NEW YORK STATE | Department of Environmental Conservation

Regional Disposal Site Environmental Assessments

Rensselaer and Washington Counties, NY

March 25, 2020

Study Objectives

- Evaluate the **presence of Per- and Polyfluoroalkyl Substances (PFAS)** at areas where **historic disposal activities** were reported to have occurred, pursuant to tips provided to the NYSDEC in 2016

- Determine if a site characterization is necessary to further investigate nature and extent of contamination

Study Overview

Process

2016 DEC Availability Sessions

Tips provided to DEC regarding historic disposal activities

DEC Reviewed Tips

Identified Sample Locations

Based on the nature of provided Tips, DEC identified areas to be sampled in and around the Town of Hoosick, and in southern Washington County

Sent Initial Notification and Access Letters

Step 1: Volunteer Access Agreements

Step 2: Hang-tags and DEC door-to-door visits

Step 3: 10-day notification to non-respondent property owners

Collected Data

DEC discussed sampling locations with each residential property owner

Collected samples of various environmental media to evaluate the presence of PFAS

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Field Investigation

- 40 properties were screened in and around the Town of Hoosick, and in southern Washington County
- Mix of residential and municipal owned land
- Mobilization: December 2018 through late February 2019; 2nd Phase completed in Fall 2019
- Environmental Media Sampled:
  - Soil (surface and subsurface)
  - Groundwater
  - Surface Water
  - Sediment
- Sampled media type was determined based on the contents of provided tips

Sample Results

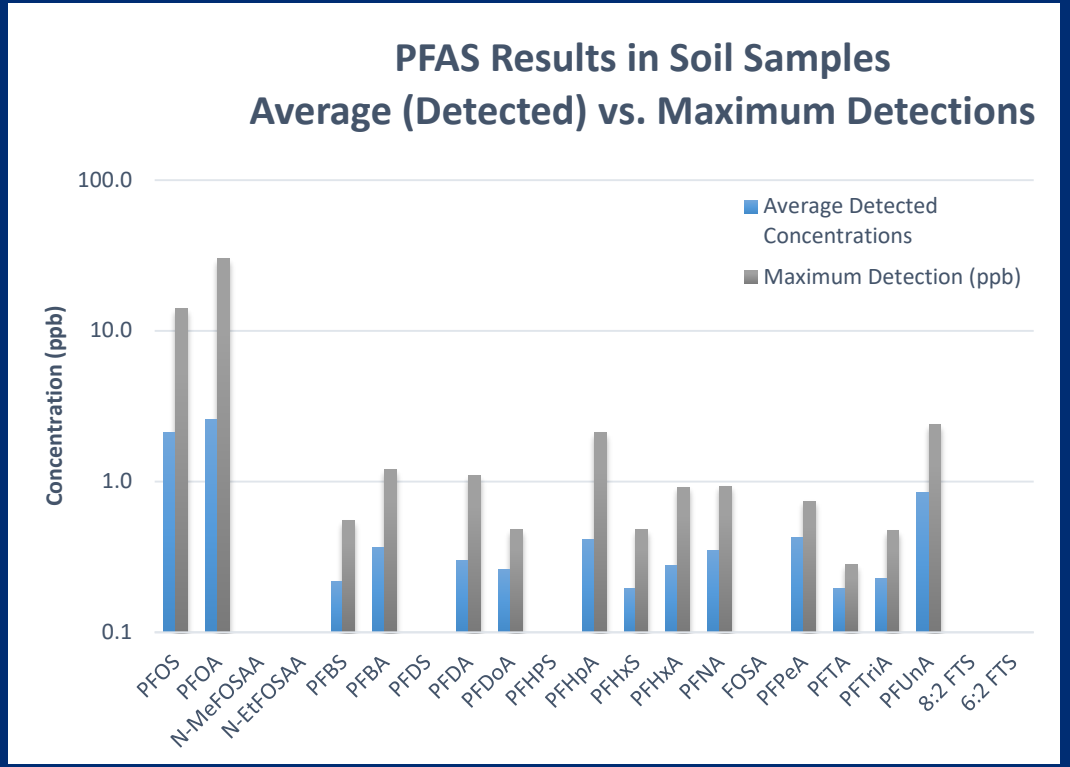
Phase 1 Environmental Assessments

Samples Collected

Matrix:	Soil	Sediment	Surface Water	Groundwater
Totals:	**154**	**28**	**28**	**54**

