



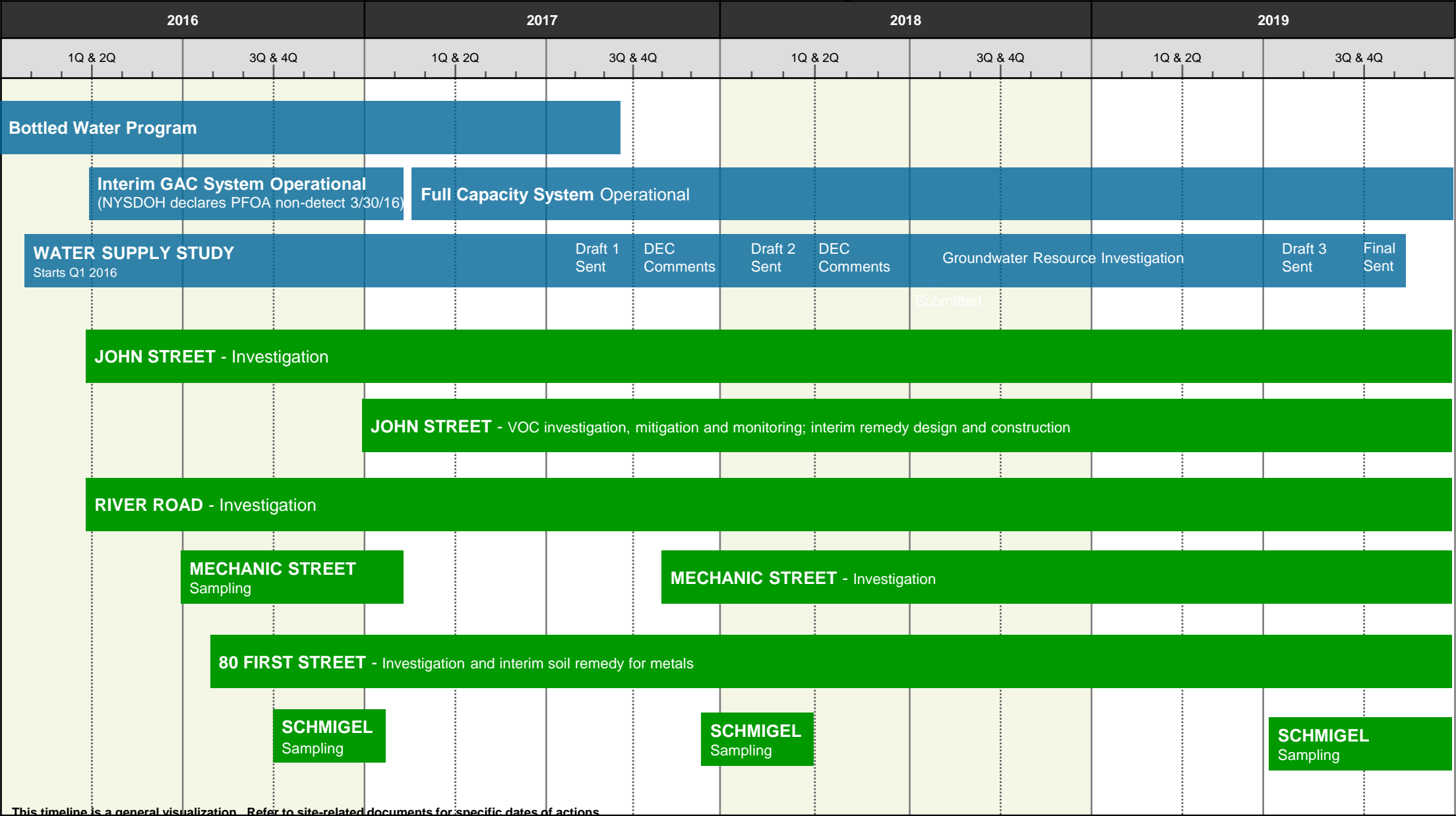
# **Hoosick Falls Community Participation Working Group**

## **John Morris, Global Remediation Director**

FEBRUARY 2020

**Honeywell**

# HONEYWELL HOOSICK FALLS ACTIONS (UNDER NYSDEC DIRECTION)



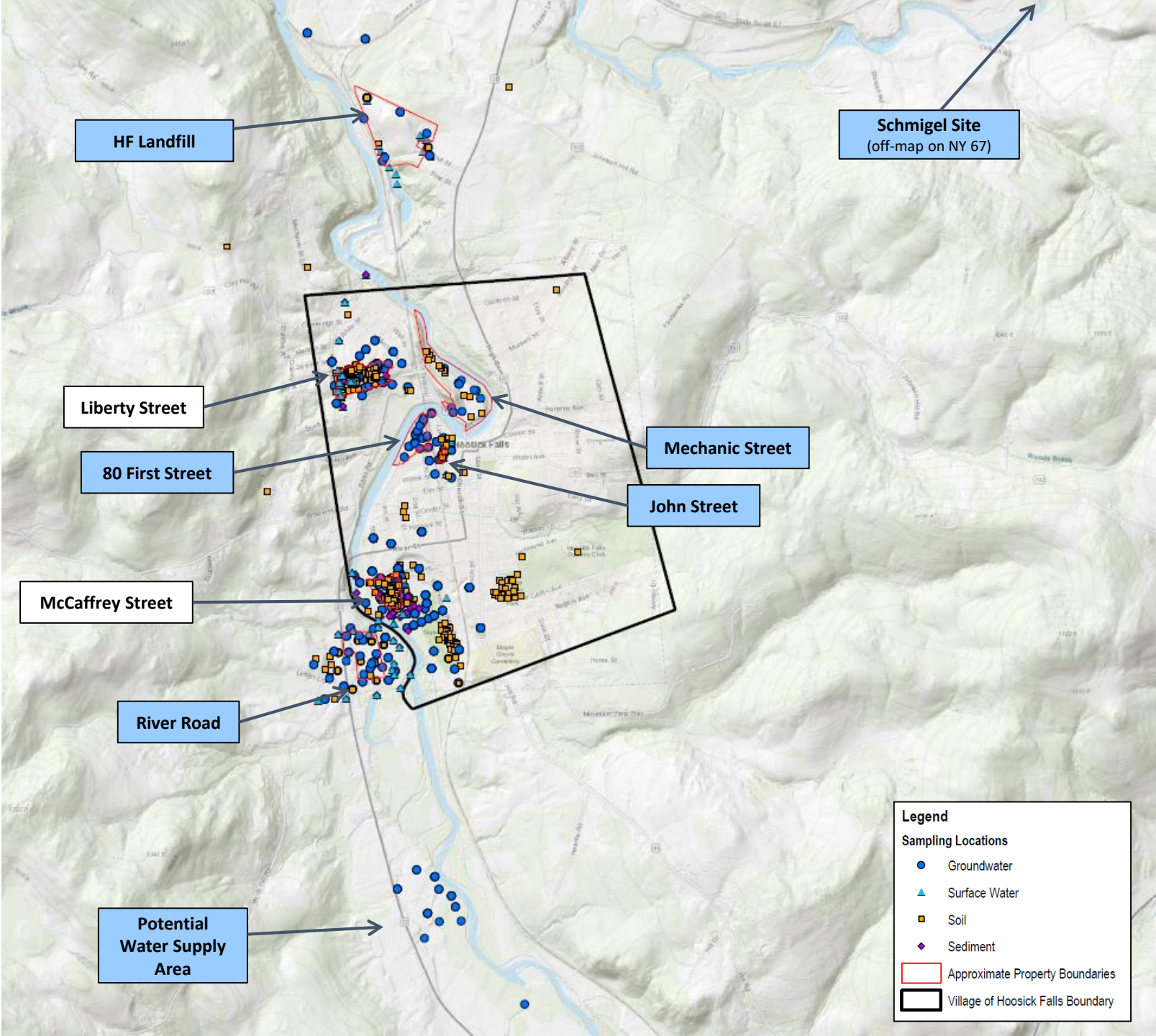
This timeline is a general visualization. Refer to site-related documents for specific dates of actions



