

**Project Location**

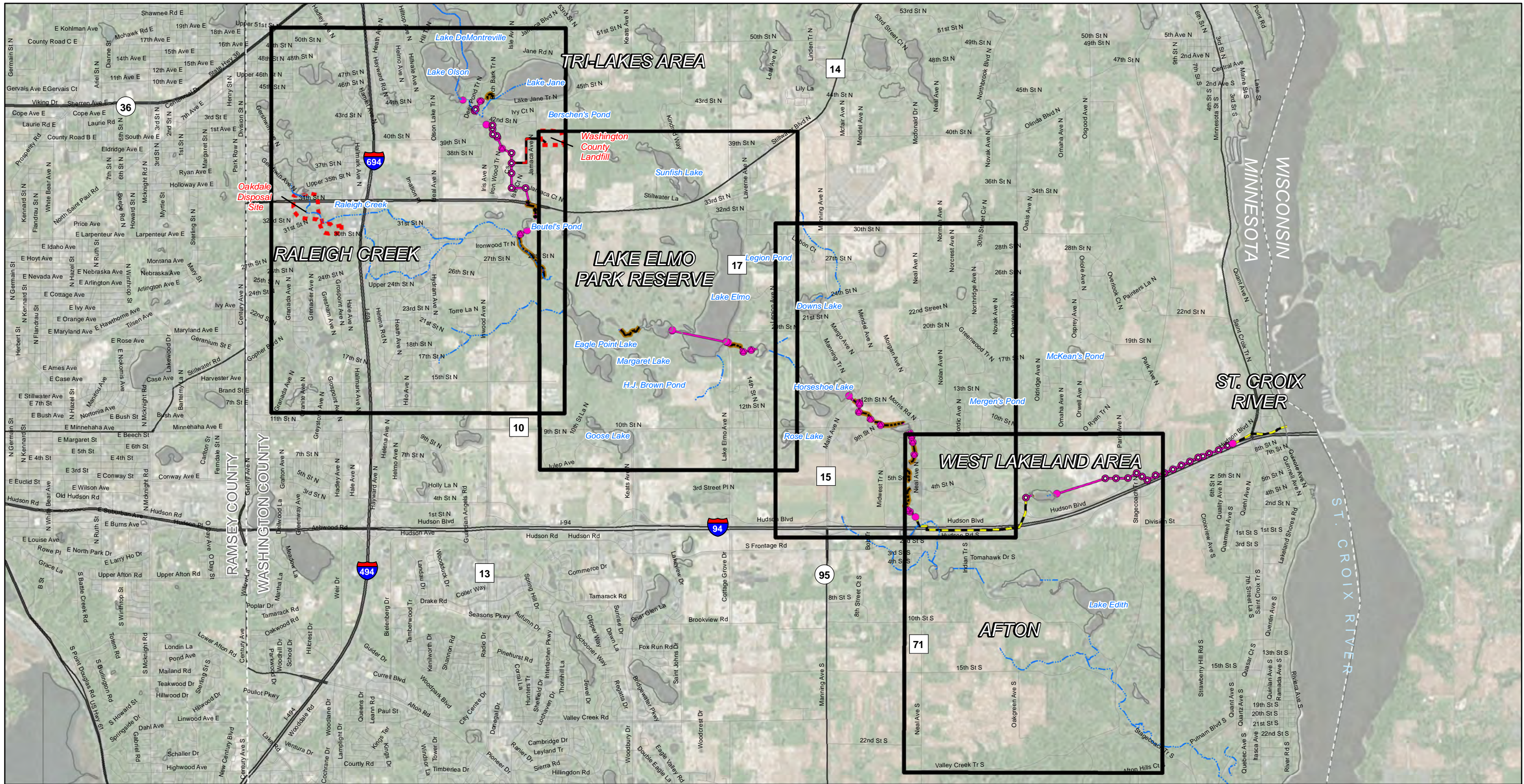
**Figure 1a**  
**Project Location**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- |                                |         |                                       |
|--------------------------------|---------|---------------------------------------|
| <b>Project 1007 Structures</b> | Channel | Washington County Landfill connection |
| Catch Basin                    | Culvert | MnDOT Pipeline                        |
| Manhole                        | Pipe    |                                       |
| Other Structure                |         |                                       |



Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community; Other Sources: MDH, Barr Engineering  
 AECOM Path: C:\Users\marie.santos\Desktop\Project 1007 OFFLINE\GIS\templ6-Month Investigation Progress Report\Figure 1 - Project Location.mxd Revised: 6/30/2020 By MGD

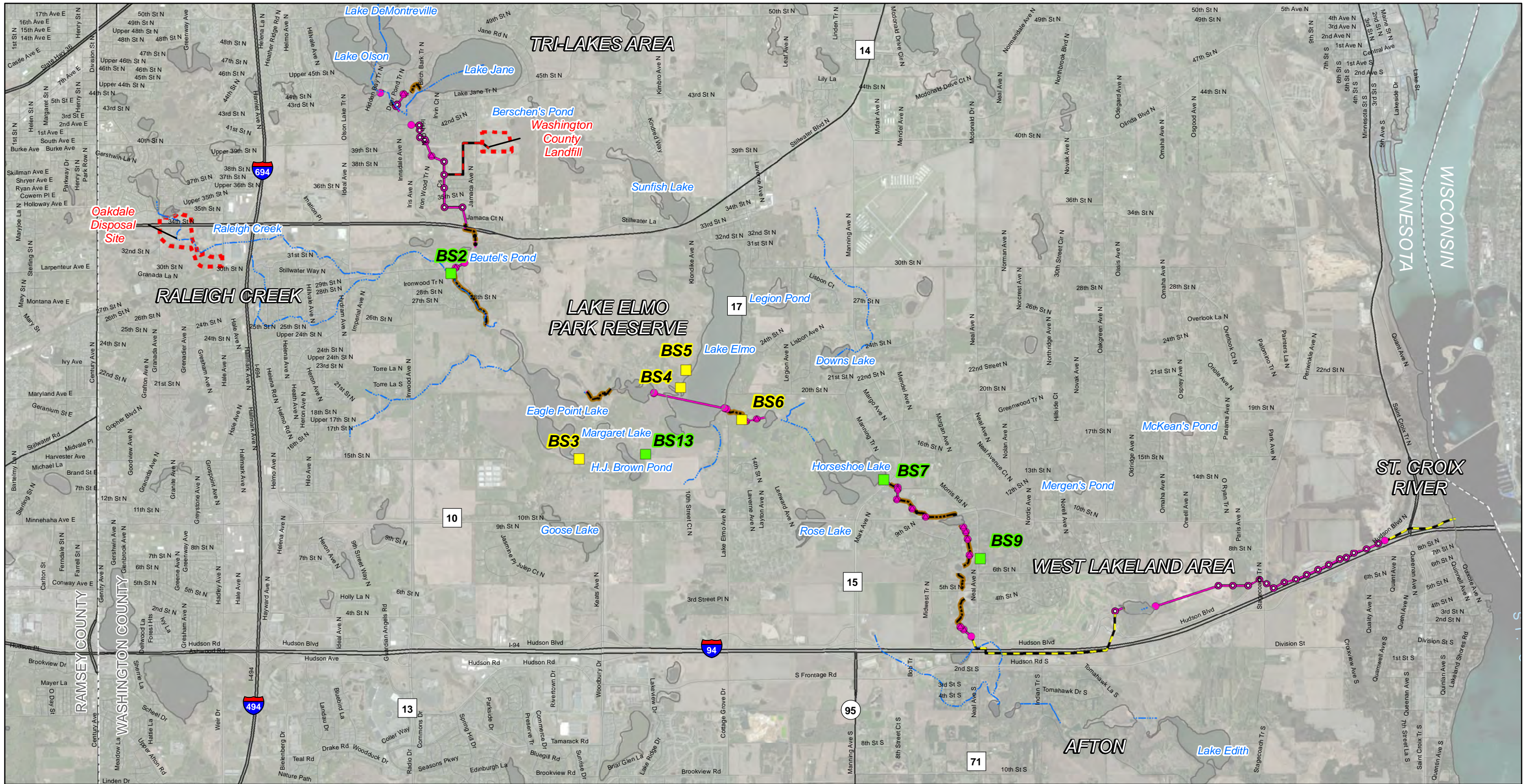




**Figure 1b**  
**Project Overview**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

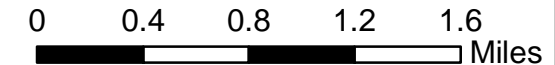






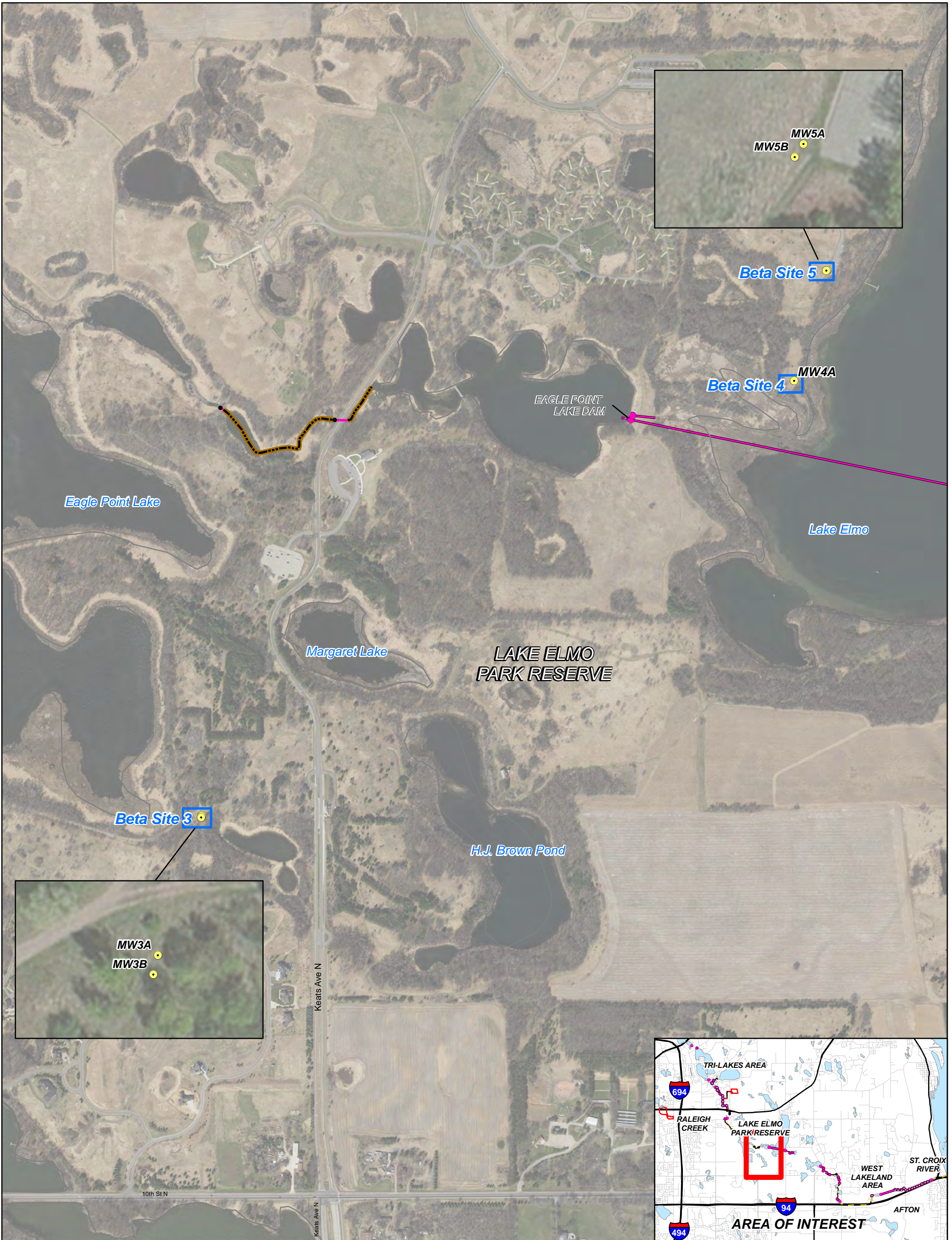
**Figure 2-1**  
**Beta Site Locations**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- |                                |                                       |                                      |
|--------------------------------|---------------------------------------|--------------------------------------|
| <b>Project 1007 Structures</b> | Washington County Landfill connection | <b>Beta Site Drilling</b>            |
| Catch Basin                    | MnDOT Pipeline                        | November 11, 2019 - January 21, 2020 |
| Manhole                        | Streams and Creeks                    | May 26, 2020 - June 26, 2020         |
| Other Structure                | Water Body                            |                                      |
| Channel                        |                                       |                                      |
| Culvert                        |                                       |                                      |
| Pipe                           |                                       |                                      |



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community; Other Sources: MDH, Barr Engineering  
 AECOM Path: C:\Users\marie.santos\Desktop\Project 1007 OFFLINE\GIS temp\6-Month Investigation Progress Report\Figure 2-2 - Beta Site Locations.mxd Revised: 6/23/2020 By MGD





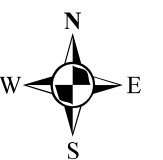
**Figure 3-1a**  
**Beta Sites 3, 4, and 5 Location Map**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 45, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

**Project 1007 Structures**

- Catch Basin
- Manhole
- Other Structure
- Channel
- Culvert
- Pipe
- Washington County Landfill connection
- MnDOT Pipeline

- Monitoring Well
- Beta Site

**AECOM**

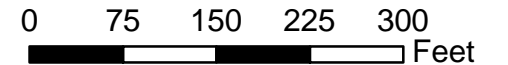




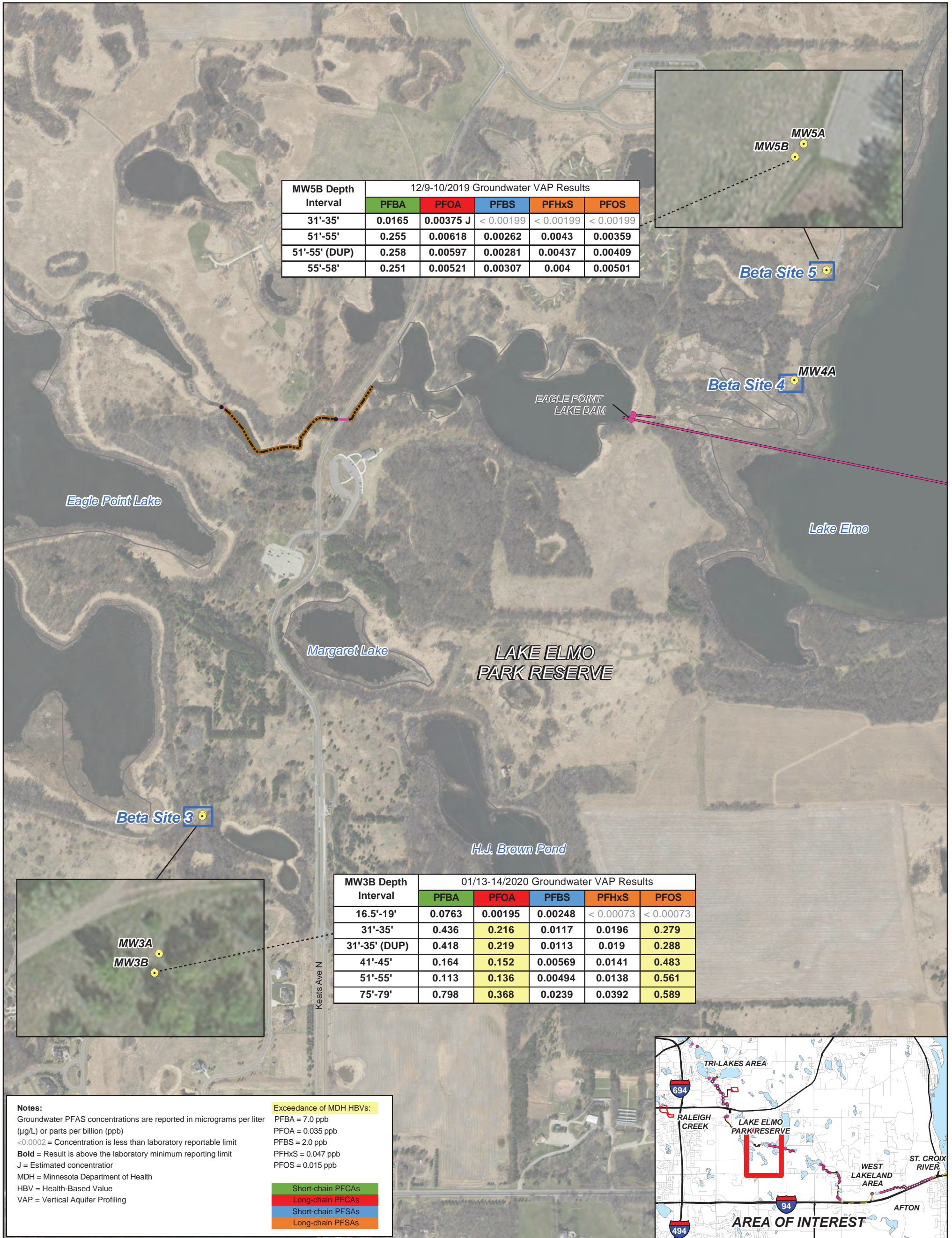


**Figure 3-1b**  
**Beta Site 6 Location Map**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- |                                |                                       |                 |
|--------------------------------|---------------------------------------|-----------------|
| <b>Project 1007 Structures</b> | Washington County Landfill connection | Monitoring Well |
| Catch Basin                    | MnDOT Pipeline                        | Beta Site       |
| Manhole                        | Streams and Creeks                    |                 |
| Other Structure                | Surface Water Body                    |                 |
| Channel                        |                                       |                 |
| Culvert                        |                                       |                 |
| Pipe                           |                                       |                 |







**Figure 3-2a**  
**Beta Sites 3 and 5 Groundwater VAP PFAS Analytical Results**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

