTO HIDE CAPTION  
The Seacoast Women's Giving Circle granted awards totaling over \$60,000 to environmental nonprofits. From left, Shaina Kasper of Toxics Action Center, Dan Gasko of White Pine Programs, Julia Dunlop of New England Grassroots Environment Fund, Melissa Paly, Conservation Law Foundation's Great Bay-Piscataqua Waterkeeper, Beverly Shadley of Southeast Land Trust of New Hampshire, Jane Lannon, co-chair of Seacoast Women's Giving Circle, Alayna Davis of Testing for Pease and Erika Taylor, co-chair of Seacoast Women's Giving Circle. [Joanna Raggs/Seacoastonline]

## Community Questions

- What other PFAS are in the Pease drinking water that are not currently being sampled for?
- Is the current GAC system effective in filtering out all PFAS?



## Our team

- Dr Chris Higgins –  
*Colorado School of Mines*
- Dr Carrie McDonough –  
*Colorado School of Mines*
- Dr Loretta Fernandez –  
*Northeastern University*
- Dr Phil Brown –  
*Northeastern University*
- Dr Laurel Schaider –  
*Silent Spring Institute*



Dr Phil Brown, PhD



Dr Chris Higgins, PhD



Dr Carrie McDonough, PhD



Dr Laurel Schaider, PhD



Dr Loretta Fernandez, PhD 6

## Our team

- Shaina Kasper –  
*Toxics Action Center*
- Andrea Amico –  
*Testing for Pease*
- Alayna Davis –  
*Testing for Pease*
- Michelle Dalton –  
*Testing for Pease*
- Lindsey Carmichael –  
*Portsmouth Resident*



Shaina Kasper



(L to R): Lindsey, Alayna, Andrea, & Michelle

# Pease Non Target Analysis Plan

- 2 samples from the current GAC system (influent + effluent)
- 9 paired samples of the new GAC system (influent + 1/4 through bed), starting when they change over, and then approximately every 4 weeks (or monthly, i.e., Oct, Nov, Dec, Jan, Feb, Mar, Apr)
- 2 samples from the site 8 treatment plant (influent + effluent) \*\*\*to be coordinated with the US AF\*\*\*
- All samples will be collected by Dr Fernandez from Northeastern University. All samples to be analyzed at Dr Higgin's lab at the Colorado School of Mines.





## Report back

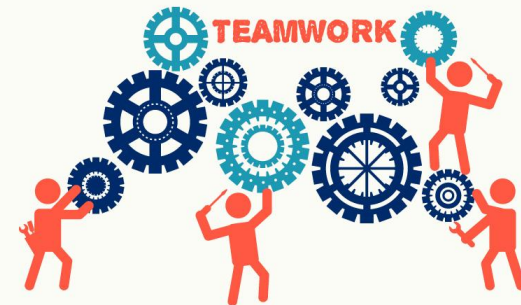
- Dr Higgins will provide a mid-project interim report & final report.
- Dr Brown & Dr Schaidler are highly experienced with report back to communities with uncertain information and will assist with writing the reports to the community.
- City of Portsmouth can review reports to community before we make them public.



## Benefits to Non Target Analysis Project

- Better understanding of bigger picture of PFAS in the Pease drinking water.
- Another opportunity for Pease to be a leader on work around PFAS and contribute to the science.
- Silent Spring Institute is the acknowledged leader in reporting back environmental health data and has much success in doing with high comprehension and without creating alarm.
- This approach generates much trust from residents towards science & government and is beneficial to all parties.

LEADERSHIP





## Our commitment

- We are committed to releasing the project information in a **responsible** and **meaningful** way.
- Scientists are highly respected professionals with years of experience and publications on PFAS.
- Advocates are experienced, trusted, and respected in the community for work on PFAS.



Northeastern  
University



SILENT SPRING INSTITUTE  
Researching the Environment and Women's Health

## Questions/Discussion....

*"Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has."*

~ Margaret Mead

For more information, please visit:

[www.testingforpease.com](http://www.testingforpease.com)



[facebook.com/TestingforPease](https://facebook.com/TestingforPease)