# INVESTIGATIONS

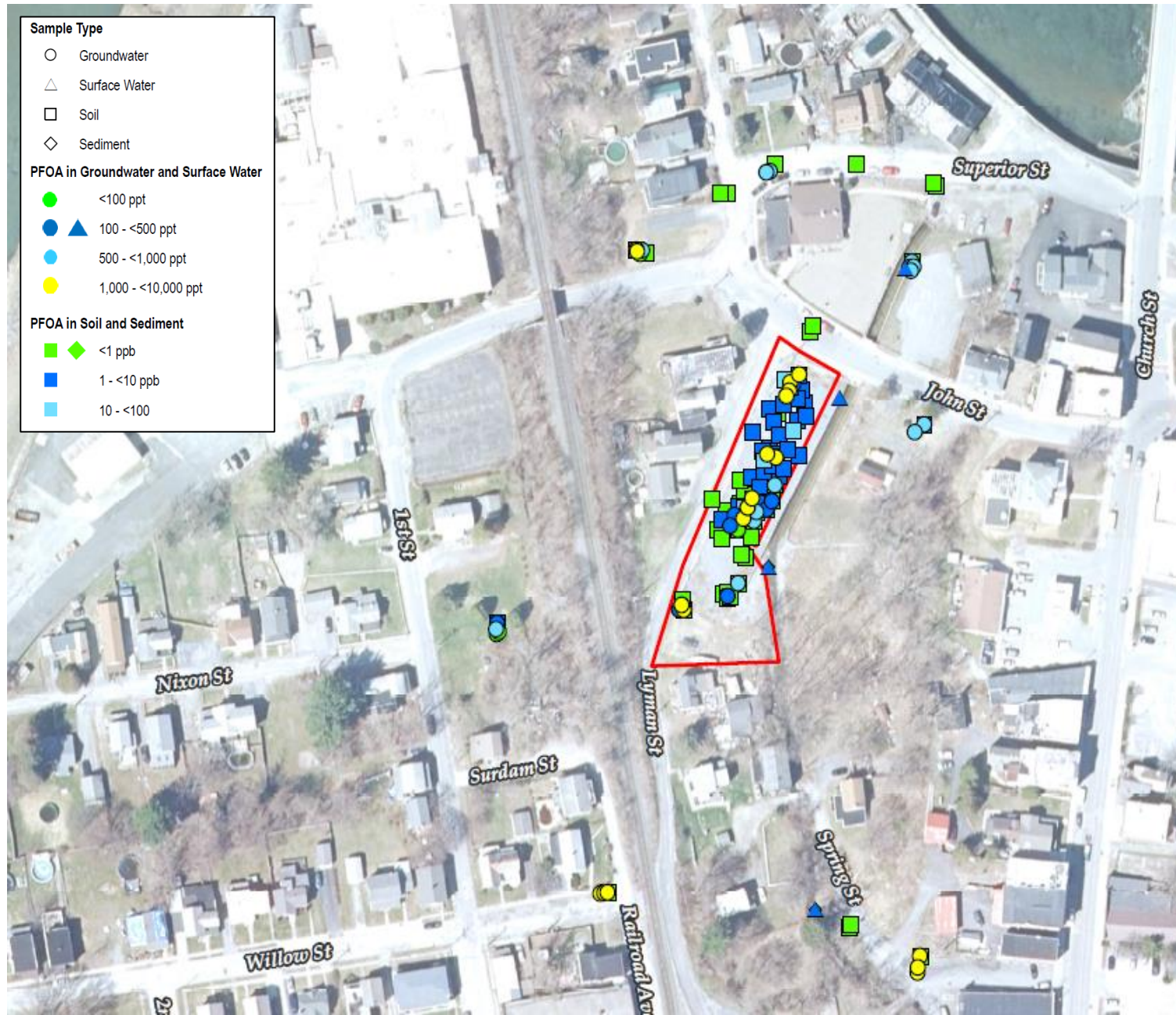
## VILLAGE OF HOOSICK FALLS

## TOWN OF HOOSICK





# JOHN STREET: PFOA INVESTIGATIONS



## NEXT STEPS

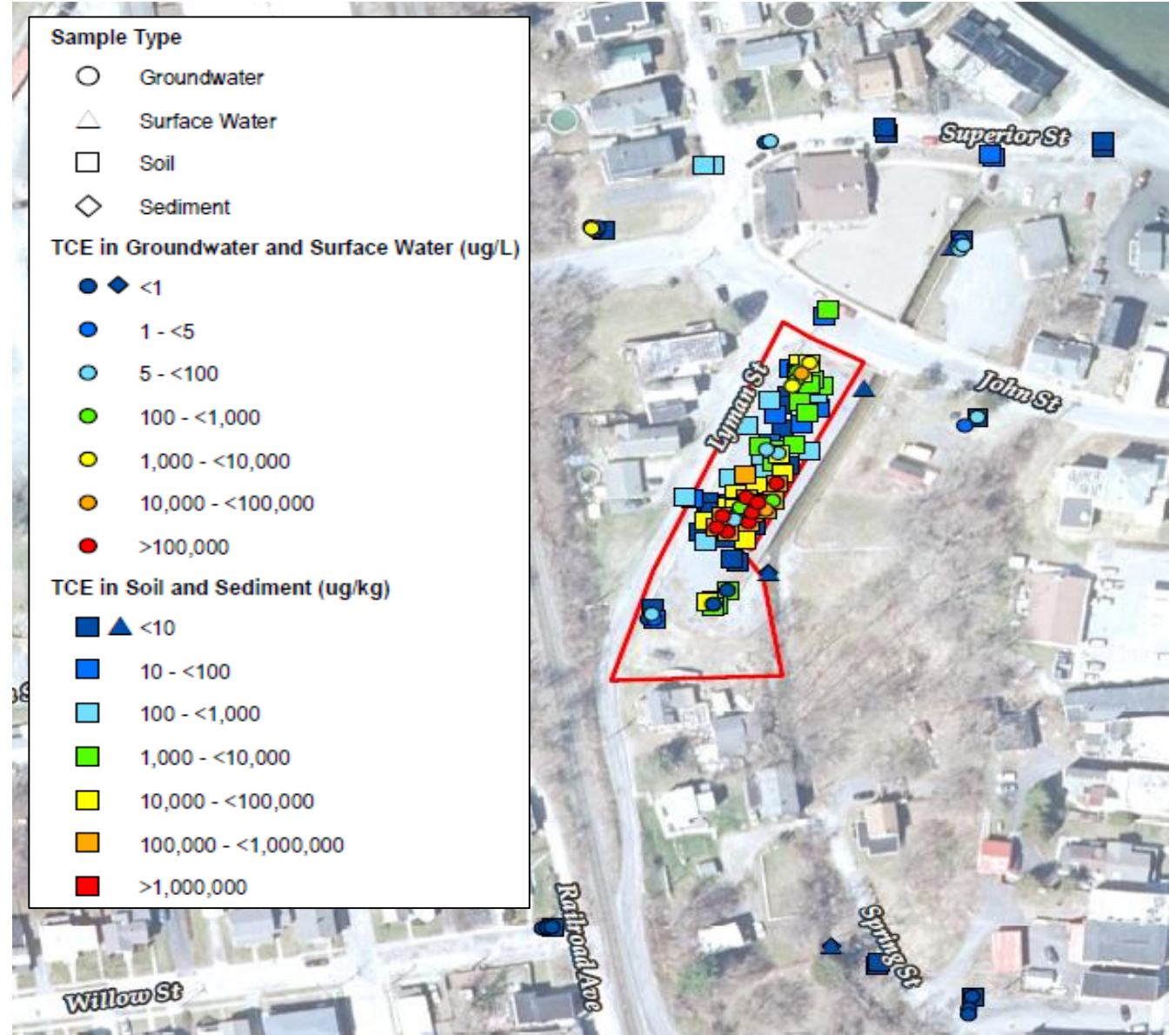
1. Evaluate data from new wells installed in 2019
2. Develop Feasibility Study to determine remedy

Groundwater	80 Samples
Range	<1 to 6,400 ppt
Average	1,500 ppt
Surface Water	4 Samples
Range	210 to 350 ppt
Average	258 ppt
Soil	150 Samples
Range	<0.32 to 23 ppb
Average	2.6 ppb
Sediment	2 Samples
Range	0.66 to 0.89 ppb
Average	0.78 ppb

Parts per trillion – ppt    Parts per billion – ppb  
USEPA Site-Specific Screening value for PFOA in soil is 1,000 ppb  
USEPA Lifetime Drinking Water Health Advisory is 70 ppt  
Proposed NYS Drinking Water Standard is 10 ppt

# JOHN STREET: VOC INVESTIGATIONS & MITIGATION

- Soil Vapor Intrusion Evaluations
- Vapor Mitigation in Buildings
- Additional Investigation for VOCs