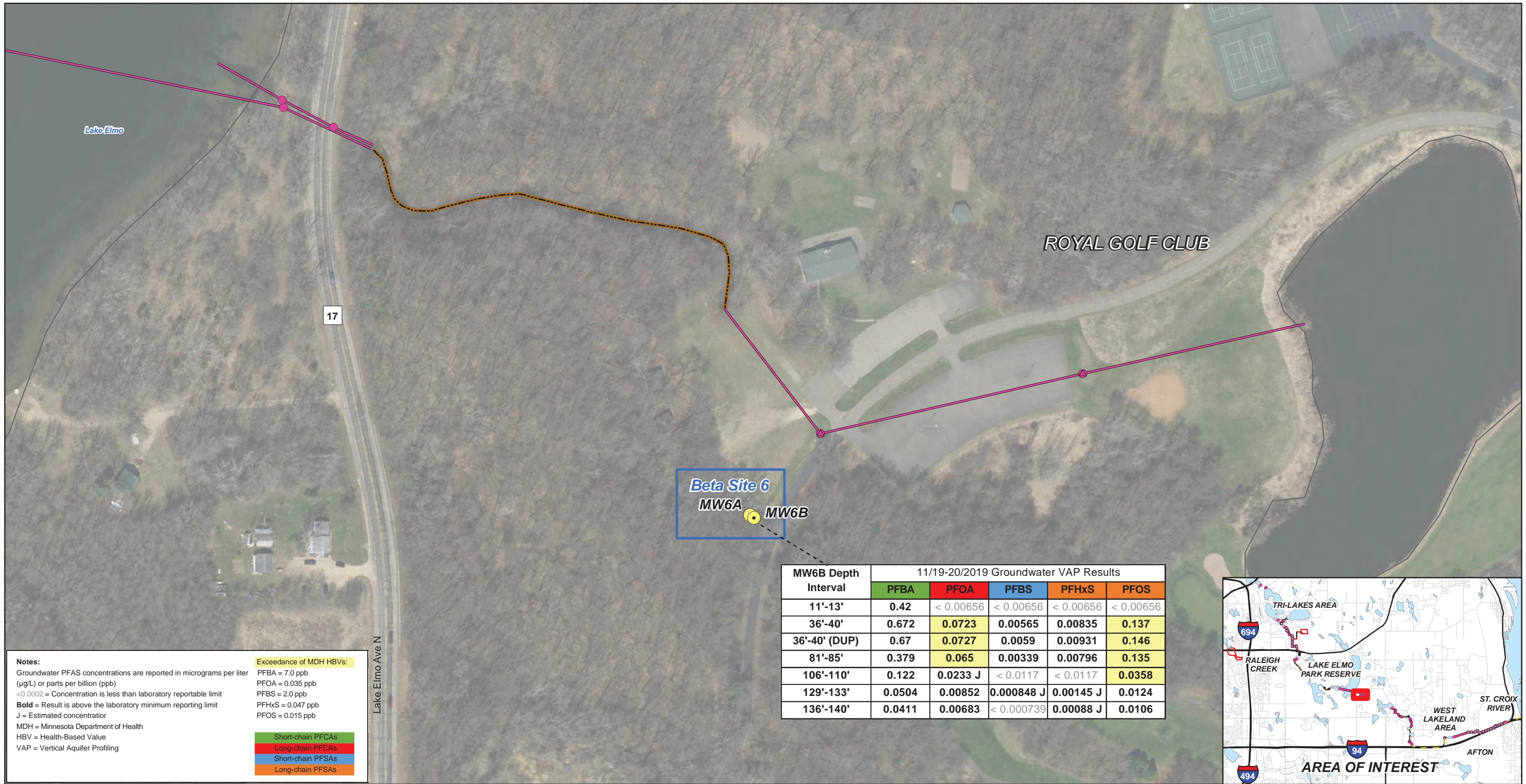
**Project 1007 Structures**

- Catch Basin
- Manhole
- Other Structure
- Channel
- Culvert
- Pipe
- Washington County Landfill connection
- MnDOT Pipeline

- Monitoring Well
- Beta Site



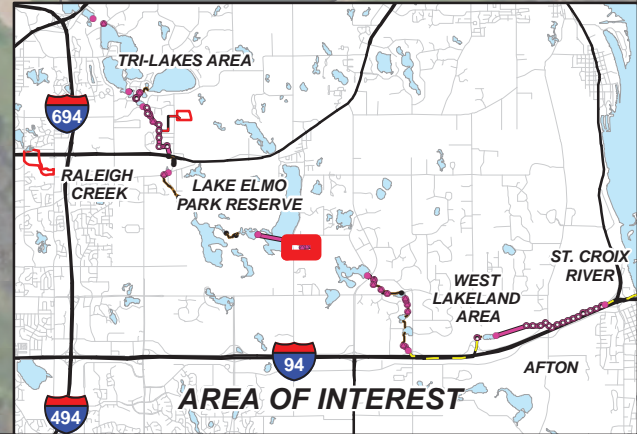




**Notes:**  
 Groundwater PFAS concentrations are reported in micrograms per liter (µg/L) or parts per billion (ppb)  
 <0.0002 = Concentration is less than laboratory reportable limit  
**Bold** = Result is above the laboratory minimum reporting limit  
 J = Estimated concentration  
 MDH = Minnesota Department of Health  
 HBV = Health-Based Value  
 VAP = Vertical Aquifer Profiling

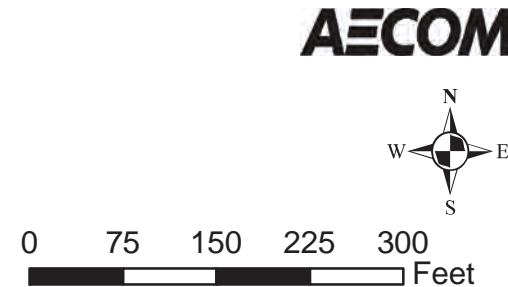
**Exceedance of MDH HBVs:**  
 PFBA = 7.0 ppb  
 PFOA = 0.035 ppb  
 PFBS = 2.0 ppb  
 PFHxS = 0.047 ppb  
 PFOS = 0.015 ppb

Legend:  
 Short-chain PFCAs (Green)  
 Long-chain PFCAs (Red)  
 Short-chain PFSAs (Blue)  
 Long-chain PFSAs (Orange)



**Figure 3-2b**  
**Beta Site 6 Groundwater VAP PFAS Analytical Results**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
  - Streams and Creeks
  - Surface Water Body
  - Monitoring Well
  - Beta Site



**AECOM**

Service Layer Credits: MnGeo 2016 Aerial Photograph; Other Sources: MDH, VBWD  
 AECOM Path: C:\Users\marie.santos\Desktop\Project 1007 OFFLINE\GIS temp\6-Month Investigation Progress Report\Figures\Figure 3-1b - Beta Site 6 Location Map rev06192020.mxd Revised: 6/19/2020 By MGD



MW5B Depth Interval	12/9-10/2019 Soil PFAS Results				
	PFBA	PFOA	PFBS	PFHxS	PFOS
18'-20'	< 0.293	< 0.0733	< 0.0733	< 0.0733	< 0.0733
28'-30'	< 0.29	< 0.0725	< 0.0725	< 0.0725	< 0.0725
28'-30' (DUP)	< 0.29	< 0.0724	< 0.0724	< 0.0724	< 0.0724
31'-32'	< 0.296	< 0.0739	< 0.0739	< 0.0739	< 0.0739
34'-35'	< 0.319	< 0.0797	< 0.0797	< 0.0797	< 0.0797
48'-49'	< 0.308	< 0.077	< 0.077	< 0.077	< 0.077
50'-54'	< 0.318	< 0.0794	< 0.0794	< 0.0794	< 0.0794
55'-58'	< 0.305	< 0.0762	< 0.0762	< 0.0762	< 0.0762

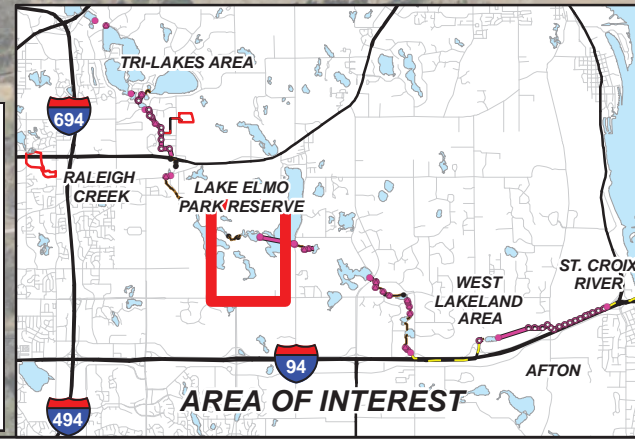
MW4A Depth Interval	12/13/2019 Soil PFAS Results				
	PFBA	PFOA	PFBS	PFHxS	PFOS
8'-8.5'	< 0.296	< 0.0741	< 0.0741	< 0.0741	< 0.0741
20'-21'	< 0.297	< 0.0742	< 0.0742	< 0.0742	< 0.0742
21'-23'	< 0.306	< 0.0765	< 0.0765	< 0.0765	< 0.0765
31'-32'	< 0.29	< 0.0726	< 0.0726	< 0.0726	< 0.0726
37'-38'	< 0.293	< 0.0732	< 0.0732	< 0.0732	<b>0.201</b>
38'-40'	< 0.281	< 0.0702	< 0.0702	< 0.0702	< 0.0702
50'-52'	< 0.315	< 0.0787	< 0.0787	< 0.0787	< 0.0787
60'-62'	< 0.295	< 0.0738	< 0.0738	< 0.0738	< 0.0738
68'-70'	< 0.295	< 0.0737	< 0.0737	< 0.0737	<b>0.076 J</b>
74'-75'	< 0.294	< 0.0734	< 0.0734	< 0.0734	<b>0.089 J</b>
74'-75' (DUP)	< 0.296	< 0.0739	< 0.0739	< 0.0739	<b>0.093 J</b>
80'-81'	< 0.29	< 0.0724	< 0.0724	< 0.0724	<b>0.134 J</b>
85'-86'	< 0.302	< 0.0755	< 0.0755	< 0.0755	<b>0.117 J</b>
88'-89'	< 0.289	< 0.0723	< 0.0723	< 0.0723	<b>0.12 J</b>

MW3B Depth Interval	01/13-14/2020 Soil PFAS Results				
	PFBA	PFOA	PFBS	PFHxS	PFOS
15'-16.5'	< 0.295	< 0.0737	< 0.0737	< 0.0737	< 0.0737
16.5'-19'	< 0.291	< 0.0728	< 0.0728	< 0.0728	< 0.0728
31'-35'	< 0.313	< 0.0781	< 0.0781	< 0.0781	< 0.0781
31'-35' (DUP)	< 0.309	< 0.0773	< 0.0773	< 0.0773	< 0.0773
41'-42'	< 0.301	< 0.0753	< 0.0753	< 0.0753	<b>0.092 J</b>
44'-45'	< 0.319	< 0.0798	< 0.0798	< 0.0798	<b>0.099 J</b>
51'-53'	< 0.304	< 0.0761	< 0.0761	< 0.0761	<b>0.099 J</b>
53'-55'	< 0.318	< 0.0796	< 0.0796	< 0.0796	<b>0.086 J</b>
74'-75'	< 0.318	<b>0.114 J</b>	< 0.0794	< 0.0794	<b>0.184</b>
75'-79'	< 0.313	< 0.0782	< 0.0782	< 0.0782	< 0.0782

**Notes:**  
 Soil PFAS concentrations are reported in micrograms per kilogram (µg/kg) or parts per billion (ppb)  
 <0.0002 = Concentration is less than the laboratory reportable limit  
**Bold** = Result is above the laboratory minimum reporting limit  
 J = Estimated concentration  
 DUP = Duplicate sample  
 MPCA = Minnesota Pollution Control Agency  
 SRV = Soil Reference Value  
 RSRV = Residential/Recreational SRV  
 CSRV = Commercial/Industrial SRV

Exceedance of MPCA SRVs:		
	RSRV	CSRV
PFBA =	38,000 ppb	520,000 ppb
PFOA =	240 ppb	3,200 ppb
PFBS =	5,700 ppb	77,000 ppb
PFHxS =	130 ppb	1,700 ppb
PFOS =	41 ppb	560 ppb

- Short-chain PFCAs
- Long-chain PFCAs
- Short-chain PFASs
- Long-chain PFASs



**Figure 3-3a**  
**Beta Sites 3, 4, and 5 Soil PFAS Analytical Results**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 45, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

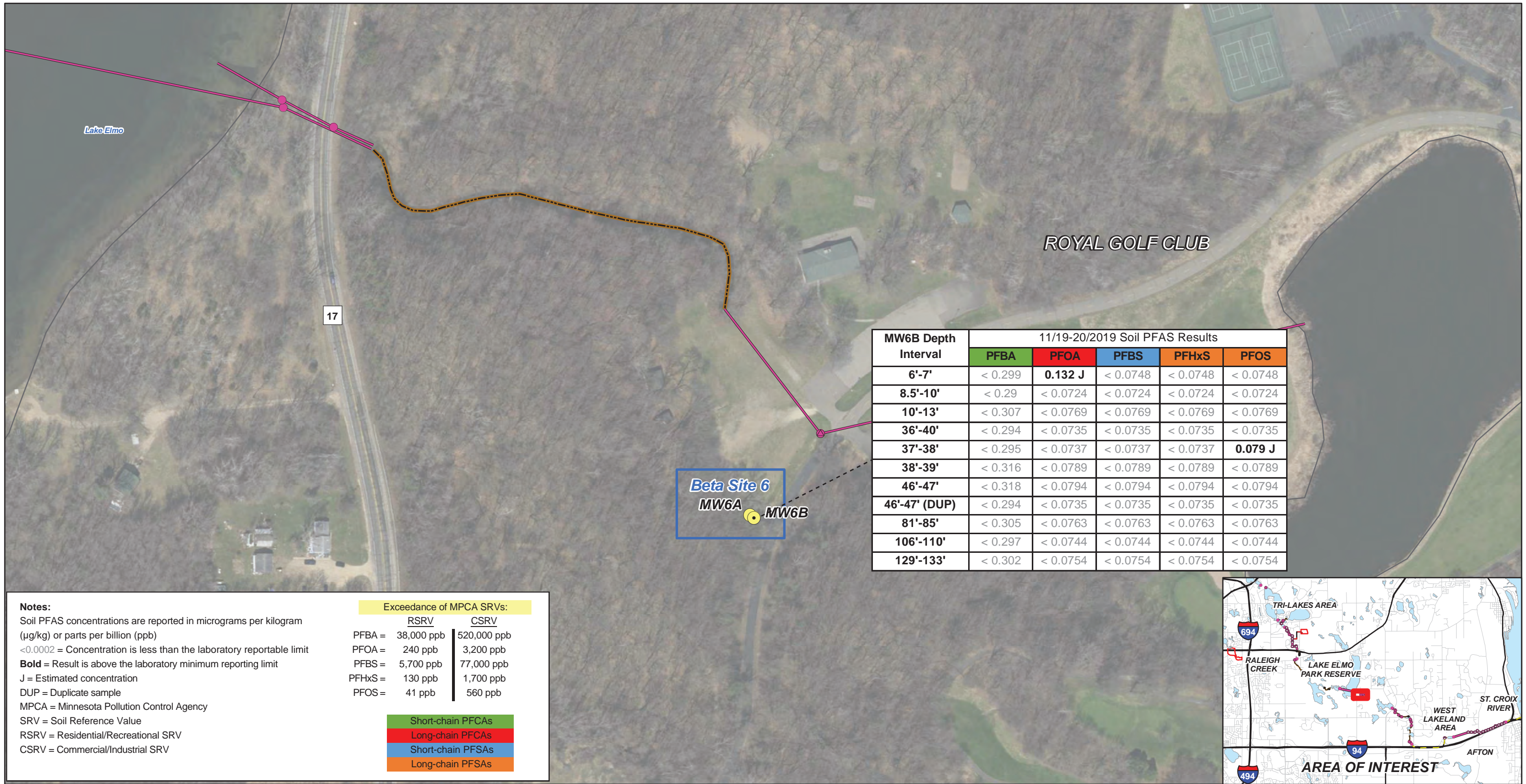
- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline

- Monitoring Well
- Beta Site



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community/MnGeo 2016 Aerial Photograph 7-County; Other Sources: MDH, VBWD  
 AECOM Path: C:\Users\marie.santos\Desktop\Project 1007 OFFLINE\GIS template\6-Month Investigation Progress Report\Figures\Figure 3-1a - Beta Sites 3,4,5 Location Map rev06192020.mxd Revised: 6/19/2020 By MGD





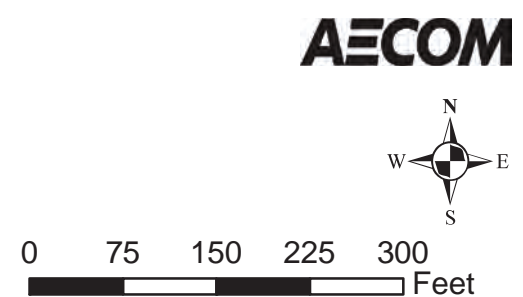
**Notes:**  
 Soil PFAS concentrations are reported in micrograms per kilogram (µg/kg) or parts per billion (ppb)  
 <0.0002 = Concentration is less than the laboratory reportable limit  
**Bold** = Result is above the laboratory minimum reporting limit  
 J = Estimated concentration  
 DUP = Duplicate sample  
 MPCA = Minnesota Pollution Control Agency  
 SRV = Soil Reference Value  
 RSRV = Residential/Recreational SRV  
 CSRV = Commercial/Industrial SRV

Exceedance of MPCA SRVs:		
	RSRV	CSRV
PFBA =	38,000 ppb	520,000 ppb
PFOA =	240 ppb	3,200 ppb
PFBS =	5,700 ppb	77,000 ppb
PFHxS =	130 ppb	1,700 ppb
PFOS =	41 ppb	560 ppb

Short-chain PFCAs
Long-chain PFCAs
Short-chain PFASs
Long-chain PFASs

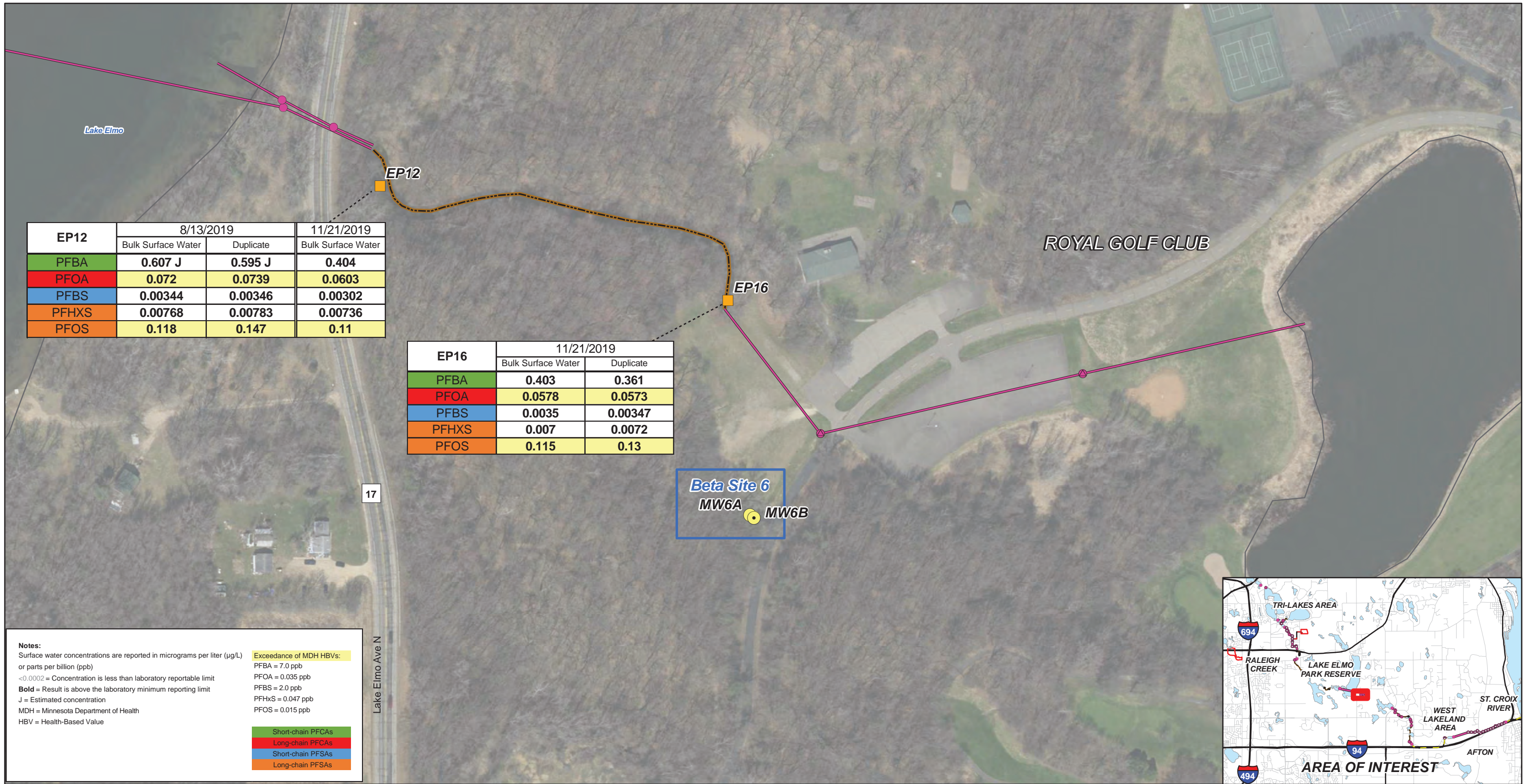
**Figure 3-3b**  
**Beta Site 6 Soil PFAS Analytical Results**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
  - Streams and Creeks
  - Surface Water Body
  - Monitoring Well
  - Beta Site