Soil Sample Results – All depths
(154 Samples)

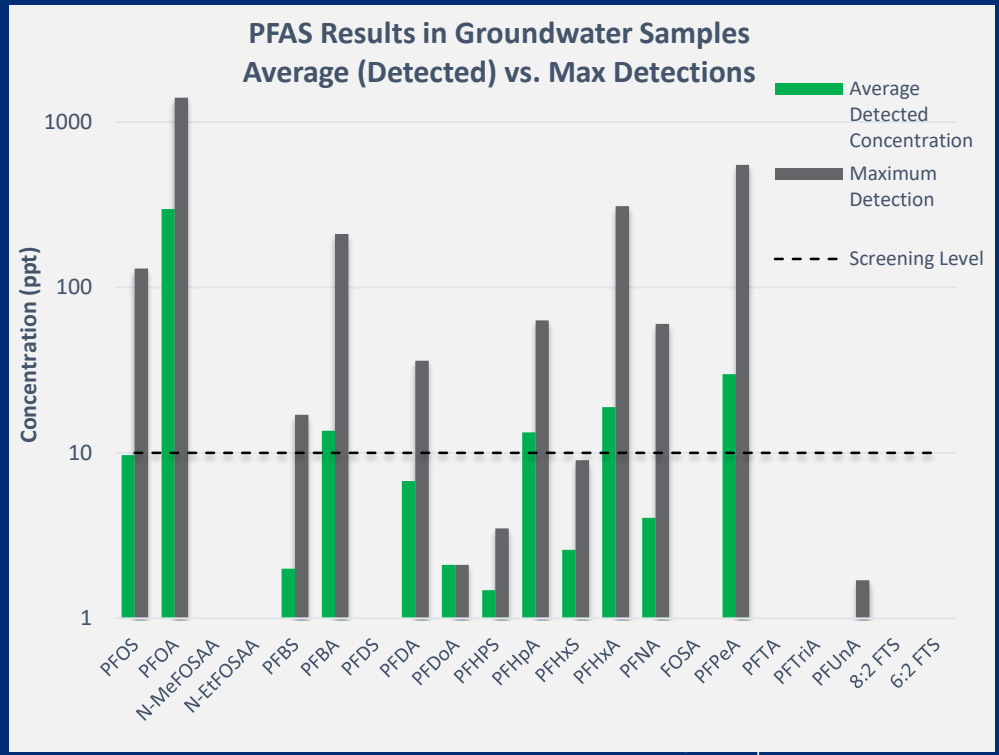
Frequency of Detection			Average Detected Concentration (ppb)
Compound	**Number of Detections**	**Frequency**	
PFOS	52	34%	2.1
PFOA	112	73%	2.6
N-MeFOSAA			
N-EtFOSAA			
PFBS	3	2%	0.2
PFBA	17	11%	0.4
PFDS			
PFDA	35	23%	0.3
PFDoA	11	7%	0.3
PFHPS			
PFHpA	32	21%	0.4
PFHxS	10	6%	0.2
PFHxA	15	10%	0.3
PFNA	30	19%	0.3
FOSA			
PFPeA	6	4%	0.4
PFTA	5	3%	0.2
PFTriA	12	8%	0.2
PFUnA	33	21%	0.8
8:2 FTS			
6:2 FTS			



Groundwater

(54 Samples)