- Interim Remedial Measure (IRM) for Shallow Groundwater (Nov 2019 start)
  - Implementation complete
  - Robust monitoring network to gauge effectiveness; ongoing monitoring





# JOHN STREET: SOIL VAPOR INTRUSION INVESTIGATIONS: 2017 – 2020

- Conducted Soil Vapor Intrusion sampling at 24 properties:
  - Indoor air
  - Sub-slab soil gas
  - Outdoor air
- Results:
  - 12 Properties - no mitigation
  - 9 Properties - mitigation
  - 3 Properties - follow up sampling



# JOHN STREET: VOC MITIGATION

## Objectives:

- Mitigate vapor intrusion into buildings
- Reduce potential for future vapor intrusion

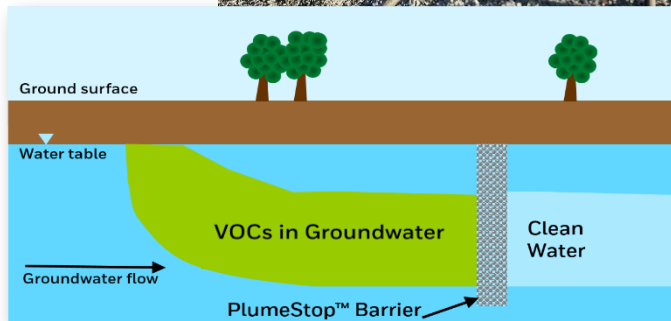
## Techniques:

- Physical barriers to vapor intrusion:
  - Pouring concrete basement floors
  - Adding specialized floor sealants
  - Sealing basement walls and foundations
- Active mitigation methods:
  - Sub-slab depressurization systems
  - Air recirculation through carbon