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**Figure 3-4**  
**Surface Water PFAS Analytical Results, November 21, 2019**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

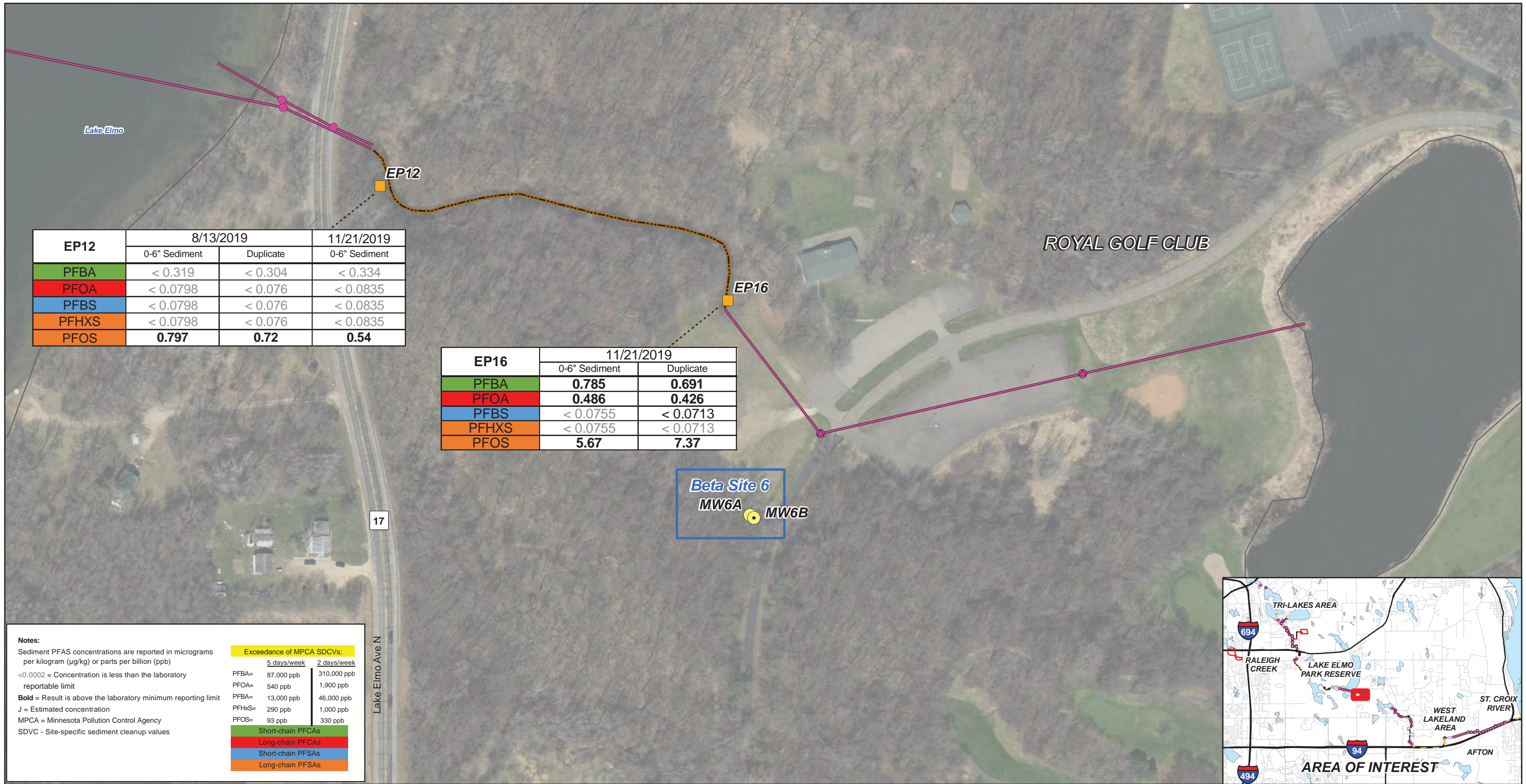
- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
- Washington County Landfill connection**
- MnDOT Pipeline
  - ~~~~~ Streams and Creeks
  - Surface Water Body
- Monitoring Well**
- Beta Site

**AECOM**

0 75 150 225 300 Feet

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**Figure 3-5**  
**Sediment PFAS Analytical Results, November 21, 2019**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
- Washington County Landfill connection
- MnDOT Pipeline
- Streams and Creeks
- Surface Water Body
- Monitoring Well
- Beta Site

**AECOM**

0 75 150 225 300 Feet

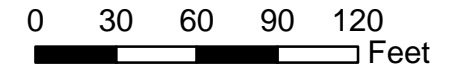
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**Figure 4-1a**  
**Beta Site 2 Location Map**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- |                                |                                       |                 |
|--------------------------------|---------------------------------------|-----------------|
| <b>Project 1007 Structures</b> | Washington County Landfill connection | Monitoring Well |
| Catch Basin                    | MnDOT Pipeline                        | Beta Site       |
| Manhole                        | Streams and Creeks                    |                 |
| Other Structure                | Surface Water Body                    |                 |
| Channel                        |                                       |                 |
| Culvert                        |                                       |                 |
| Pipe                           |                                       |                 |

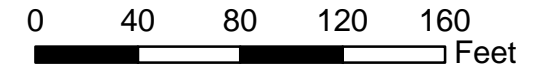




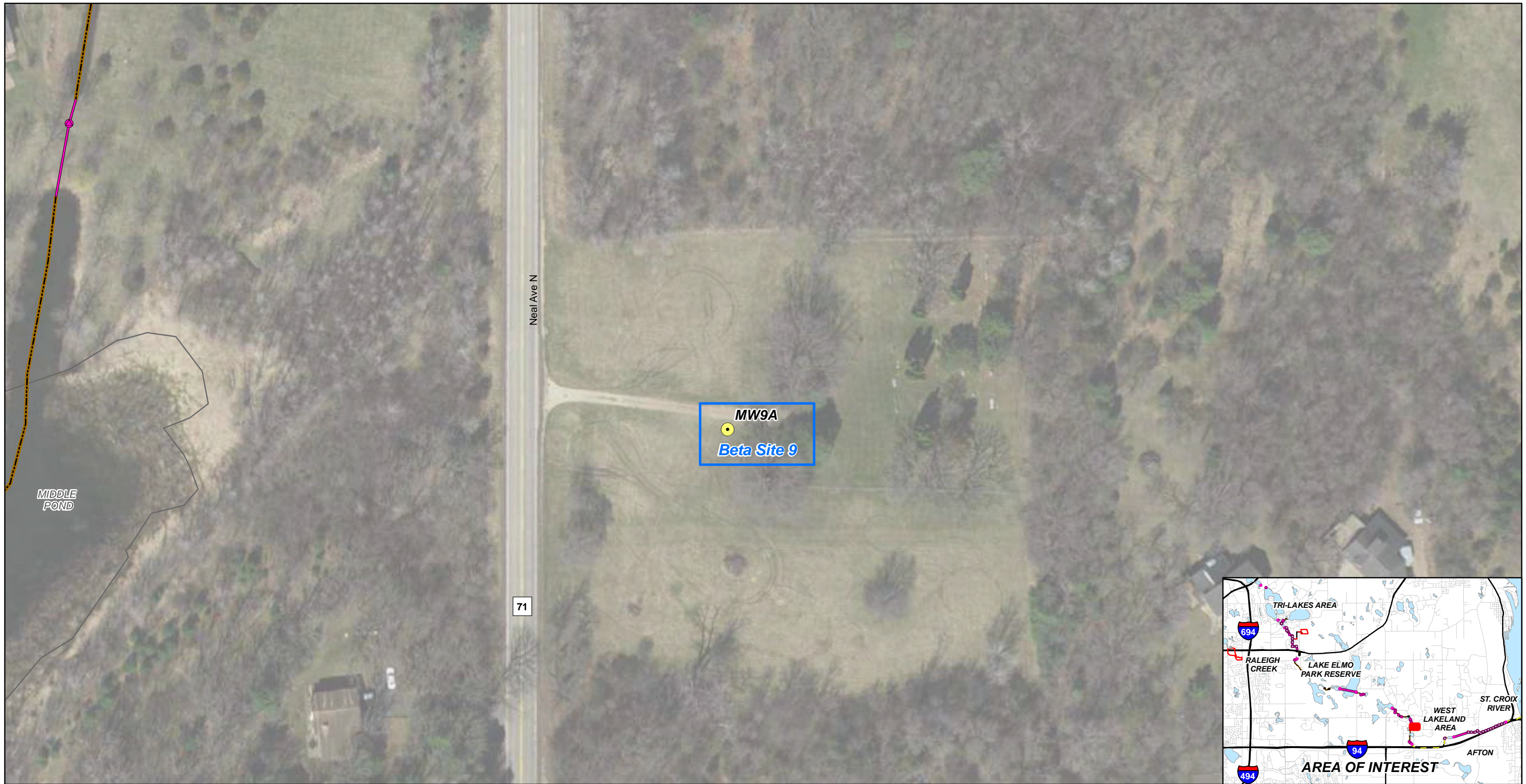


**Figure 4-1b**  
**Beta Site 7 Location Map**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- |                                |                                       |                 |
|--------------------------------|---------------------------------------|-----------------|
| <b>Project 1007 Structures</b> | Washington County Landfill connection | Monitoring Well |
| Catch Basin                    | MnDOT Pipeline                        | Beta Site       |
| Manhole                        | Streams and Creeks                    |                 |
| Other Structure                | Surface Water Body                    |                 |
| Channel                        |                                       |                 |
| Culvert                        |                                       |                 |
| Pipe                           |                                       |                 |

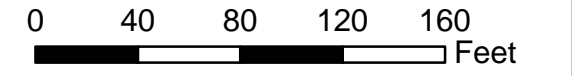




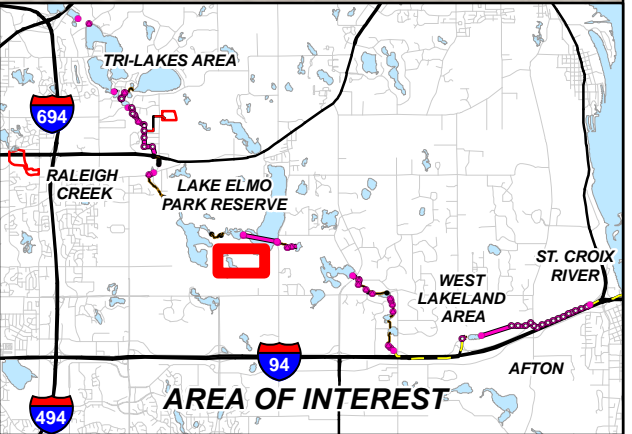