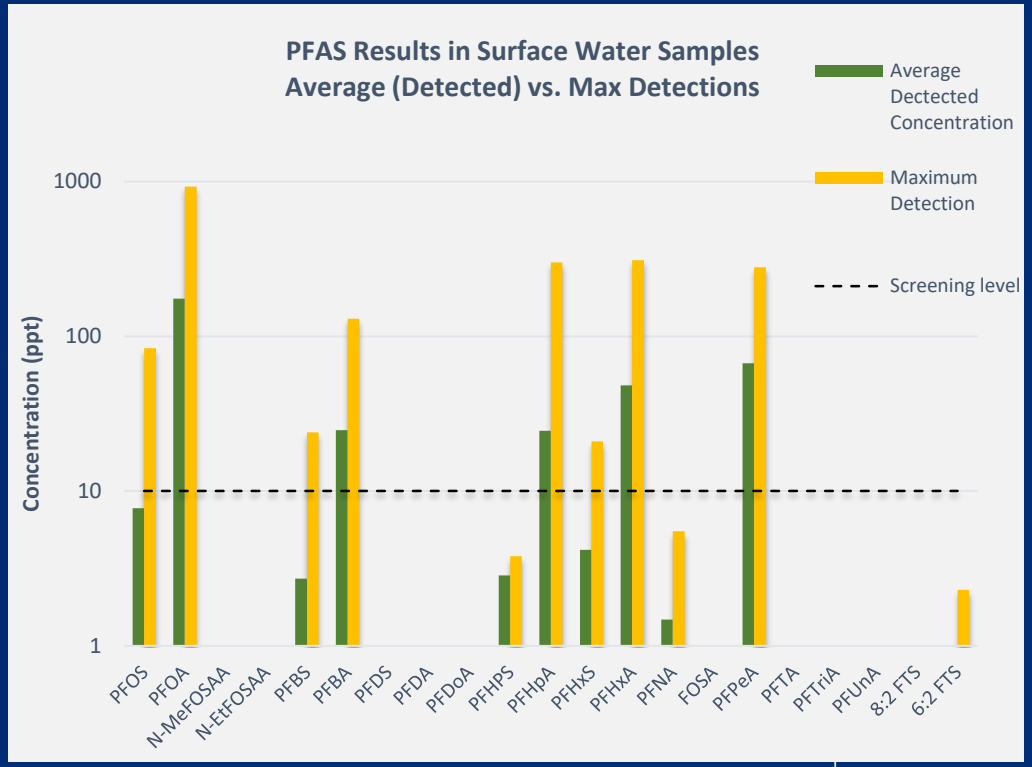
Compound	Frequency of Detection: Number of Detections	Frequency of Detection: Frequency	Average Detected Concentration (ppt)
PFOS	46	85%	9.7
PFOA	51	94%	297.5
N-MeFOSAA			
N-EtFOSAA			
PFBS	42	78%	2.0
PFBA	44	81%	13.6
PFDS			
PFDA	7	13%	6.8
PFDoA	1	2%	2.1
PFHPS	5	9%	1.5
PFHpA	46	85%	13.3
PFHxS	26	48%	2.6
PFHxA	48	89%	18.9
PFNA	33	61%	4.0
FOSA			
PFPeA	30	56%	29.9
PFTA	1	2%	<1
PFTriA			
PFUnA	1	2%	<1
8:2 FTS			
6:2 FTS			



Surface Water

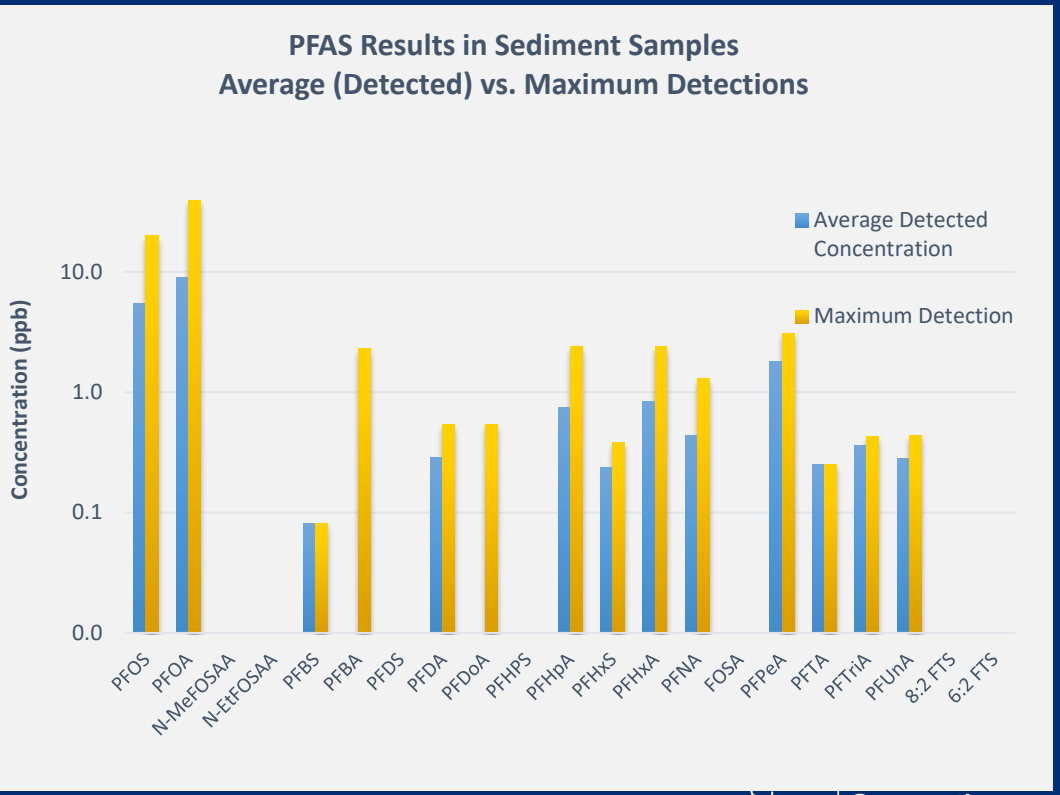
(28 Samples; Colocated with Sediment Samples)