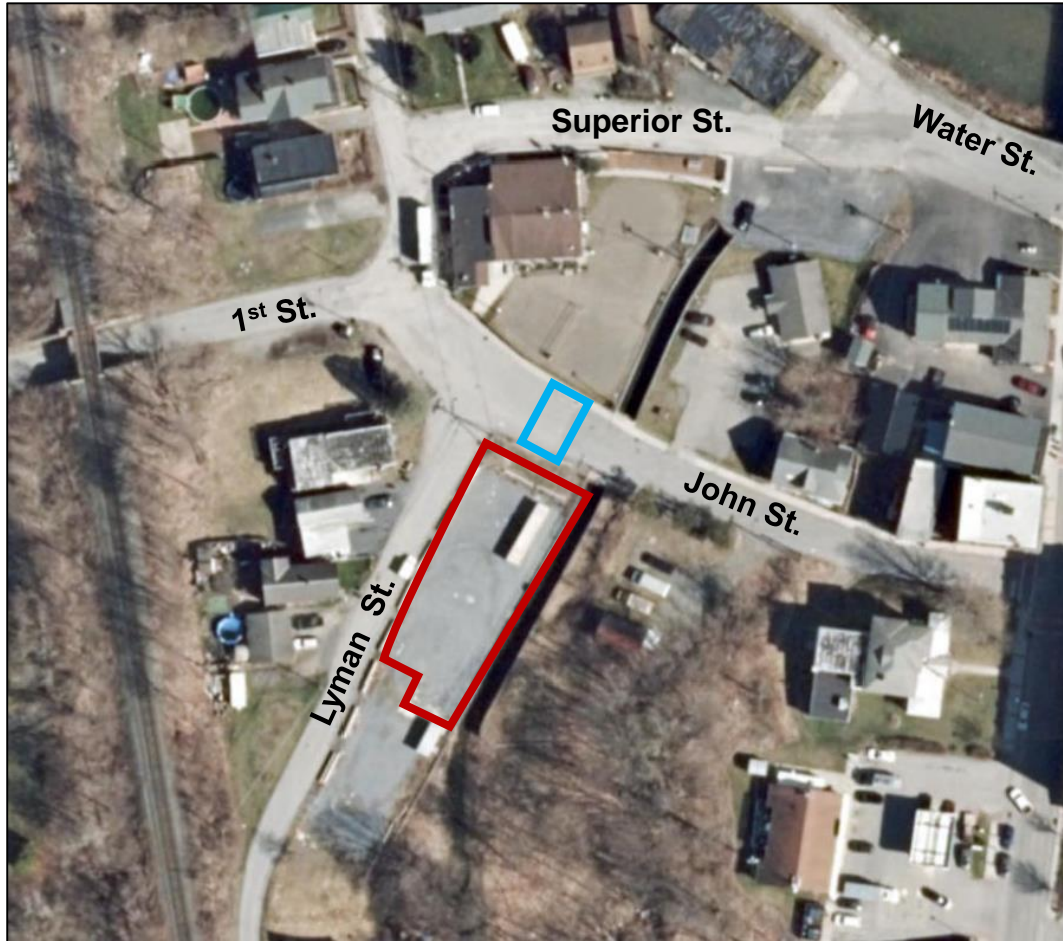


# PLUMESTOP INJECTIONS (IRM): NOVEMBER 2019





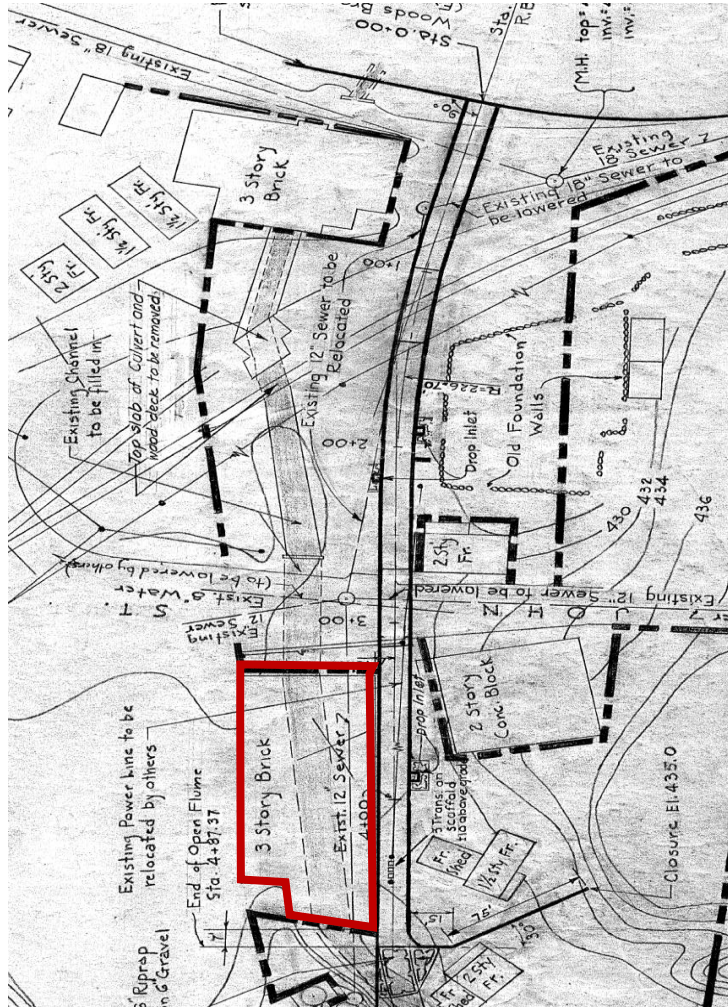
# CULVERT DISCOVERED DURING VILLAGE SEWER PROJECT: NOVEMBER 14, 2019






# WOODS BROOK AND THE CULVERT

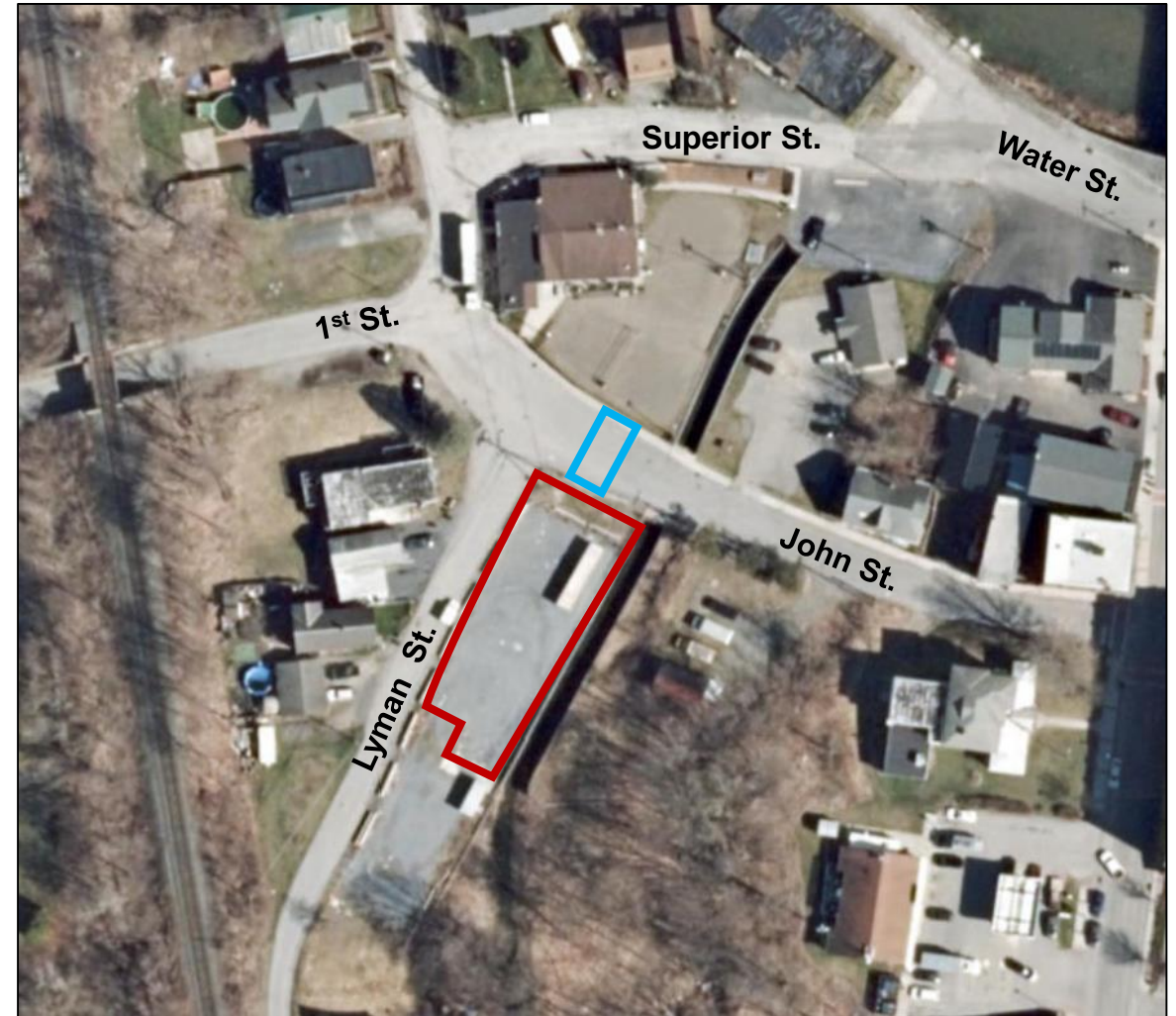
Schematic showing culverts in 1952 prior to Flood Control Project