**Figure 4-1c**  
**Beta Site 9 Location Map**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- |                                |                                       |                 |
|--------------------------------|---------------------------------------|-----------------|
| <b>Project 1007 Structures</b> | Washington County Landfill connection | Monitoring Well |
| Catch Basin                    | MnDOT Pipeline                        | Beta Site       |
| Manhole                        | Streams and Creeks                    |                 |
| Other Structure                | Surface Water Body                    |                 |
| Channel                        |                                       |                 |
| Culvert                        |                                       |                 |
| Pipe                           |                                       |                 |

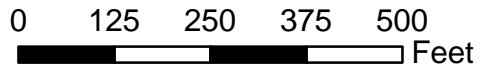




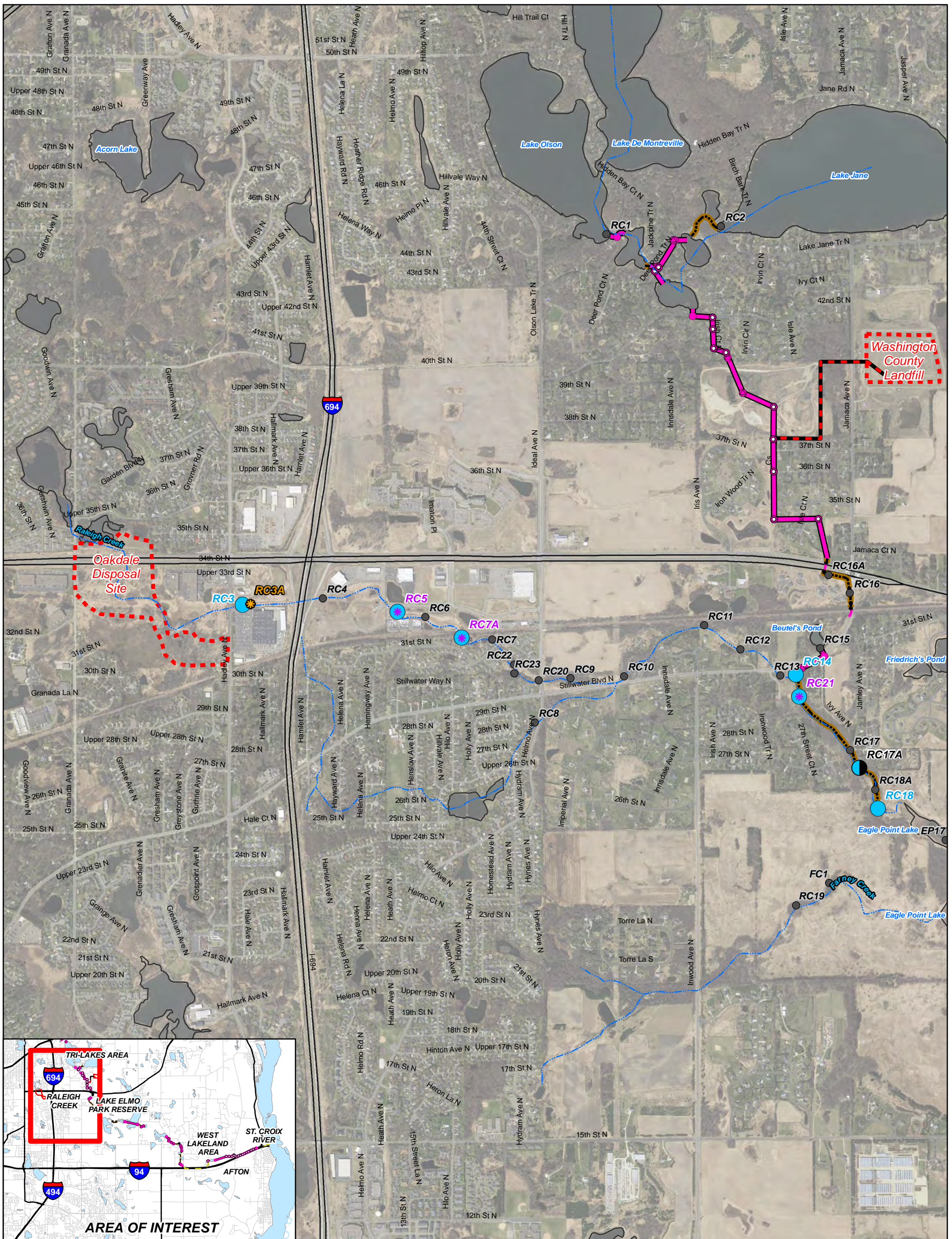


**Figure 4-1d**  
**Beta Site 13 Location Map**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- |                                |                                       |                 |
|--------------------------------|---------------------------------------|-----------------|
| <b>Project 1007 Structures</b> | Washington County Landfill connection | Monitoring Well |
| Catch Basin                    | MnDOT Pipeline                        | Beta Site       |
| Manhole                        | Streams and Creeks                    |                 |
| Other Structure                | Surface Water Body                    |                 |
| Channel                        |                                       |                 |
| Culvert                        |                                       |                 |
| Pipe                           |                                       |                 |







**Figure 5-1a**  
**Sampling Locations,**  
**Winter Seasonal Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

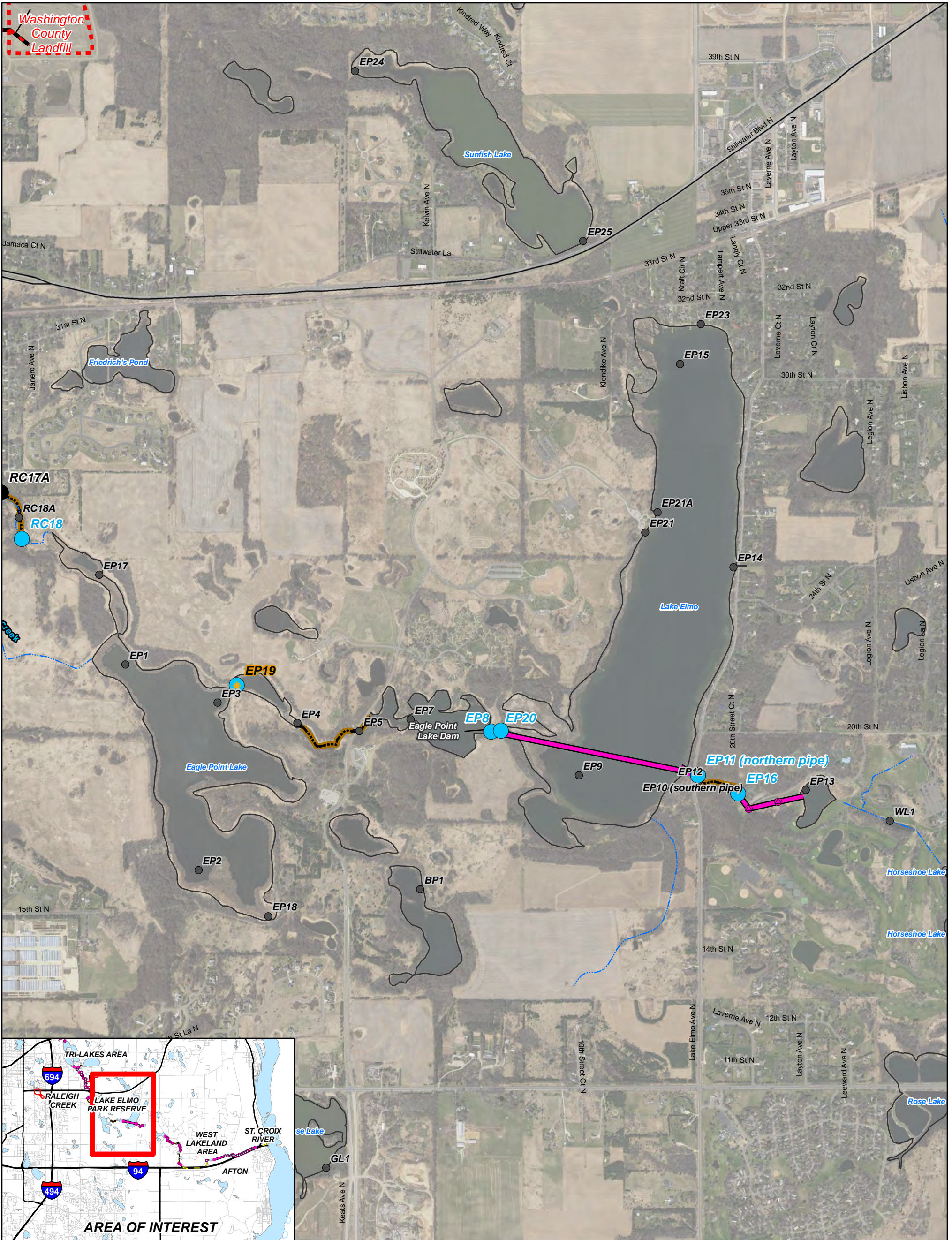
**Project 1007 Structures**

- Catch Basin
- Manhole
- Other Structure
- Channel
- Culvert
- Pipe
- Washington County Landfill connection
- MnDOT Pipeline
- Streams and Creeks
- Surface Water Body

- RC7 **RC7** Foam Observation Only
- RC7 **RC7** Water Sample(s)
- RC7 **RC7** Water and SML Samples
- RC7 **RC7** Water Sample and Foam Observation
- RC7 **RC7** Water and Foam Samples
- RC7 **RC7** Previously Sampled Location





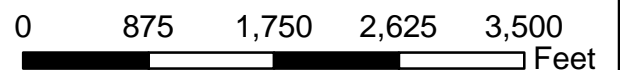


**Figure 5-1b**  
**Sampling Locations,**  
**Winter Seasonal Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

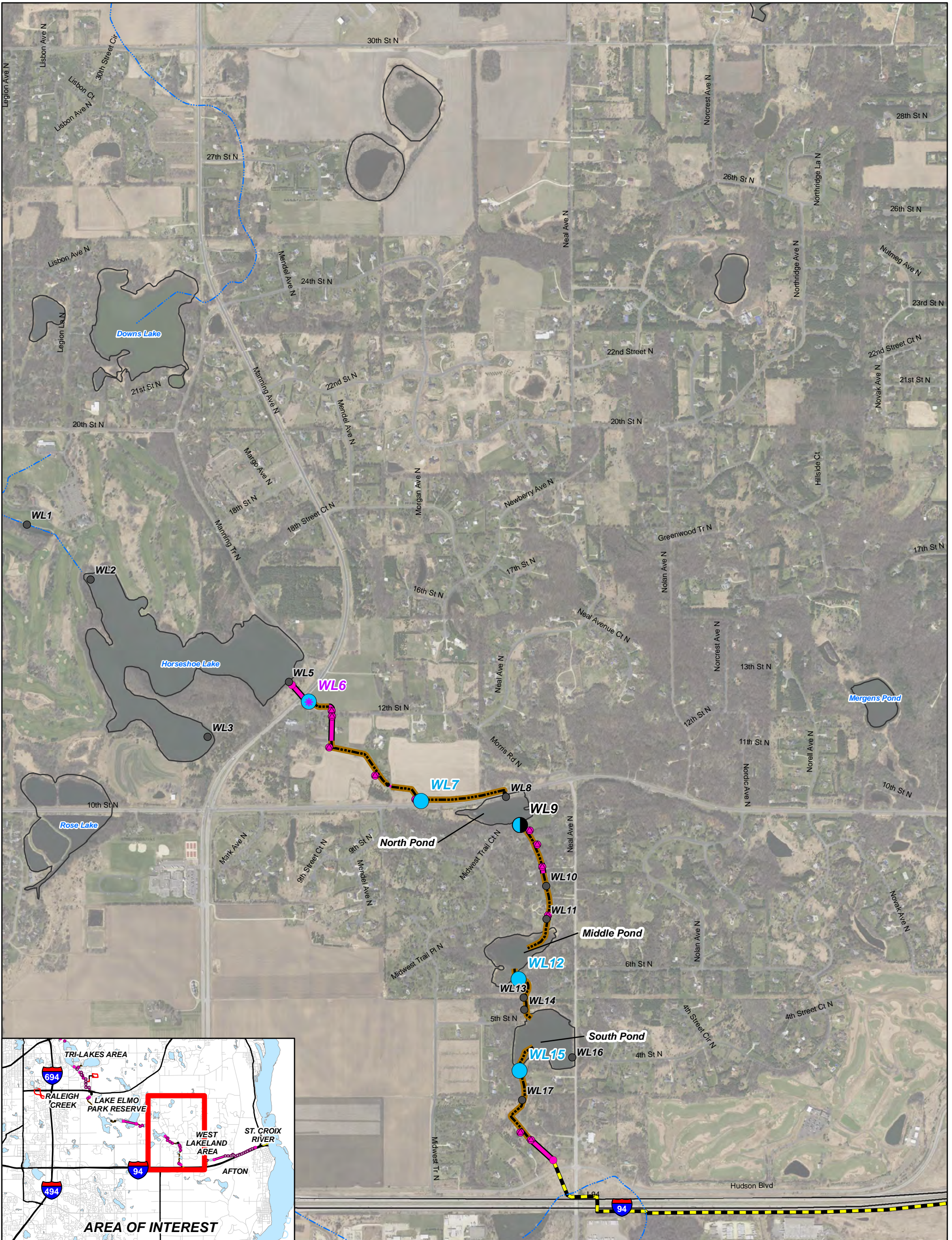
**Project 1007 Structures**

- Catch Basin
- Manhole
- Other Structure
- Channel
- Culvert
- Pipe
- Washington County Landfill connection
- MnDOT Pipeline
- ~ Streams and Creeks
- Surface Water Body

- ✿ RC7 Foam Observation Only
- RC7 Water Sample(s)
- ◐ RC7 Water and SML Samples
- RC7 Water Sample and Foam Observation
- RC7 Water and Foam Samples