Compound	Frequency of Detection: Number of Detections	Frequency of Detection: Frequency	Average Detected Concentration (ppt)
PFOS	25	89%	7.8
PFOA	27	96%	175.1
N-MeFOSAA			
N-EtFOSAA			
PFBS	20	71%	2.7
PFBA	10	36%	24.8
PFDS			
PFDA	1	4%	<1
PFDoA			
PFHPS	2	7%	2.9
PFHpA	24	86%	24.5
PFHxS	10	36%	4.3
PFHxA	13	46%	48.2
PFNA	10	36%	1.5
FOSA	1	4%	<1
PFPeA	8	29%	66.9
PFTA	1	4%	<1
PFTriA			
PFUnA			
8:2 FTS			
6:2 FTS	1	4%	<1



Sediment (28 Samples)

Compound	Frequency of Detection: Number of Detections	Frequency of Detection: Frequency	Average Detected Concentration (ppb)
PFOS	8	29%	5.5
PFOA	21	75%	9.0
N-MeFOSAA			
N-EtFOSAA			
PFBS	1	4%	0.1
PFBA	2	7%	<1
PFDS			
PFDA	4	14%	0.3
PFDoA	2	7%	
PFHPS			
PFHpA	9	32%	0.8
PFHxS	4	14%	0.2
PFHxA	7	25%	0.8
PFNA	9	32%	0.4
FOSA			
PFPeA	4	14%	1.8
PFTA	1	4%	0.3
PFTriA	2	7%	0.4
PFUnA	6	21%	0.3
8:2 FTS			
6:2 FTS			



Summary

Phase 1 Environmental Assessments

Summary

- **PFOA** was the most frequently detected compound
- Four PFAS were detected in >/= 20% of samples (all matrices) including:
  - PFOS (8-chain)
  - PFHpA (7-chain)
  - PFHxA (6-chain)
  - PFNA (9-chain)
- PFBS (4-chain) detected in > 75% of GW and SW samples
- PFUnA (11-chain) was detected in > 20% of SO and SE samples

Summary

- Majority of elevated (*those exceeding the groundwater screening level of 10 ppt or those substantially above-average detected concentration*) detections were concentrated to a few select areas and were not widespread
- Groundwater: Sample locations with **Total** PFAS concentration > 500 ppt were limited to 6 of the 40 areas that were investigated

Next Steps

- Identified areas of concern that required further investigation
- A supplement environmental assessment was completed in Fall of 2019 which included:
  - Further investigation of 4 properties which were selected based on preliminary sample results from the preliminary EA
  - Stepped out from original sample locations with elevated concentrations to evaluate extent of contamination
  - Sampled additional media types
  - Evaluated types of PFAS detected in samples to determine nature of contamination and potential source

Next Steps (cont'd)

- Supplemental data to be evaluated upon validation by chemists
- Complete further investigations if necessary, to evaluate nature and extent of contamination within areas of concern
- Prepare a general report summarizing all collected data, based on this presentation

Thank You

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