 Approx.  
current  
location of  
culvert

 Approx.  
location of  
John St  
building

### After Flood Control Project



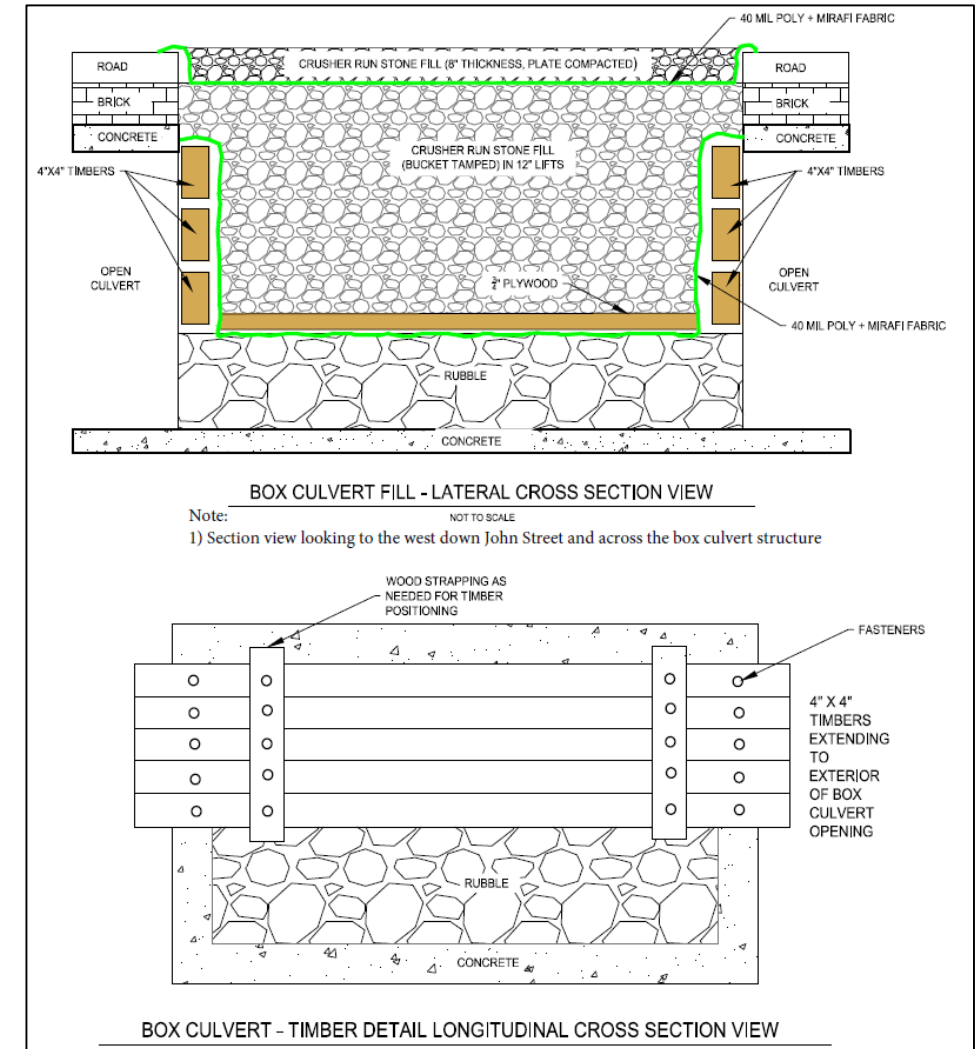


# CULVERT WORK BEGINS: NOVEMBER 21, 2019



- Placed additional poly sheeting
- Added orange fencing and caution tape
- Secured physical barricade and cover

# INSPECT AND SECURE CULVERT: NOVEMBER 26, 2019





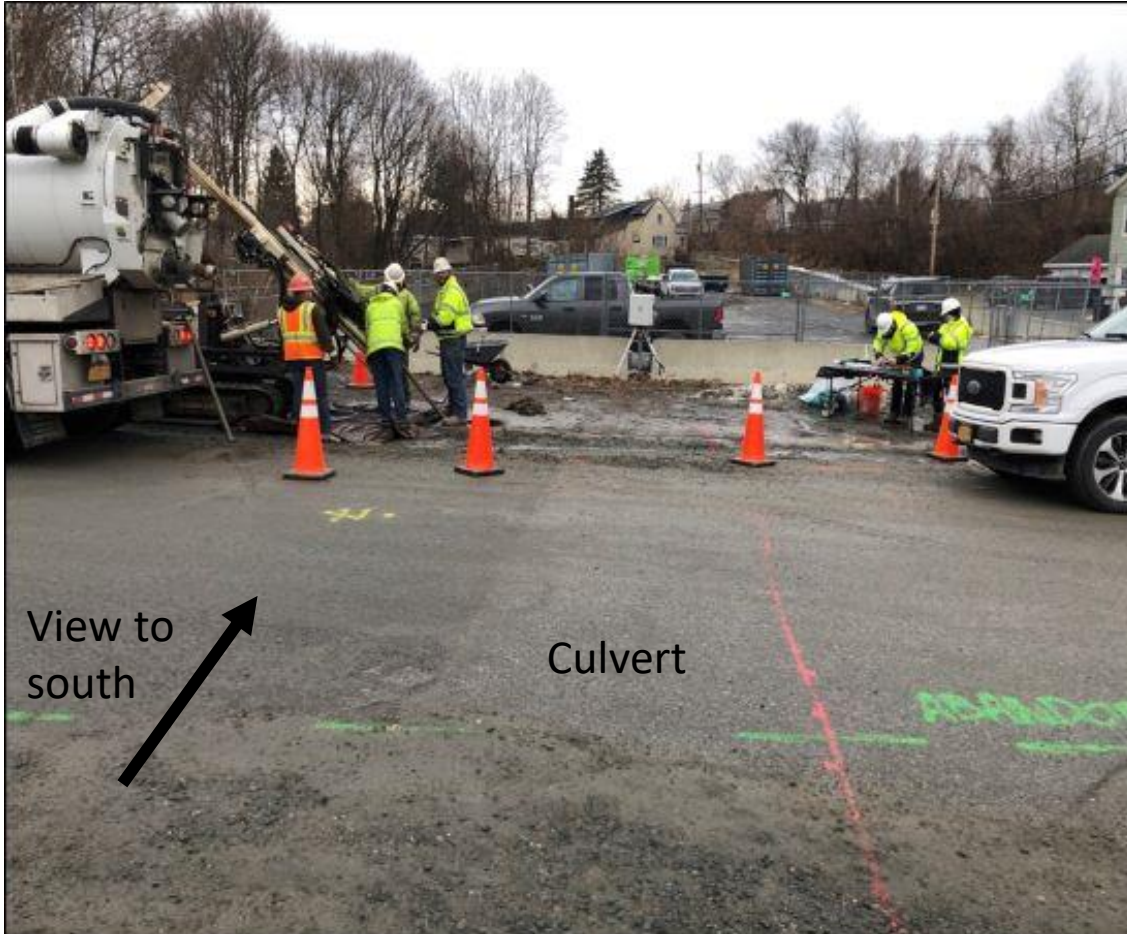
# FILL CULVERT/CLOSE EXCAVATION: NOVEMBER 26, 2019