- Previously Sampled Location



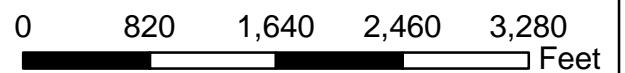




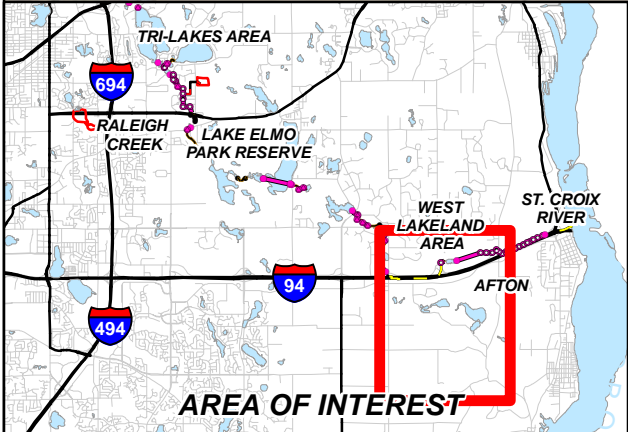
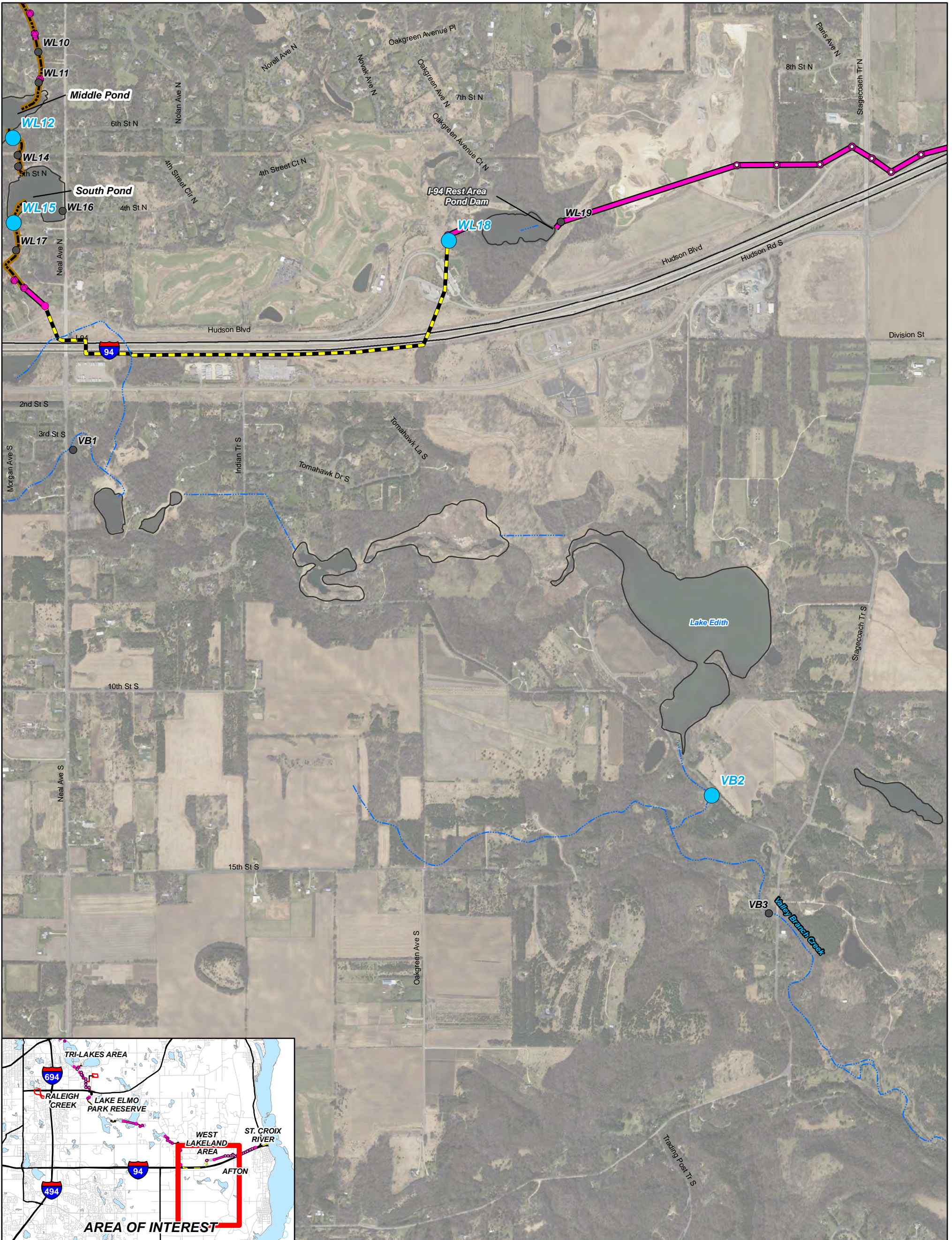
**Figure 5-1c**  
**Sampling Locations,**  
**Winter Seasonal Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
  - Streams and Creeks
  - Surface Water Body

- RC7** Foam Observation Only
- RC7** Water Sample(s)
- RC7** Water and SML Samples
- RC7** Water Sample and Foam Observation
- RC7** Water and Foam Samples
- Previously Sampled Location



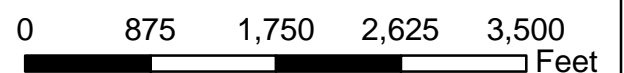




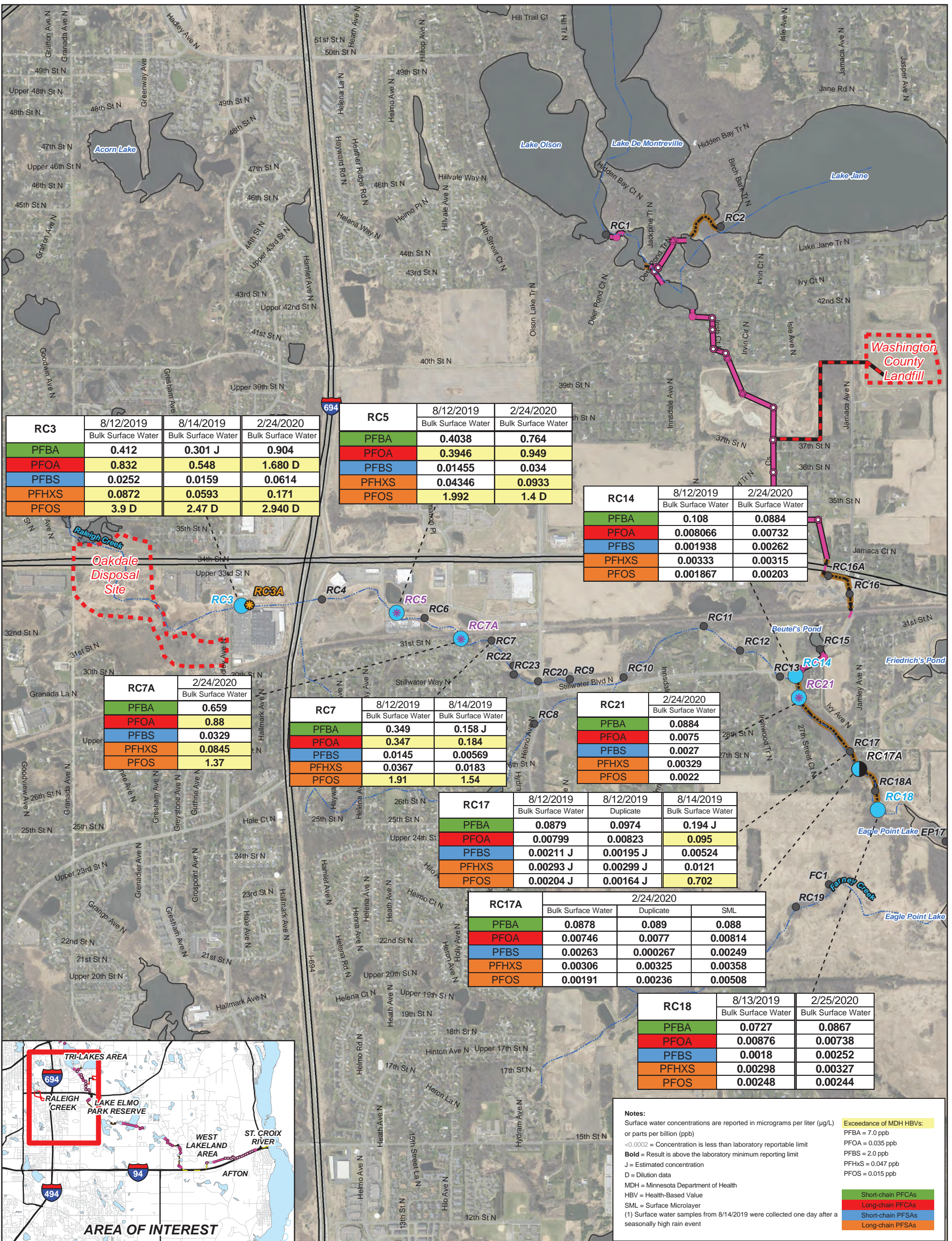
**Figure 5-1d**  
**Sampling Locations,**  
**Winter Seasonal Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
  - ~ Streams and Creeks
  - Surface Water Body

- RC7** ✱ Foam Observation Only
- RC7** ● Water Sample(s)
- RC7** ◐ Water and SML Samples
- RC7** ◑ Water Sample and Foam Observation
- RC7** ● Water and Foam Samples
- Previously Sampled Location







**Figure 5-2a**  
**Surface Water PFAS Analytical Results,**  
**Winter Seasonal Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
  - Streams and Creeks
  - Surface Water Body

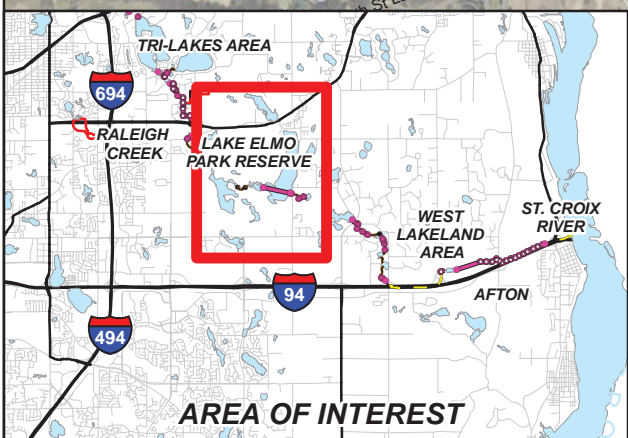
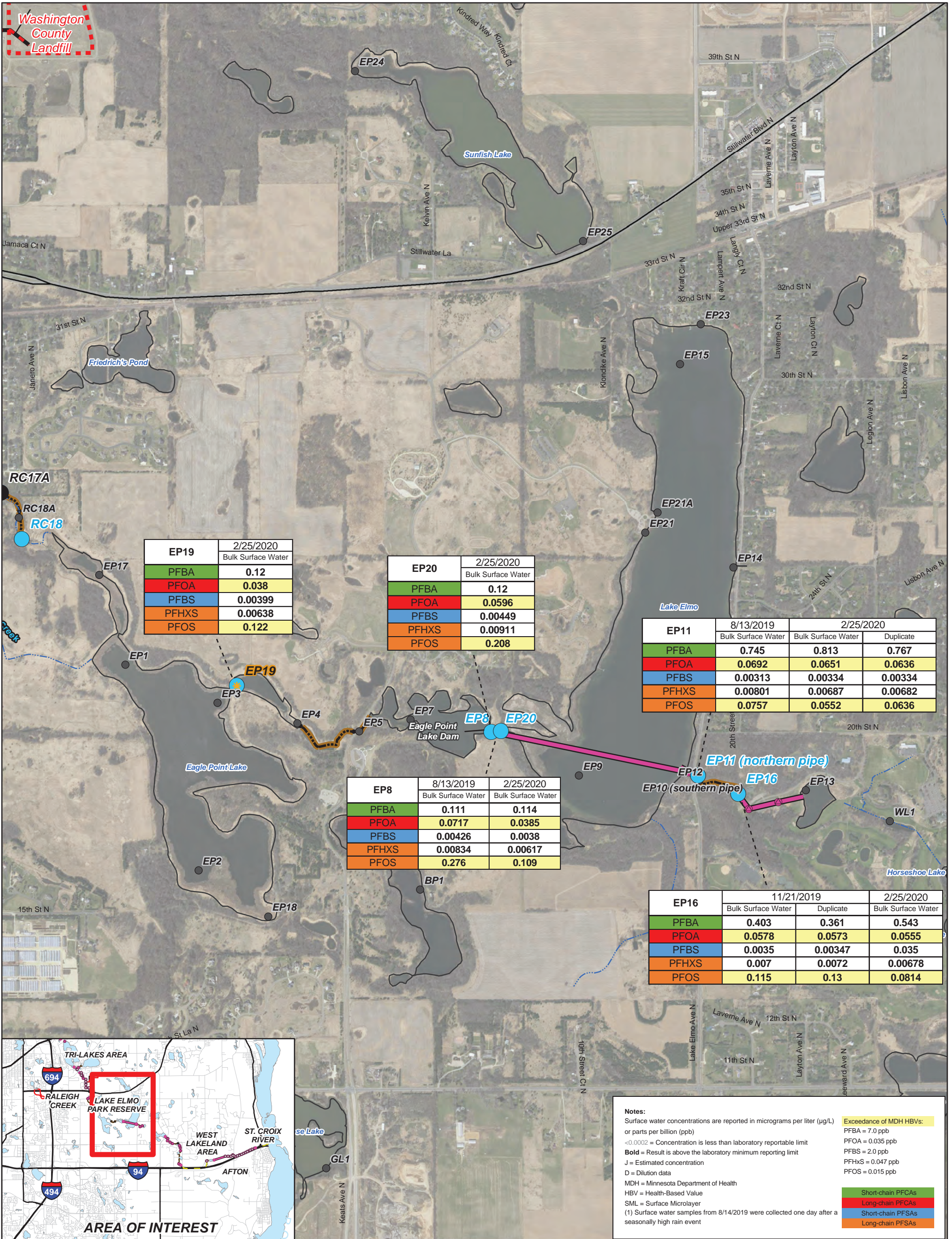
- RC7 Foam Observation Only
- RC7 Water Sample(s)
- RC7 Water and SML Samples
- RC7 Water Sample and Foam Observation
- RC7 Water and Foam Samples
- RC7 Previously Sampled Location

**AECOM**





Washington County Landfill



**Notes:**  
 Surface water concentrations are reported in micrograms per liter (µg/L) or parts per billion (ppb)  
 <0.0002 = Concentration is less than laboratory reportable limit  
**Bold** = Result is above the laboratory minimum reporting limit  
 J = Estimated concentration  
 D = Dilution data  
 MDH = Minnesota Department of Health  
 HBV = Health-Based Value  
 SML = Surface Microlayer  
 (1) Surface water samples from 8/14/2019 were collected one day after a seasonally high rain event

**Exceedance of MDH HBVs:**  
 PFBA = 7.0 ppb  
 PFOA = 0.035 ppb  
 PFBS = 2.0 ppb  
 PFHXS = 0.047 ppb  
 PFOS = 0.015 ppb

**Legend:**  
 Short-chain PFACs (Green)  
 Long-chain PFACs (Red)  
 Short-chain PFASs (Blue)  
 Long-chain PFASs (Orange)

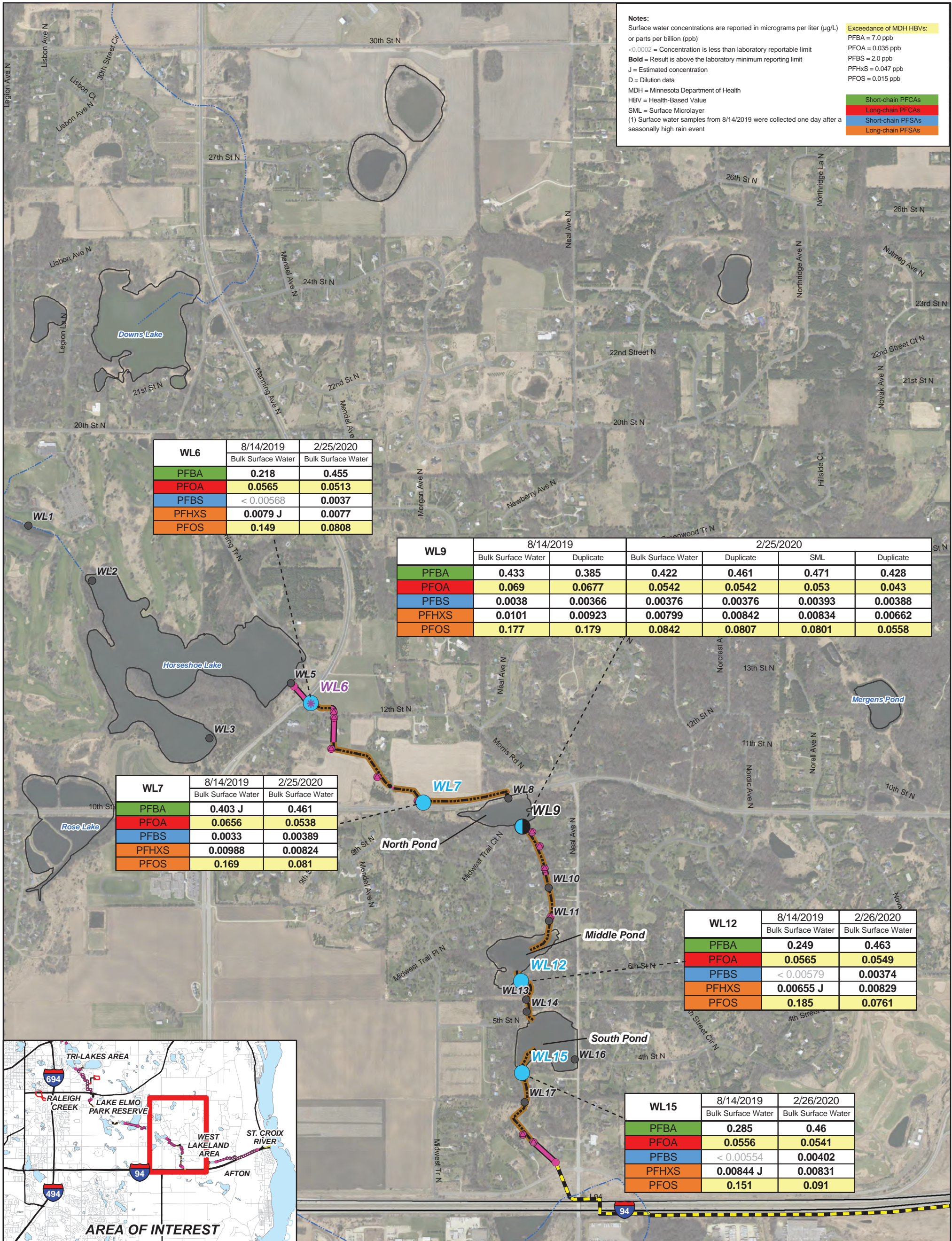
**Figure 5-2b**  
 Surface Water PFAS Analytical Results,  
 Winter Seasonal Sampling Event  
 Six-Month Investigation Progress Report  
 (November 11, 2019 - May 15, 2020)  
 Project 1007  
 Minnesota Pollution Control Agency

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
  - Streams and Creeks
  - Surface Water Body

- RC7 (Yellow Star) Foam Observation Only
- RC7 (Blue Circle) Water Sample(s)
- RC7 (Light Blue Circle) Water and SML Samples
- RC7 (Orange Circle) Water Sample and Foam Observation
- RC7 (Purple Star) Water and Foam Samples
- Black Circle Previously Sampled Location







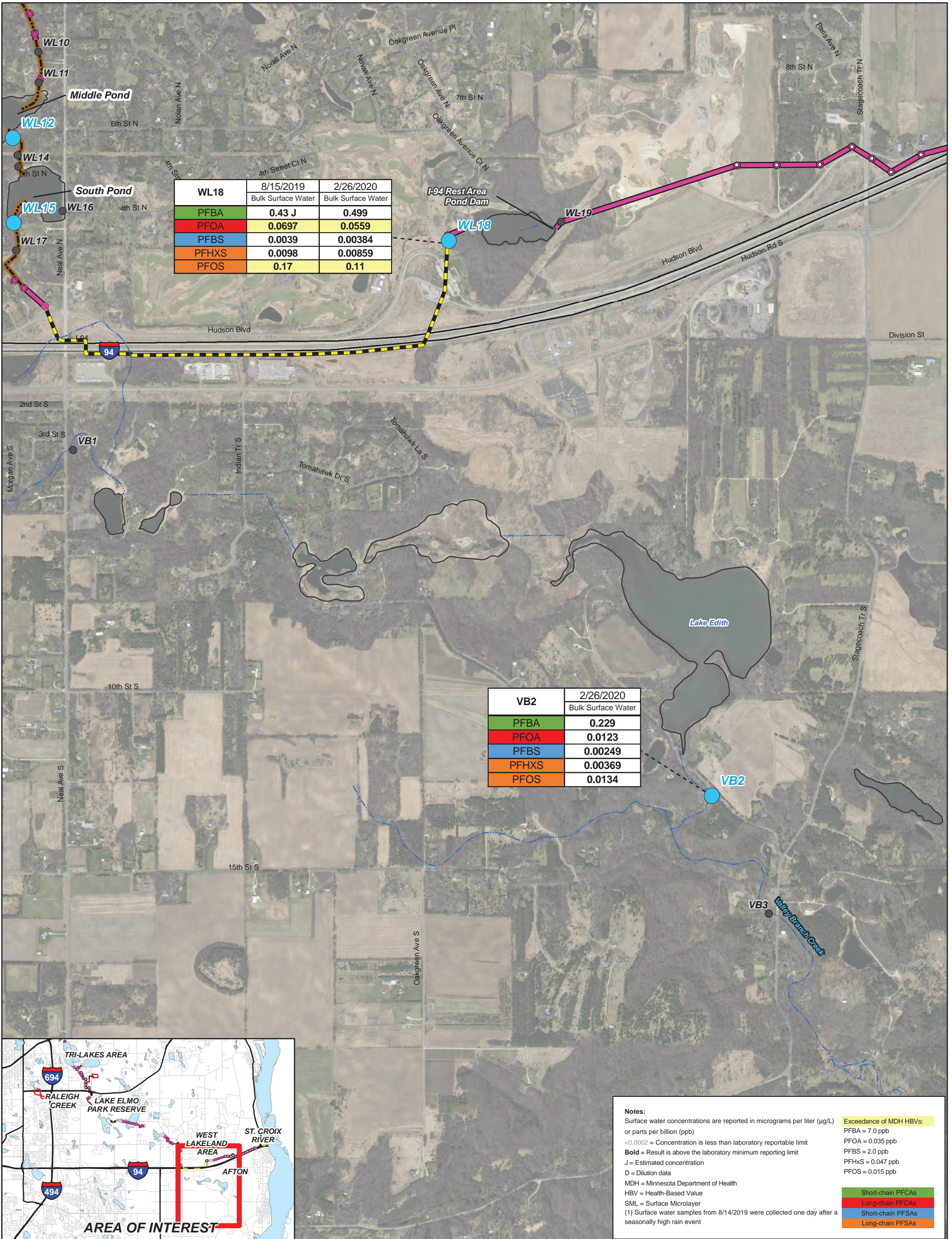
**Figure 5-2c**  
**Surface Water PFAS Analytical Results,**  
**Winter Seasonal Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
  - Streams and Creeks
  - Surface Water Body

- RC7**
- Foam Observation Only
  - Water Sample(s)
  - Water and SML Samples
  - Water Sample and Foam Observation
  - Water and Foam Samples
  - Previously Sampled Location







**Figure 5-2d**  
**Surface Water PFAS Analytical Results,**  
**Winter Seasonal Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

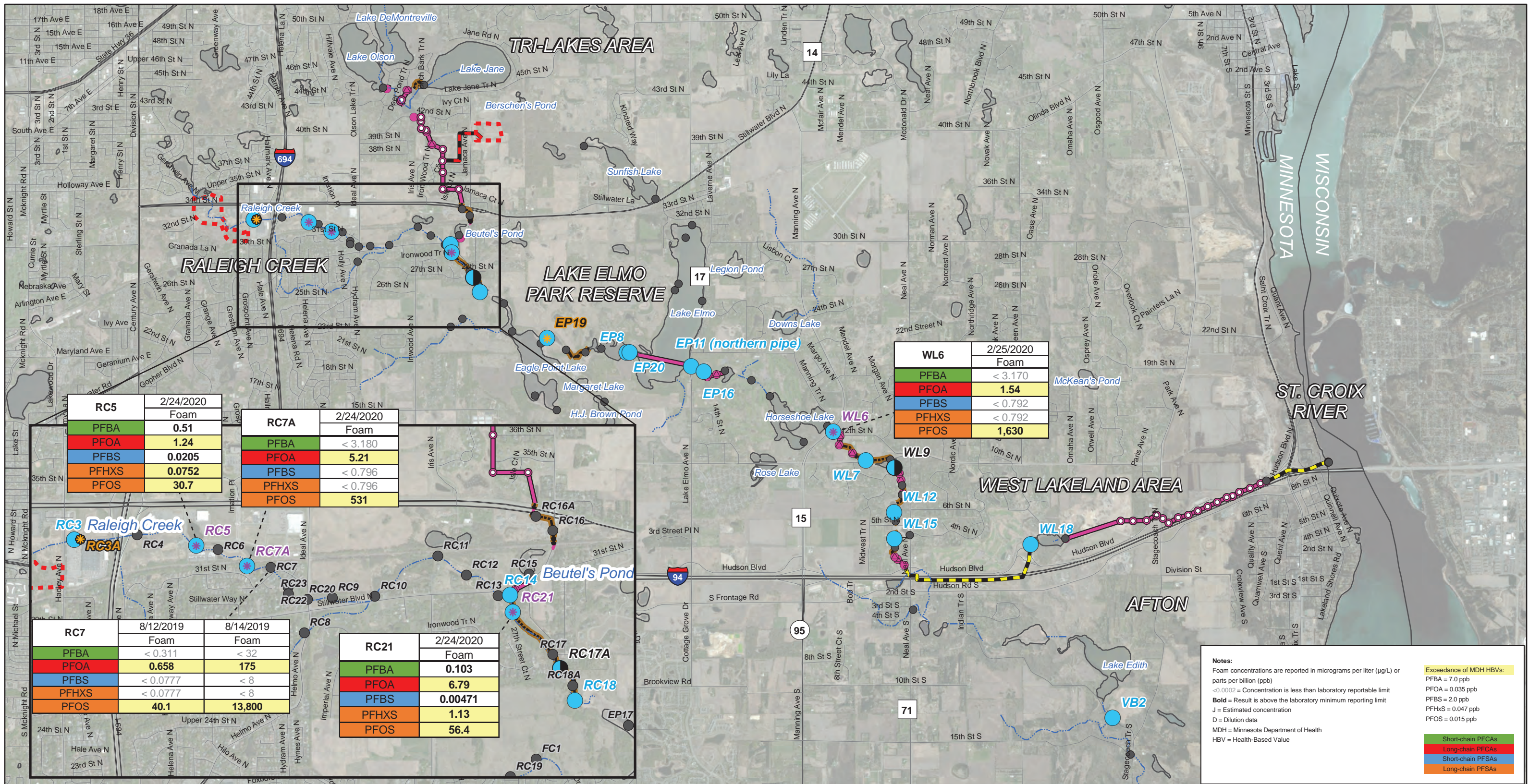
**Project 1007 Structures**

- Catch Basin
- Manhole
- Other Structure
- Channel
- Culvert
- Pipe
- Washington County Landfill connection
- MnDOT Pipeline
- Streams and Creeks
- Surface Water Body

- RC7 Foam Observation Only
- RC7 Water Sample(s)
- RC7 Water and SML Samples
- RC7 Water Sample and Foam Observation
- RC7 Water and Foam Samples
- Previously Sampled Location







**Figure 5-3**  
**Foam PFAS Analytical Results, Winter Seasonal Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
- Washington County Landfill connection
- MnDOT Pipeline
- Streams and Creeks
- Surface Water Body
- RC7 (star) Foam Observation Only
  - RC7 (circle) Water Sample (s)
  - RC7 (circle with dot) Water and SML Samples
  - RC7 (circle with star) Water Sample and Foam Observation
  - RC7 (circle with star) Water and Foam Samples
  - Other Sampling Location

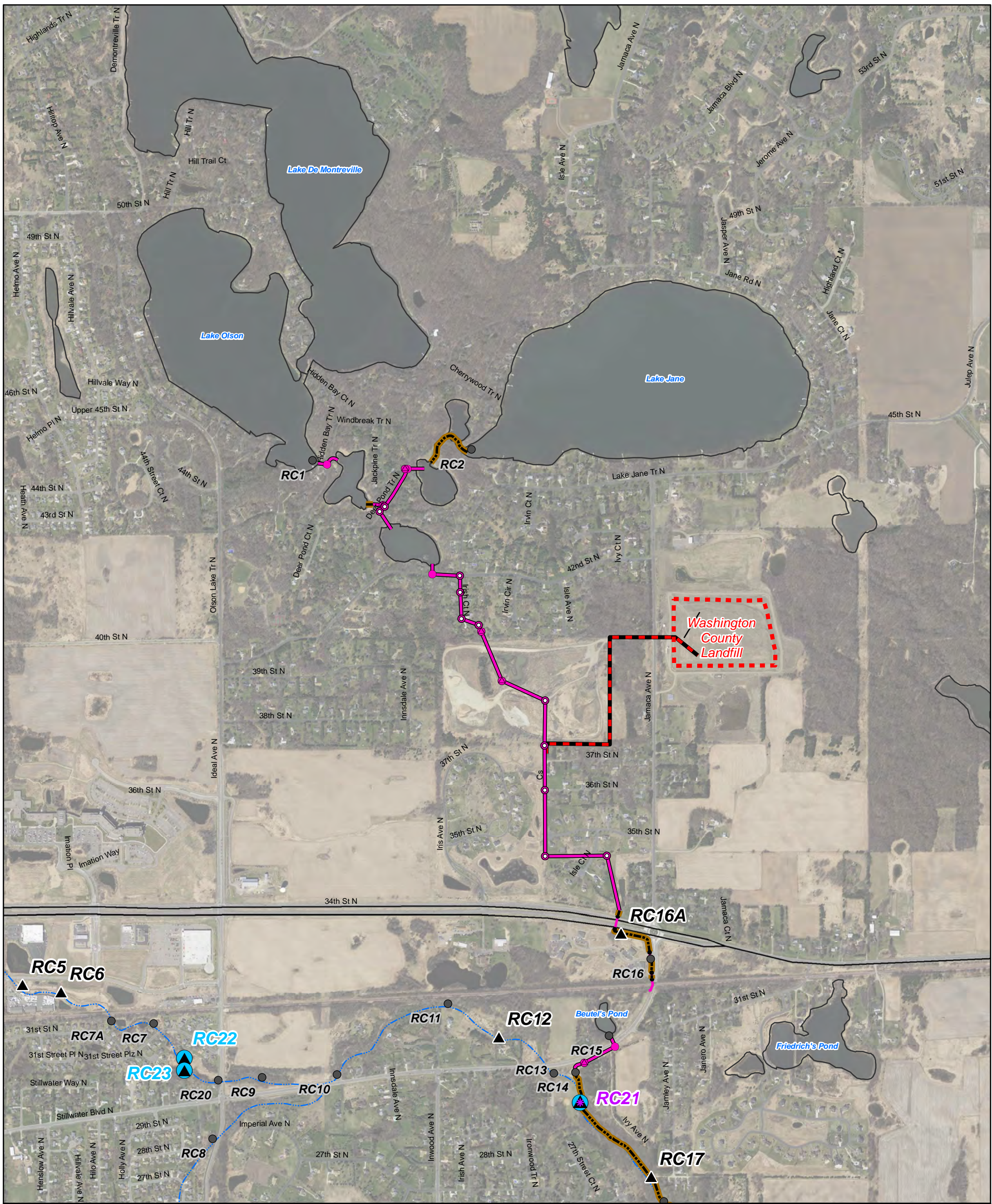
**Notes:**  
 Foam concentrations are reported in micrograms per liter (µg/L) or parts per billion (ppb)  
 <0.0002 = Concentration is less than laboratory reportable limit  
 Bold = Result is above the laboratory minimum reporting limit  
 D = Dilution data  
 MDH = Minnesota Department of Health  
 HBV = Health-Based Value

**Exceedance of MDH HBVs:**  
 PFBA = 7.0 ppb  
 PFOA = 0.035 ppb  
 PFBS = 2.0 ppb  
 PFHXS = 0.047 ppb  
 PFOS = 0.015 ppb

**Short-chain PFASs**  
**Long-chain PFASs**  
**Short-chain PFSAs**  
**Long-chain PFSAs**

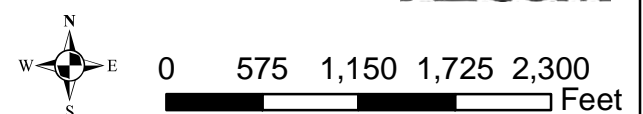
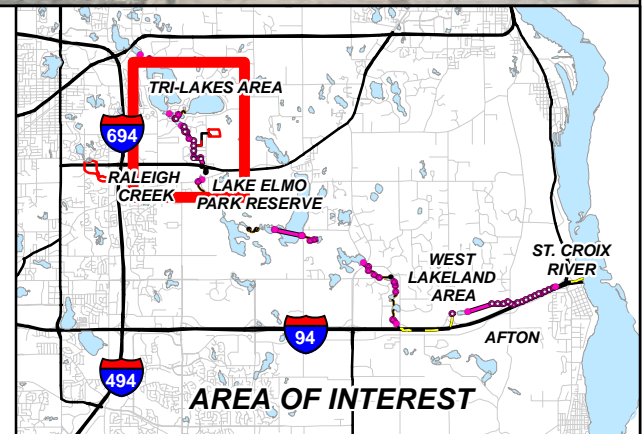






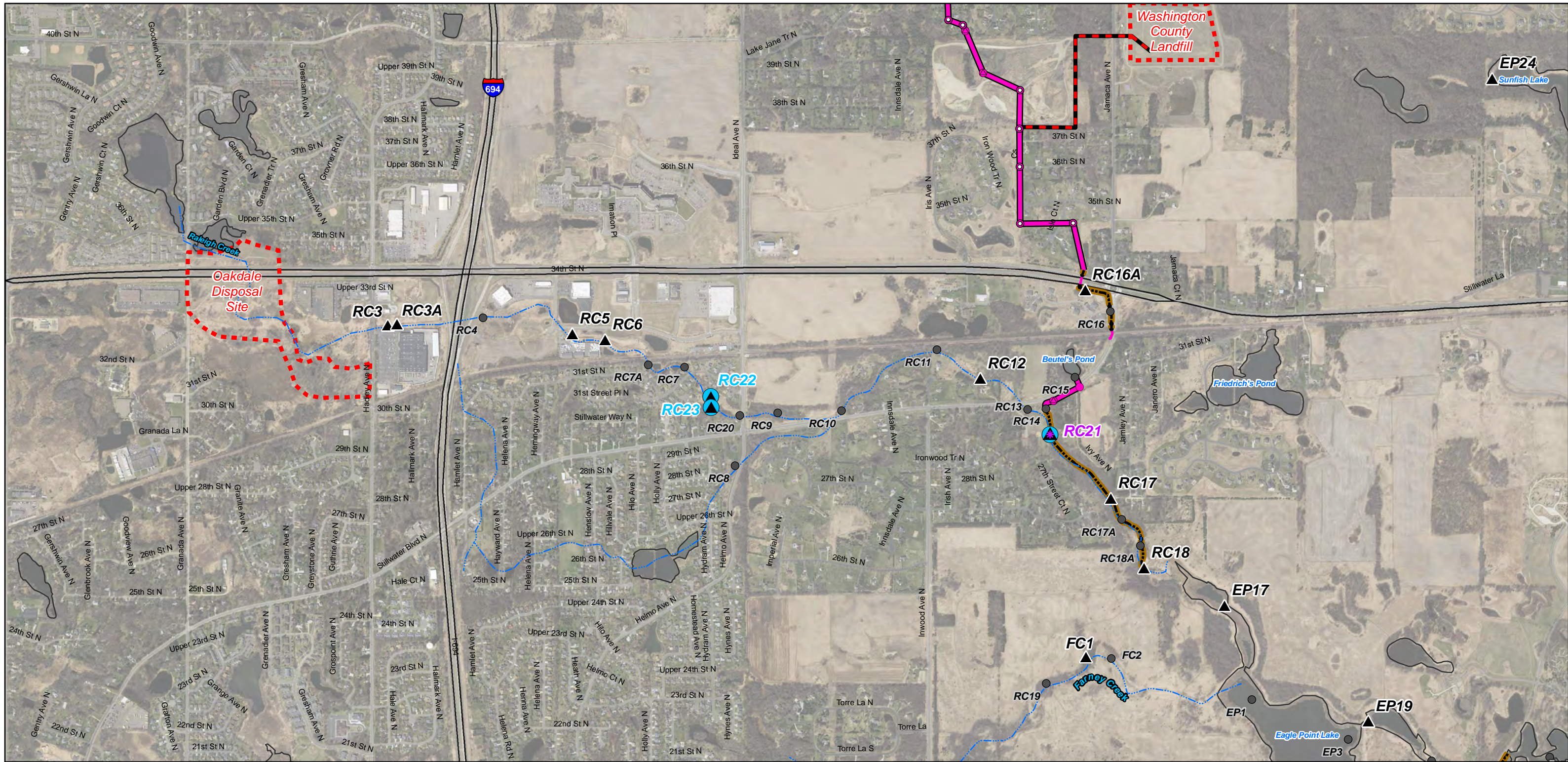
**Figure 6-1a**  
**Sampling Locations,**  
**Sediment Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
  - Streams and Creeks
  - Surface Water Body
  - Sediment Sample(s)
  - RC7 Water and Sediment Samples
  - RC7 Water, Sediment, and Foam Samples
  - RC7 Water, Sediment, SML, and Foam Samples
  - Previously Sampled Location



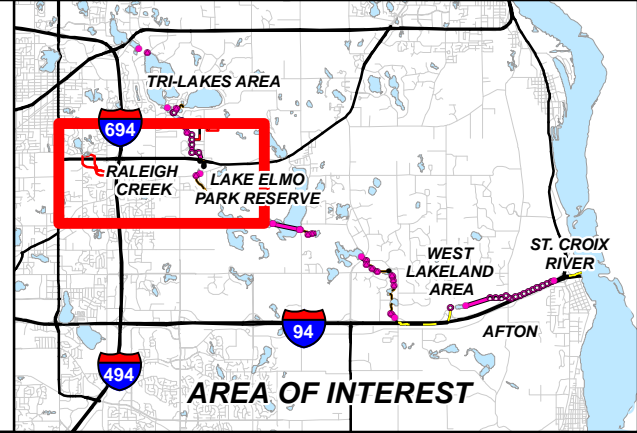
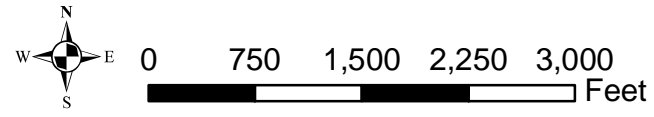
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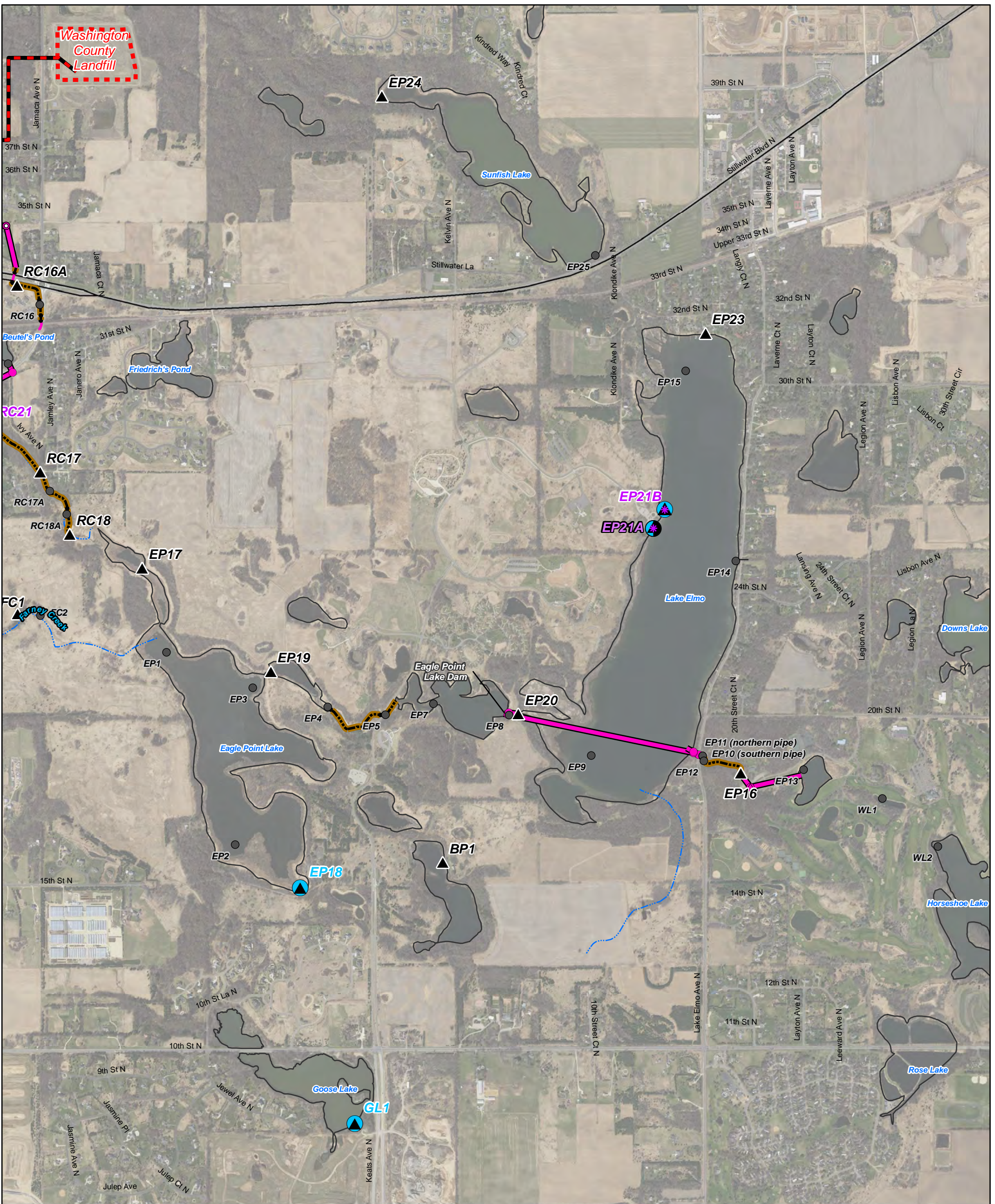
**Figure 6-1b**  
**Sampling Locations,**  
**Sediment Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
- Legend**
- Streams and Creeks
  - Surface Water Body
  - Sediment Sample(s)
  - Water and Sediment Samples
  - Water, Sediment, and Foam Samples
  - Water, Sediment, SML, and Foam Samples
  - Previously Sampled Location



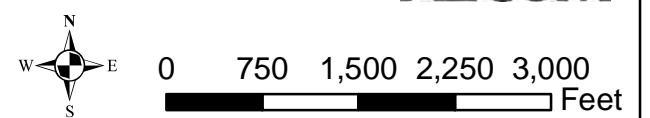
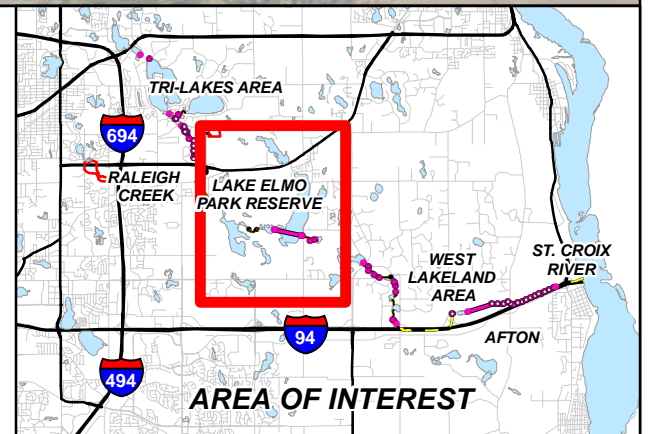
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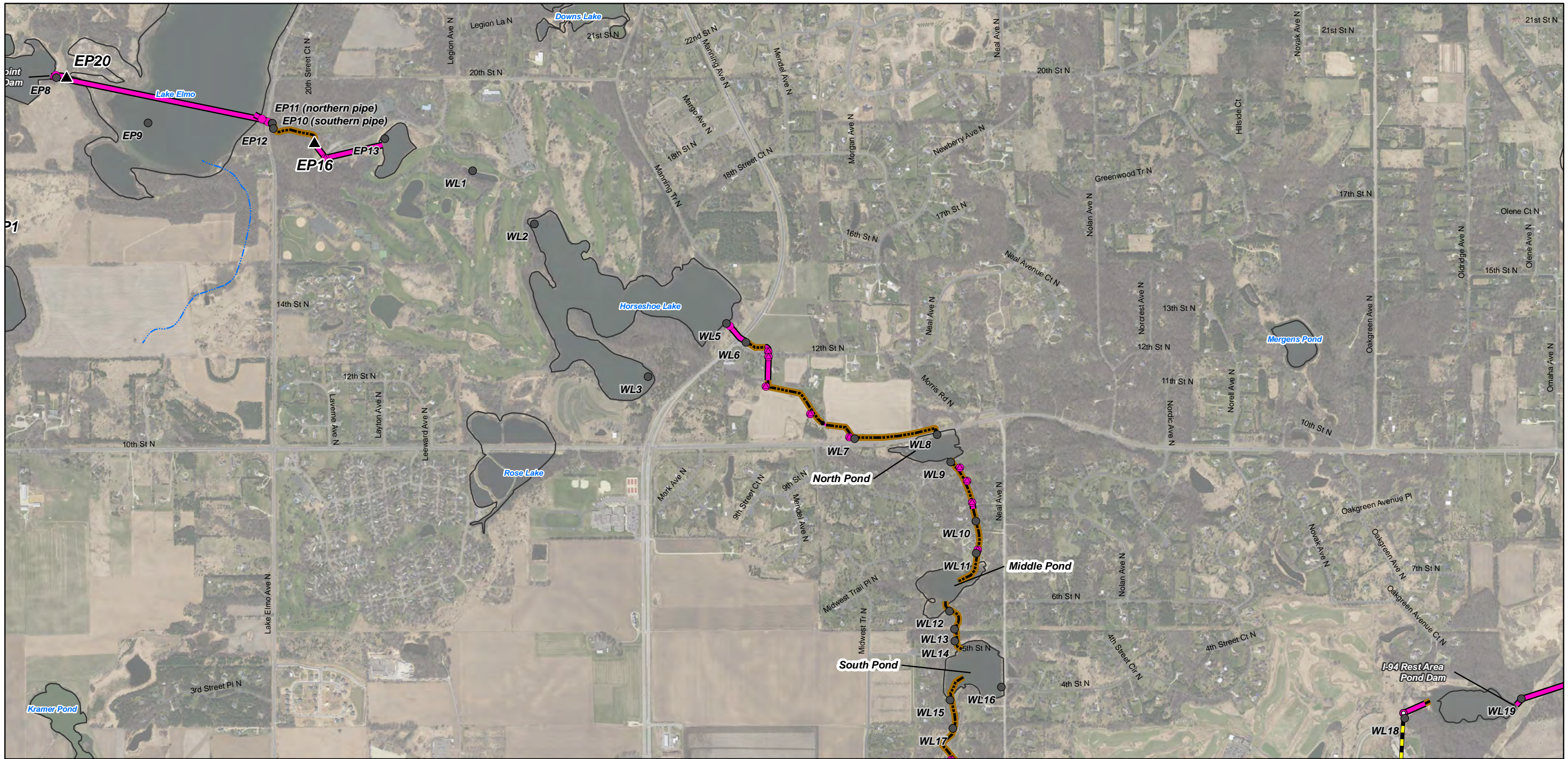