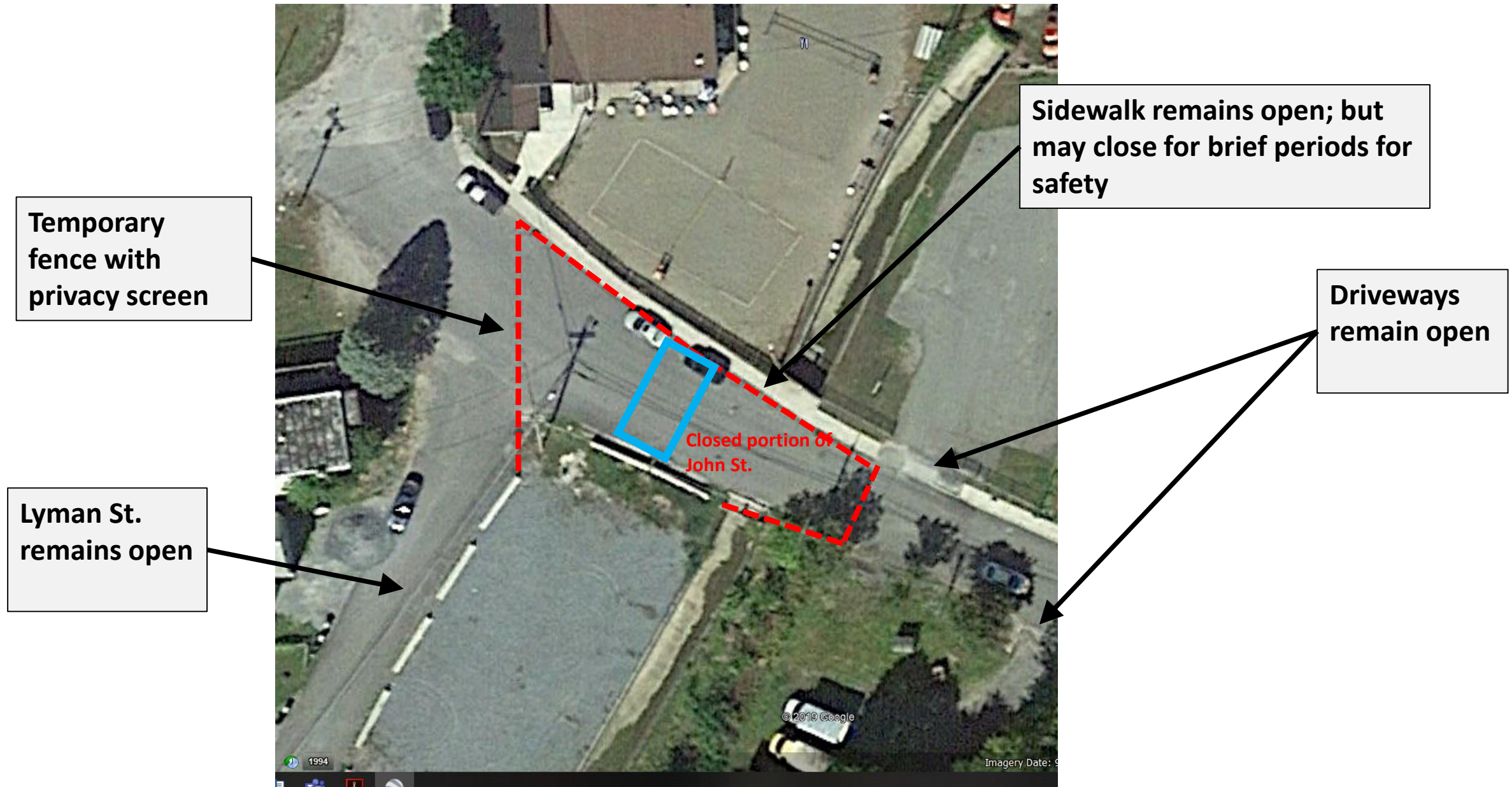
# ADDITIONAL INVESTIGATION: FEBRUARY 3 - 6, 2020