**Figure 6-1c**  
**Sampling Locations,**  
**Sediment Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
  - Streams and Creeks
  - Surface Water Body
  - Sediment Sample(s)
  - Water and Sediment Samples
  - Water, Sediment, and Foam Samples
  - Water, Sediment, SML, and Foam Samples
  - Previously Sampled Location



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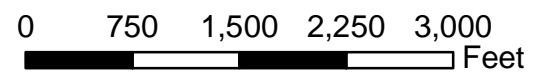


**Figure 6-1d**  
**Sampling Locations,**  
**Sediment Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

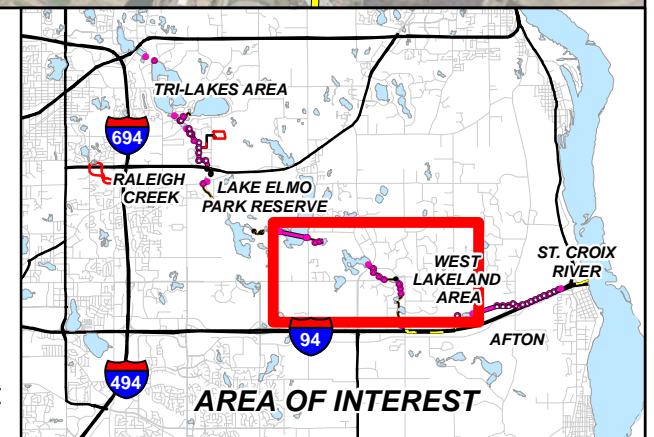
**Project 1007 Structures**

- Catch Basin
- Manhole
- Other Structure
- Channel
- Culvert
- Pipe
- Washington County Landfill connection
- MnDOT Pipeline

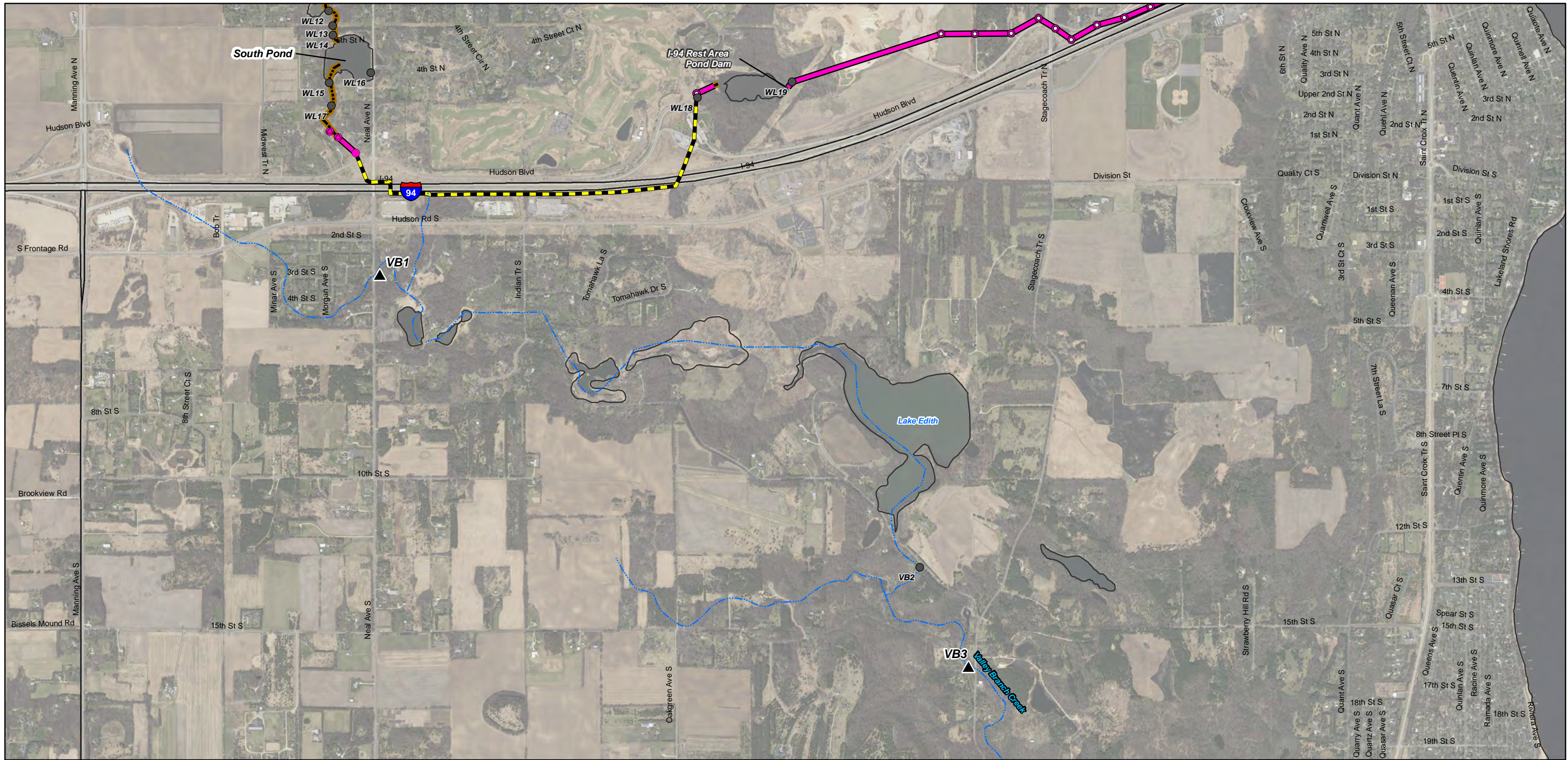
- Streams and Creeks
- Surface Water Body
- Sediment Sample(s)
- Water and Sediment Samples
- Water, Sediment, and Foam Samples
- Water, Sediment, SML, and Foam Samples
- Previously Sampled Location



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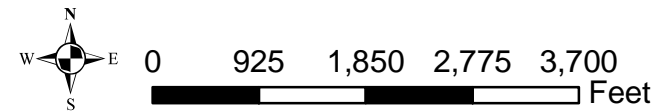


**Figure 6-1e**  
**Sampling Locations,**  
**Sediment Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

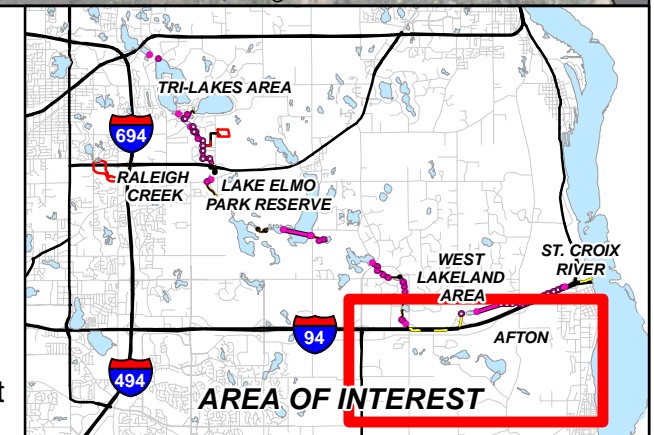
**Project 1007 Structures**

- Catch Basin
- Manhole
- Other Structure
- Channel
- Culvert
- Pipe
- Washington County Landfill connection
- MnDOT Pipeline

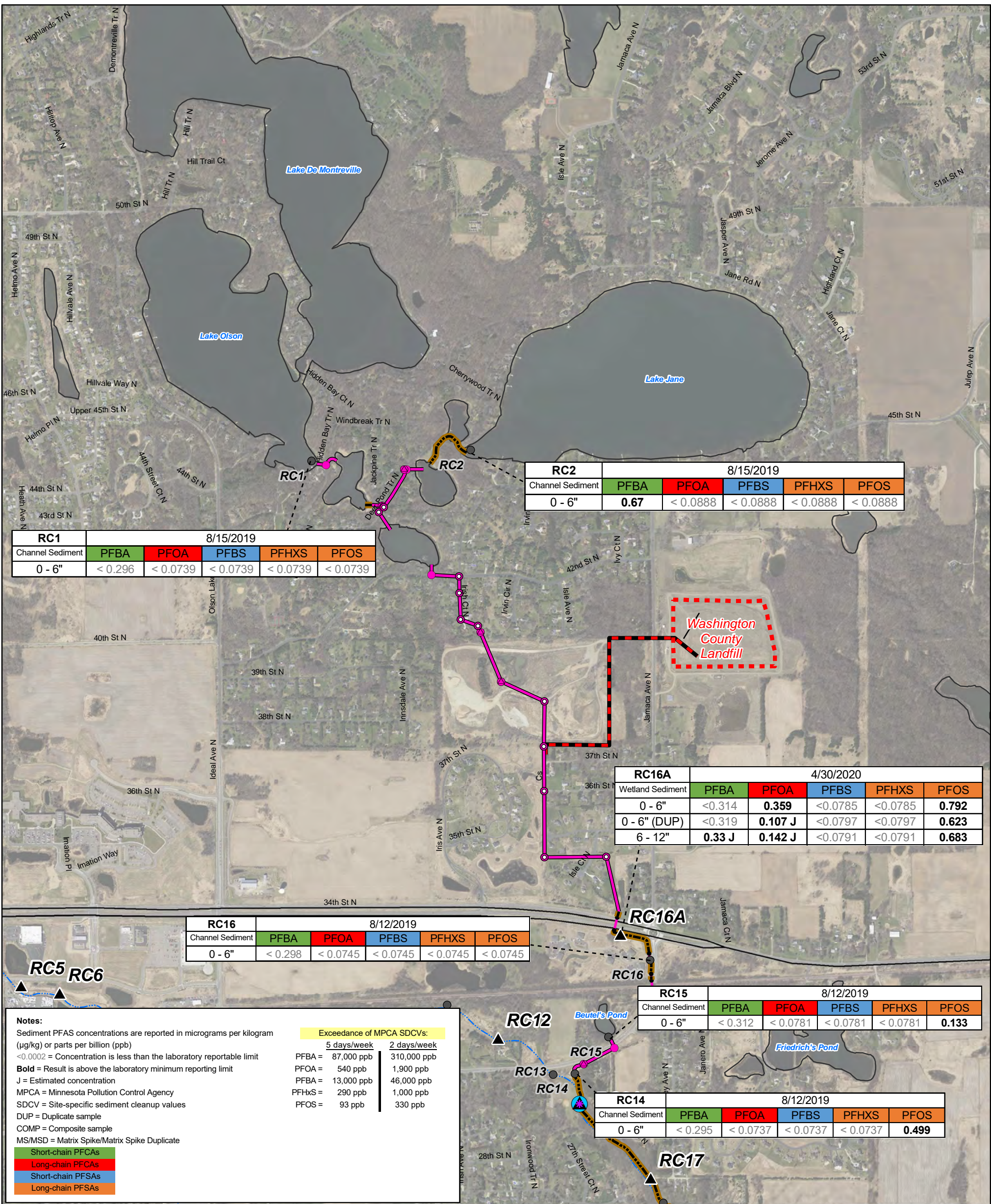
- Streams and Creeks
- Surface Water Body
- Sediment Sample(s)
- Water and Sediment Samples
- Water, Sediment, and Foam Samples
- Water, Sediment, SML, and Foam Samples
- Previously Sampled Location



**AECOM**

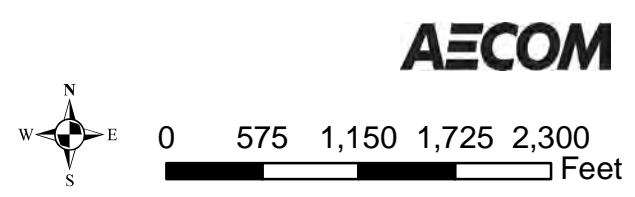
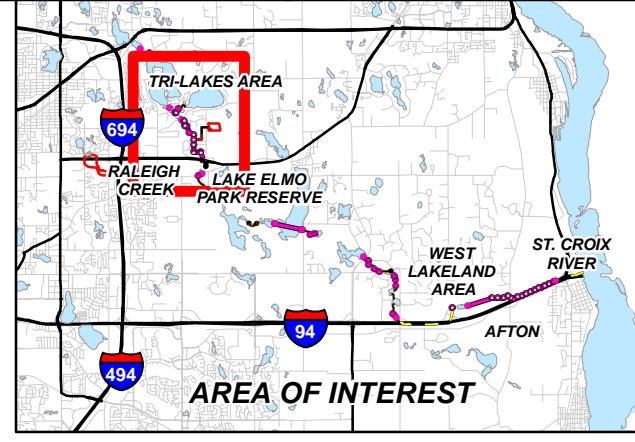






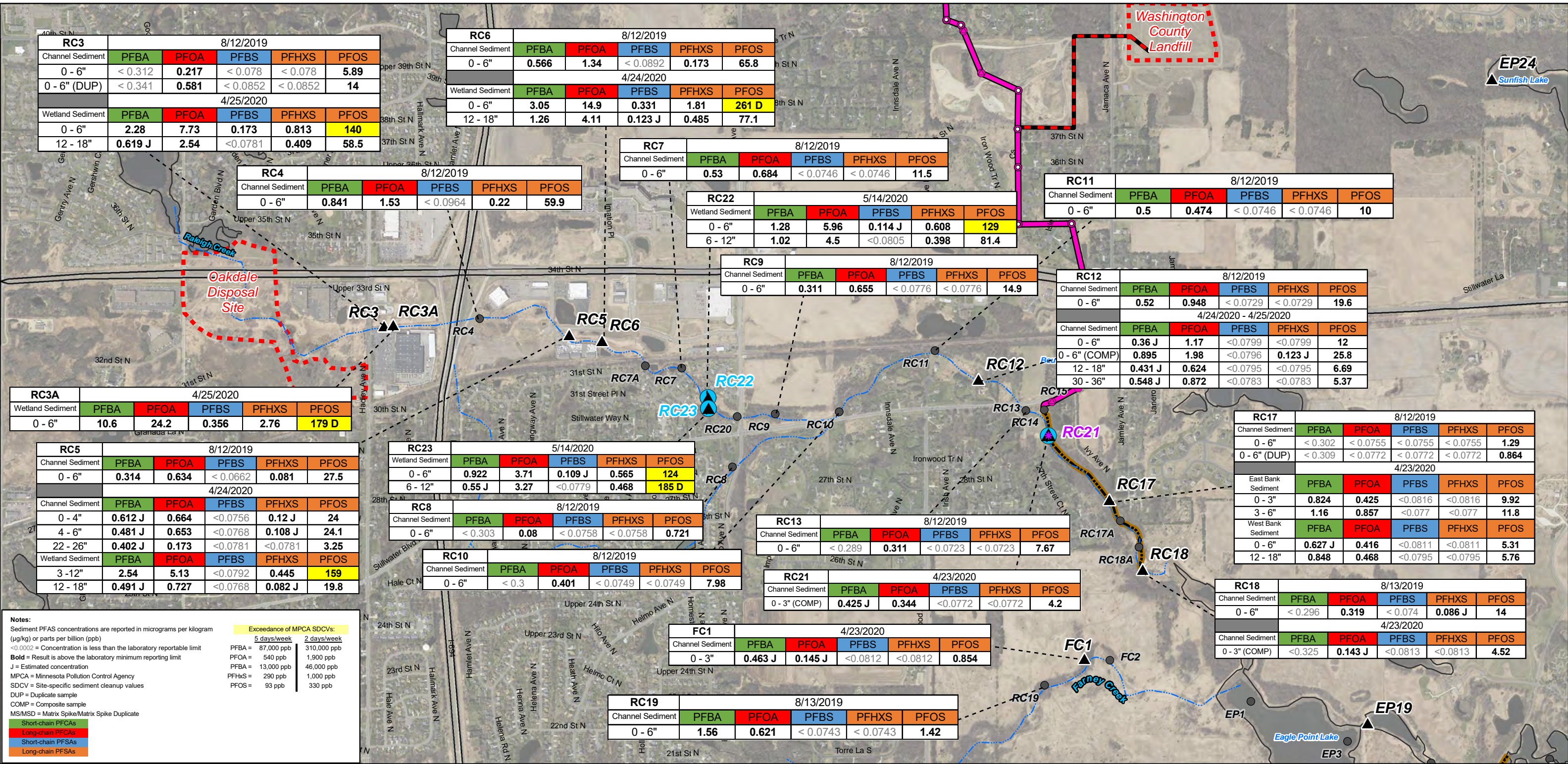
**Figure 6-2a**  
**Sediment PFAS Analytical Results,**  
**Sediment Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
  - Streams and Creeks
  - Surface Water Body
  - Sediment Sample(s)
  - Water and Sediment Samples
  - Water, Sediment, and Foam Samples
  - Water, Sediment, SML, and Foam Samples
  - Previously Sampled Location



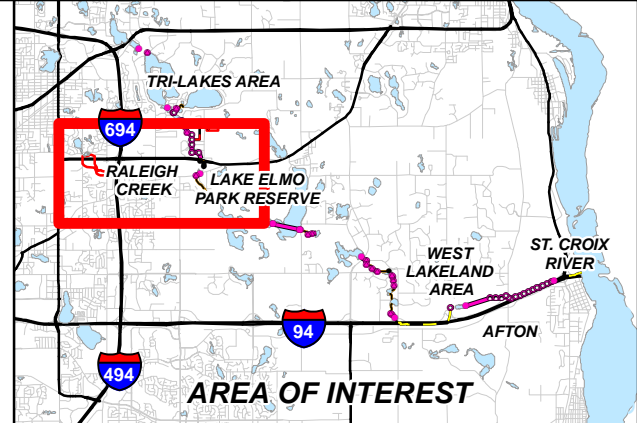
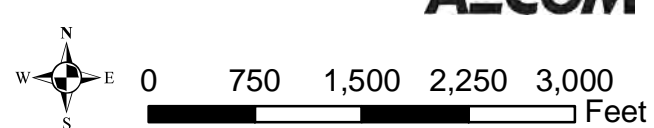
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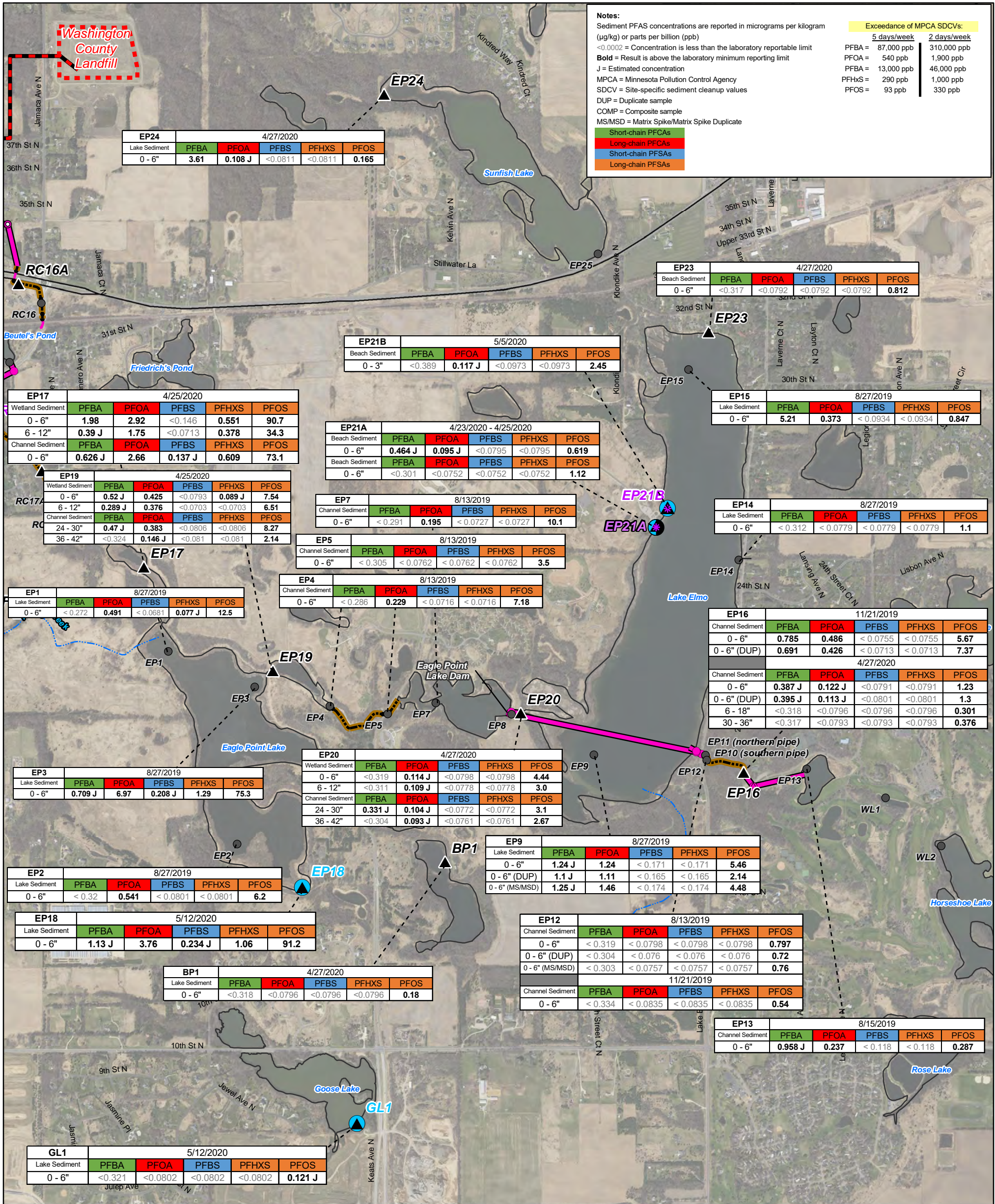


**Figure 6-2b**  
**Sediment PFAS Analytical Results,**  
**Sediment Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
- Legend:**
- Streams and Creeks
  - Surface Water Body
  - Sediment Sample(s)
  - Water and Sediment Samples
  - Water, Sediment, and Foam Samples
  - Water, Sediment, SML, and Foam Samples
  - Previously Sampled Location

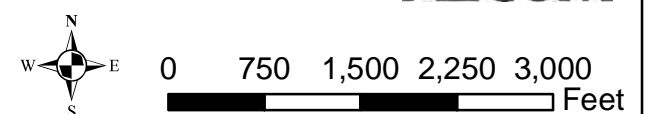
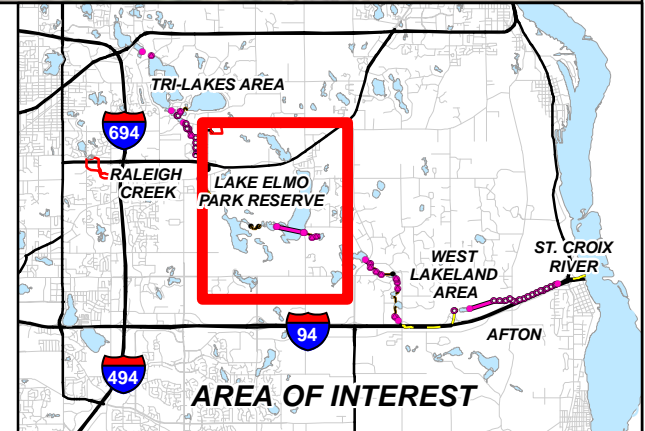






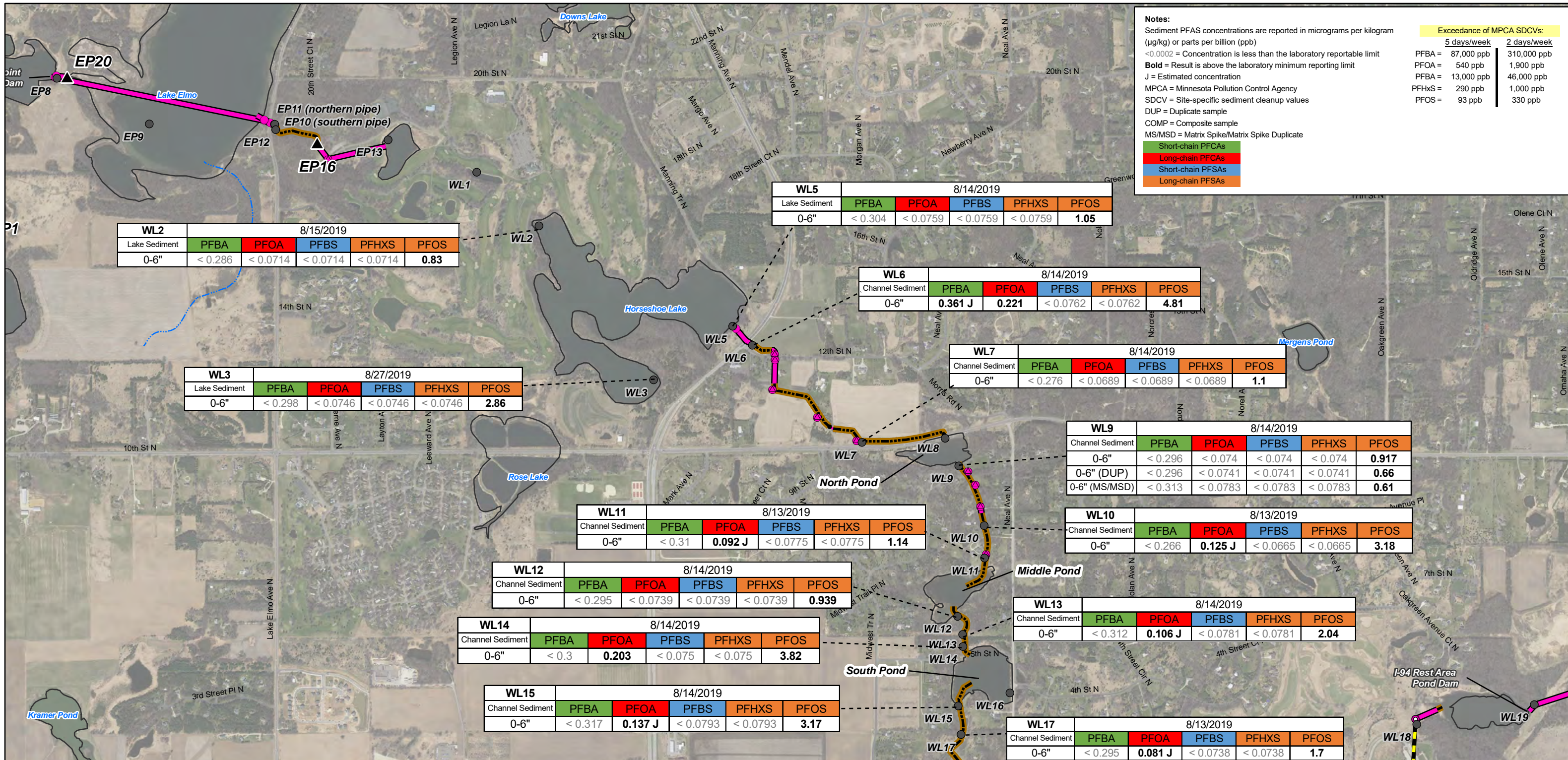
**Figure 6-2c**  
**Sediment PFAS Analytical Results,**  
**Sediment Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
  - Streams and Creeks
  - Surface Water Body
- Sediment Sample(s)**
- RC7
  - Water and Sediment Samples
  - Water, Sediment, and Foam Samples
  - Water, Sediment, SML, and Foam Samples