Angled borings to sample under culvert





# ROAD CLOSURE (~2 weeks)



# FENCING WITH FABRIC SCREEN EXAMPLE





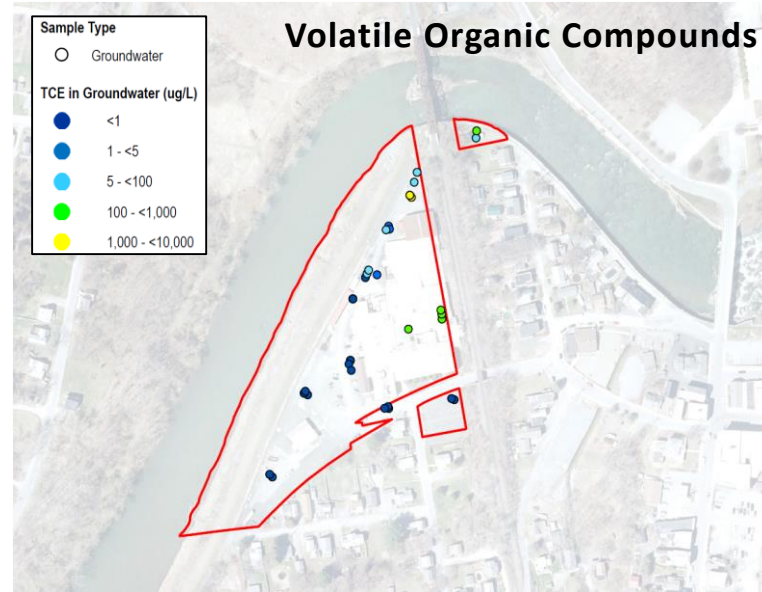
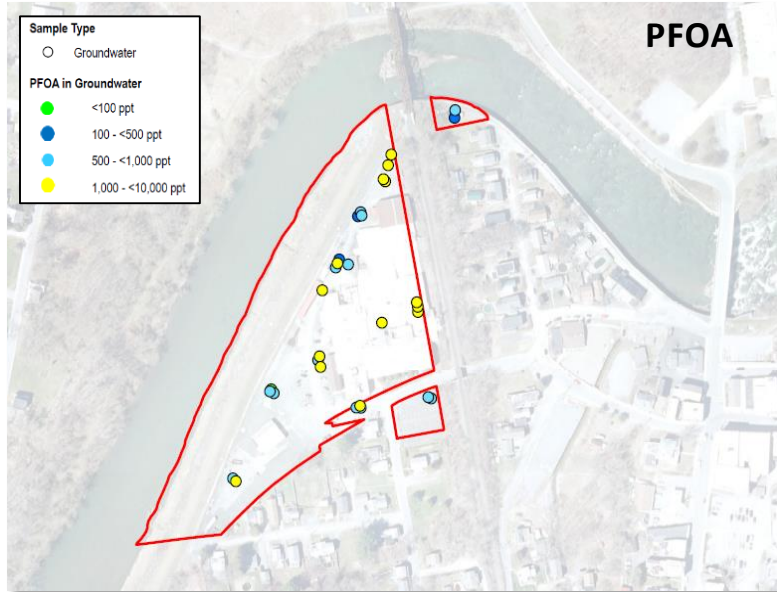
# AIR MONITORING DURING CULVERT WORK

- Real-time Continuous Monitoring for VOCs and Particulates
  - One up-wind station
  - One down-wind station
- Breathing Zone Monitoring in Work Zone by PID Meter





# 80 FIRST STREET PFOA AND VOC INVESTIGATIONS



## ADDITIONAL WORK

Oak-Mitsui conducted DEC-approved IRM scope of work

- Drained excavation pits
- Treated water
- Filled pits with clean fill (to be approved by DEC)

## NEXT STEPS

Complete Site Characterization (joint Honeywell and Oak-Mitsui)

- Evaluate results
- Submit Site Characterization Report

Groundwater	45 Samples
<b>PFOA - Range</b>	<0.77 to 2,500 ppt
<b>PFOA - Average</b>	1,100 ppt
Soil*	74 Samples
<b>PFOA - Range</b>	<0.088 to 14 ppb
<b>PFOA - Average</b>	1.9 ppb

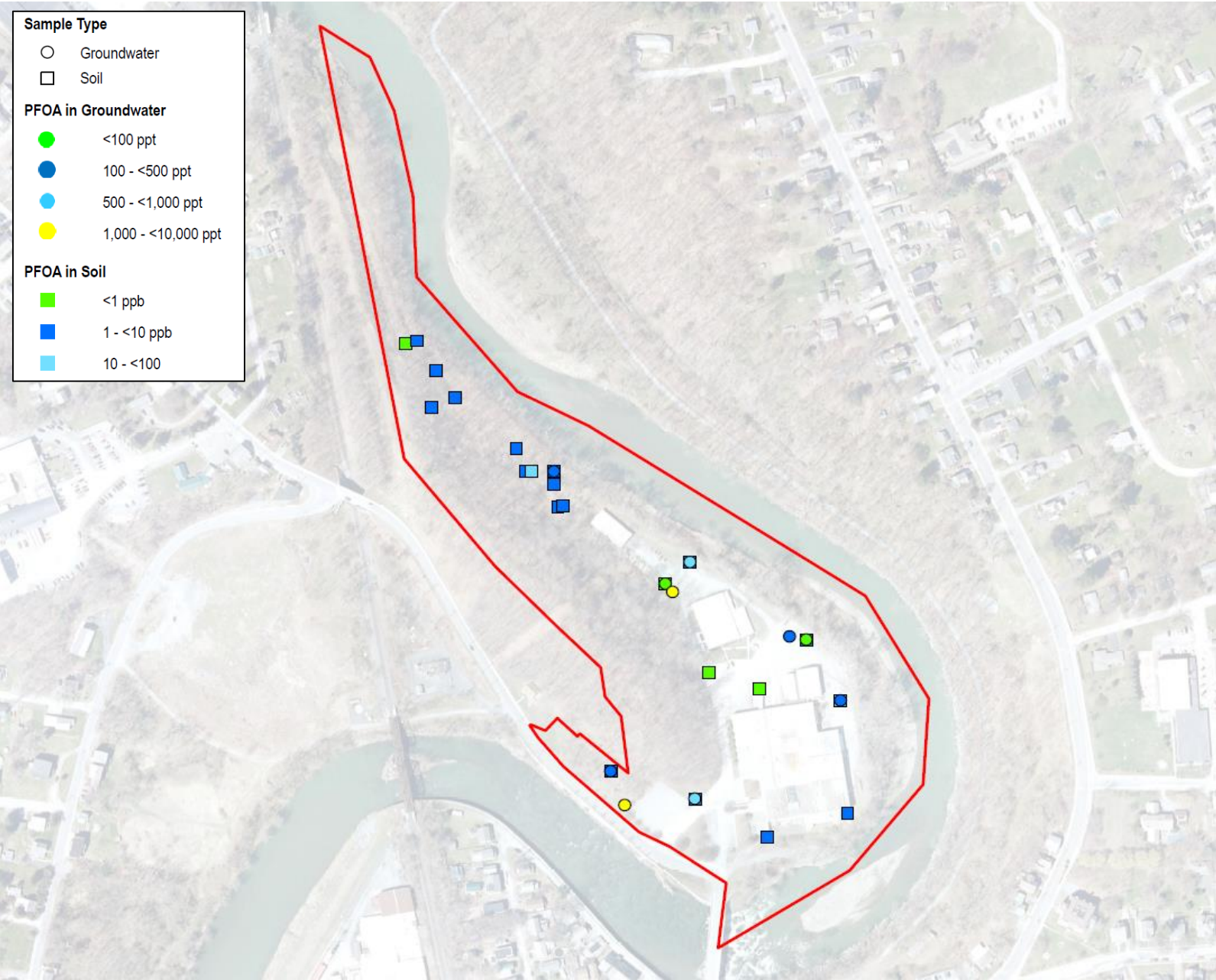
\*Soil investigation conducted by Oak-Mitsui; locations not shown on map  
 Parts per trillion – ppt    Parts per billion – ppb  
 USEPA Site-Specific Screening value for PFOA in soil is 1,000 ppb  
 USEPA Lifetime Drinking Water Health Advisory is 70 ppt  
 Proposed NYS Drinking Water Standard is 10 ppt

Groundwater	46 Samples
<b>TCE - Range</b>	<1 to 1,300 ppb
<b>1,1,1-TCA - Range</b>	<0.82 to 390 ppb
Soil*	28 Samples
<b>TCE – Range</b>	No detections
<b>1,1,1-TCA - Range</b>	No detections

VOC –Volatile Organic Compound; TCE – Trichloroethene;  
 1,1,1-TCA – 1,1,1-Trichloroethane  
 Soil samples collected by Oak-Mitsui  
 NYSDEC Class GA Groundwater Standards: 5 ppb for both TCE and 1,1,1-TCA



# MECHANIC STREET: PFOA INVESTIGATIONS



## NEXT STEPS

- Evaluate supplemental data
- Submit Site Characterization Report to DEC

Groundwater	12 Samples
Range	<0.77 to 2,300 ppt
Average	1,100 ppt
Soil	74 Samples
Range	<0.088 to 14 ppb
Average	1.9 ppb

Parts per trillion – ppt    Parts per billion - ppb  
USEPA Site-Specific Screening value for PFOA in soil is 1,000 ppb  
USEPA Lifetime Drinking Water Health Advisory is 70 ppt  
Proposed NYS Drinking Water Standard is 10 ppt



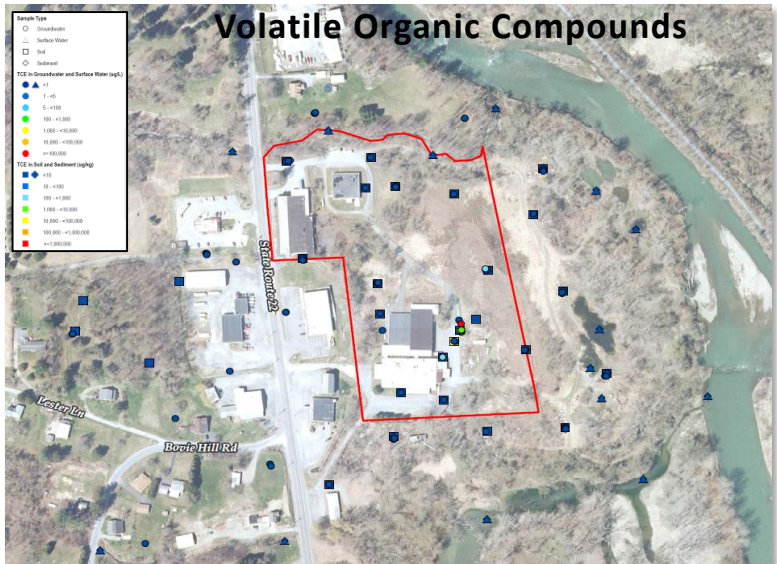
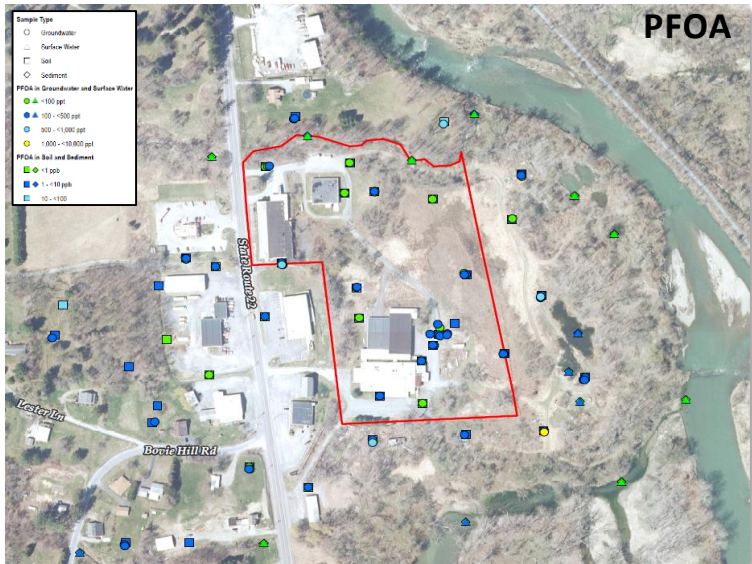
# RIVER ROAD: PFOA AND VOC INVESTIGATIONS

## ADDITIONAL WORK

Soil vapor sampling (>100 points)

## NEXT STEPS

1. Submit supplemental scope of work to DEC for approval
2. Evaluate Results
3. Submit Site Characterization Report



Groundwater	128 Samples
Range	<1 to 1,400 ppt
Average	190 ppt
Surface Water	14 Samples
Range	40 to 230 ppt
Average	92 ppt
Soil	135 Samples
Range	<0.33 to 16 ppb
Average	1.8 ppb
Sediment	14 Samples
Range	<0.32 to 3.2 ppb
Average	0.93 ppb

Parts per trillion – ppt Parts per billion – ppb  
USEPA Site-Specific Screening value for PFOA in soil is 1,000 ppb  
USEPA Lifetime Drinking Water Health Advisory is 70 ppt  
Proposed NYS Drinking Water Standard is 10 ppt

	ON-SITE	OFF-SITE
Groundwater	37 Samples	37 Samples
1,1,2-TCA – Range	<0.5 to 95,000 ppb	No detections
DCM – Range	<2 to 49,000 ppb	<2 to 5 ppb
VC - Range	<0.5 to 11,000 ppb	No detections
Surface Water	2 Samples	12 Samples
Total VOCs	No detections	No detections
Soil	58 Samples	37 Samples
1,1,2-TCA – Range	No detections	<1 to 7 ppb
DCM – Range	<2 to 94 ppb	<2 to 5 ppb
VC - Range	<0.9 to 10,000 ppb	No detections
Sediment	2 Samples	12 Samples
Total VOCs	No detections	No detections

Parts per billion – ppb VOC – Volatile Organic Compound  
1,1,2-TCA – 1,1,2-Trichloroethane DCM – Dichloromethane VC = Vinyl chloride  
NYSDEC Class GA Groundwater Standards: 1 ppb for 1,1,2-TCA, 5 ppb for DCM, 2 ppb VC  
NYSDEC Residential Use Soil Cleanup Objectives: 51,000 ppb for DCM, 210 ppb for VC  
NYSDEC Commercial Use Soil Cleanup Objectives: 50,000 ppb for DCM, 13,000 ppb for VC



# SCHMIGEL SITE: PFOA INVESTIGATIONS



## ADDITIONAL WORK

Completed DEC-approved supplemental Scope of Work

- Installed additional monitoring wells
- Collected groundwater, soil, surface water and sediment samples

## NEXT STEPS

1. Evaluate results
2. Submit Supplemental Investigation Report to DEC

Groundwater	6 Samples
Range	<1 to 290 ppt
Average	130 ppt

Parts per trillion – ppt    Parts per billion - ppb  
USEPA Lifetime Drinking Water Health Advisory is 70 ppt  
Proposed NYS Drinking Water Standard is 10 ppt