  - Previously Sampled Location



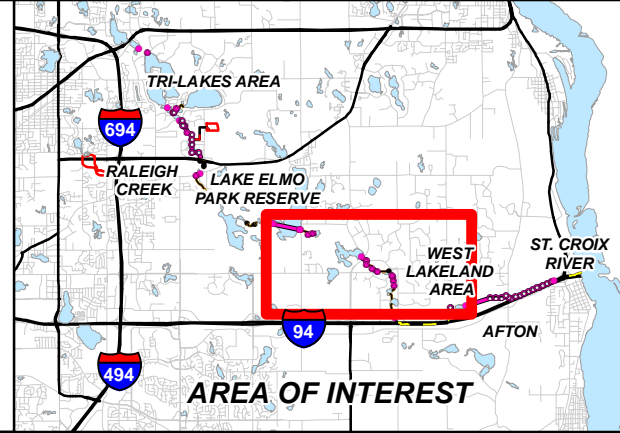
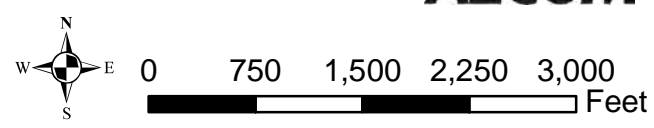
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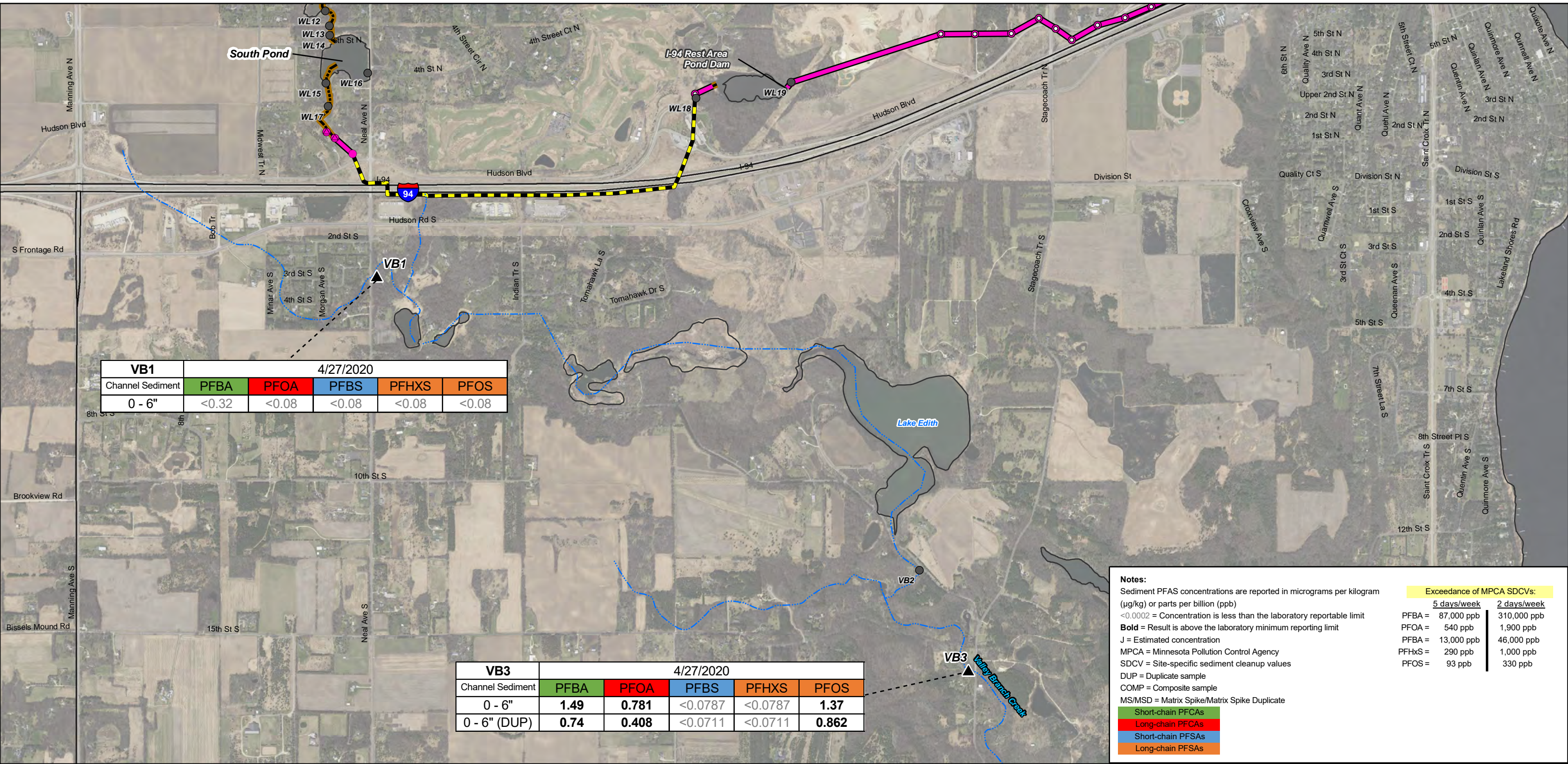
**Figure 6-2d**  
**Sediment PFAS Analytical Results,**  
**Sediment Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
- Legend:**
- Streams and Creeks
  - Surface Water Body
  - Sediment Sample(s)
  - Water and Sediment Samples
  - Water, Sediment, and Foam Samples
  - Water, Sediment, SML, and Foam Samples
  - Previously Sampled Location



Service Layer Credits: MnGeo WMS service, 2016 aerial photography - Other Sources: MDH, VBWD  
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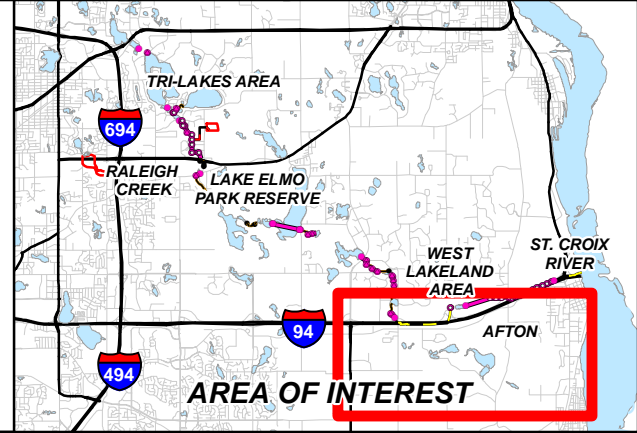
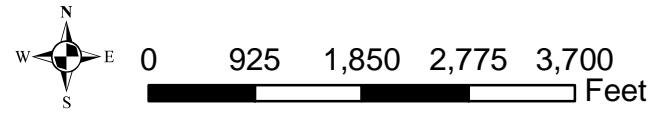
**Notes:**  
 Sediment PFAS concentrations are reported in micrograms per kilogram (µg/kg) or parts per billion (ppb)  
 <0.0002 = Concentration is less than the laboratory reportable limit  
**Bold** = Result is above the laboratory minimum reporting limit  
 J = Estimated concentration  
 MPCA = Minnesota Pollution Control Agency  
 SDCV = Site-specific sediment cleanup values  
 DUP = Duplicate sample  
 COMP = Composite sample  
 MS/MSD = Matrix Spike/Matrix Spike Duplicate

	Exceedance of MPCA SDCVs:	
	5 days/week	2 days/week
PFBA =	87,000 ppb	310,000 ppb
PFOA =	540 ppb	1,900 ppb
PFBA =	13,000 ppb	46,000 ppb
PFHXS =	290 ppb	1,000 ppb
PFOS =	93 ppb	330 ppb

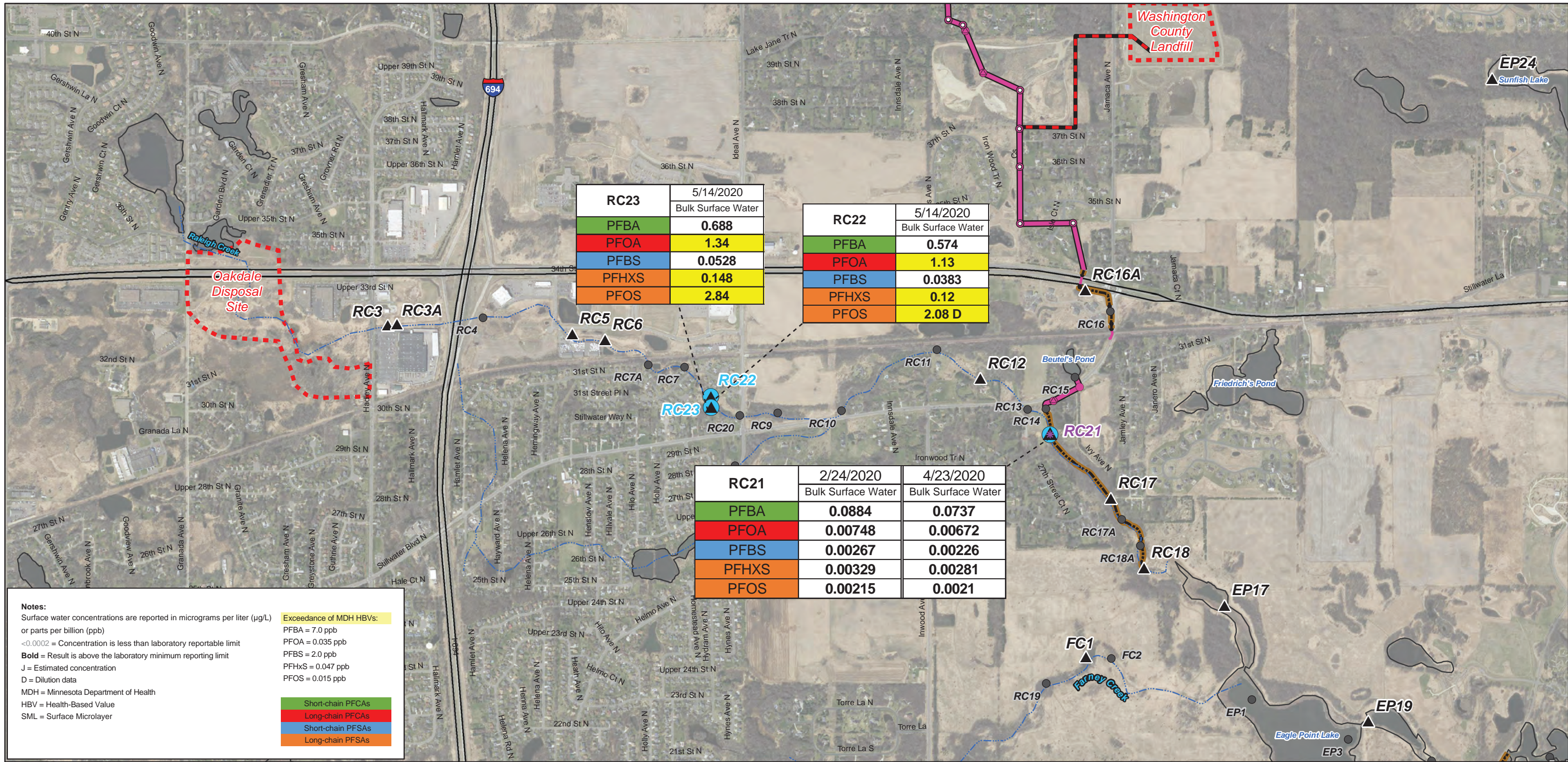
Short-chain PFCAs  
Long-chain PFCAs  
Short-chain PFSAs  
Long-chain PFSAs

**Figure 6-2e**  
**Sediment PFAS Analytical Results,**  
**Sediment Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
- ~ Streams and Creeks
  - Surface Water Body
  - ▲ Sediment Sample(s)
  - ▲ Water and Sediment Samples
  - ▲ Water, Sediment, and Foam Samples
  - ▲ Water, Sediment, SML, and Foam Samples
  - Previously Sampled Location







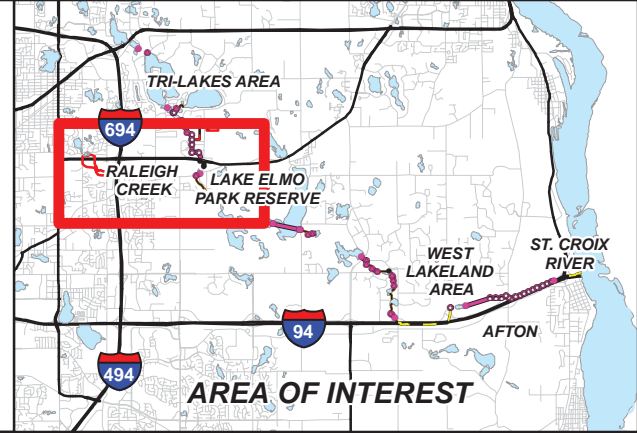
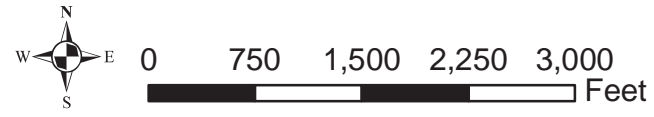
**Notes:**  
 Surface water concentrations are reported in micrograms per liter (µg/L) or parts per billion (ppb)  
 <0.0002 = Concentration is less than laboratory reportable limit  
**Bold** = Result is above the laboratory minimum reporting limit  
 J = Estimated concentration  
 D = Dilution data  
 MDH = Minnesota Department of Health  
 HBV = Health-Based Value  
 SML = Surface Microlayer

**Exceedance of MDH HBVs:**  
 PFBA = 7.0 ppb  
 PFOA = 0.035 ppb  
 PFBS = 2.0 ppb  
 PFHxS = 0.047 ppb  
 PFOS = 0.015 ppb

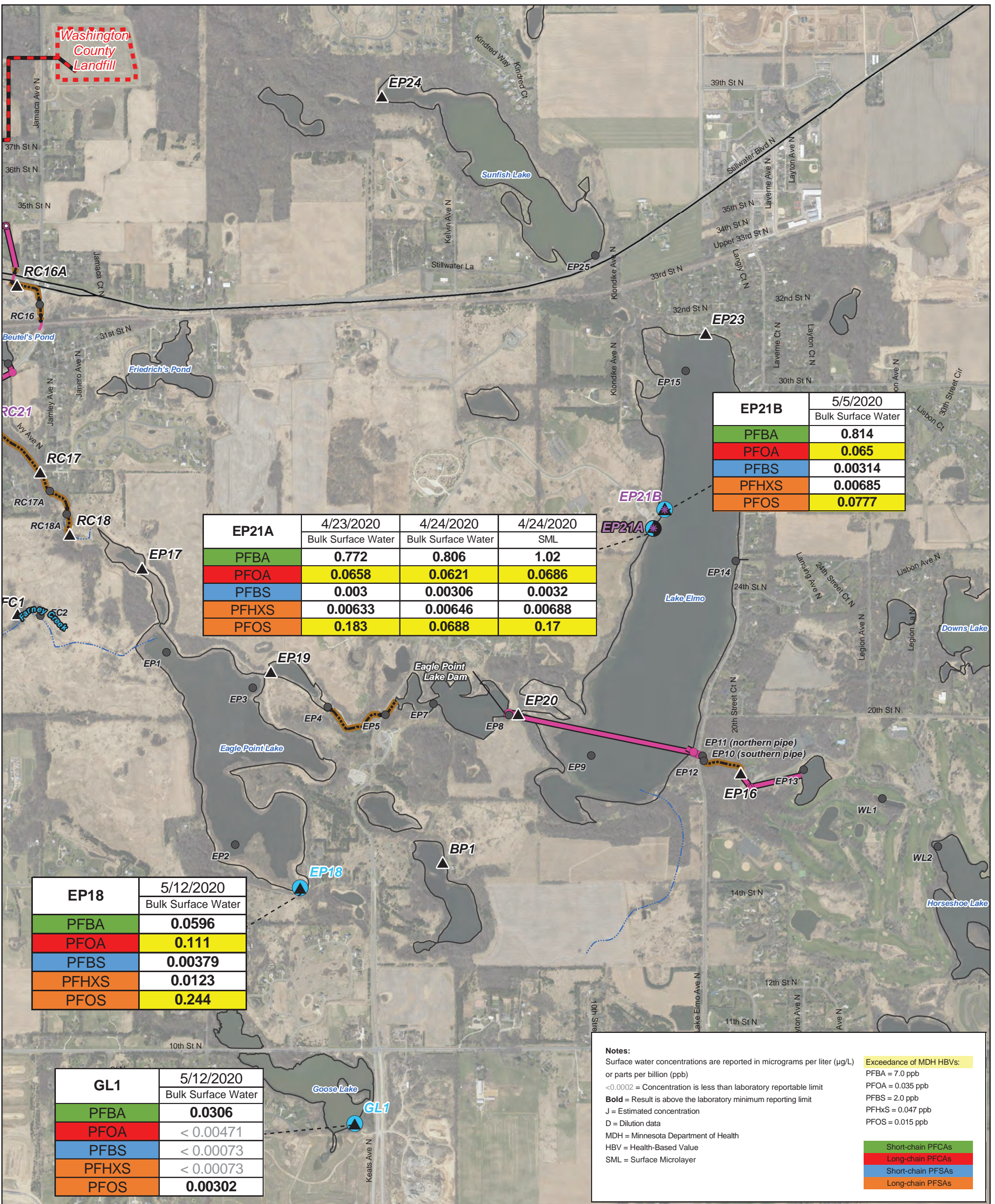
Legend:  
 Short-chain PFCAs (Green)  
 Long-chain PFCAs (Red)  
 Short-chain PFASs (Blue)  
 Long-chain PFASs (Orange)

**Figure 6-3a**  
**Surface Water PFAS Analytical Results,**  
**Sediment Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
- Legend:**
- Streams and Creeks
  - Surface Water Body
  - Sediment Sample(s)
  - Water and Sediment Samples
  - Water, Sediment, and Foam Samples
  - Water, Sediment, SML, and Foam Samples
  - Previously Sampled Location

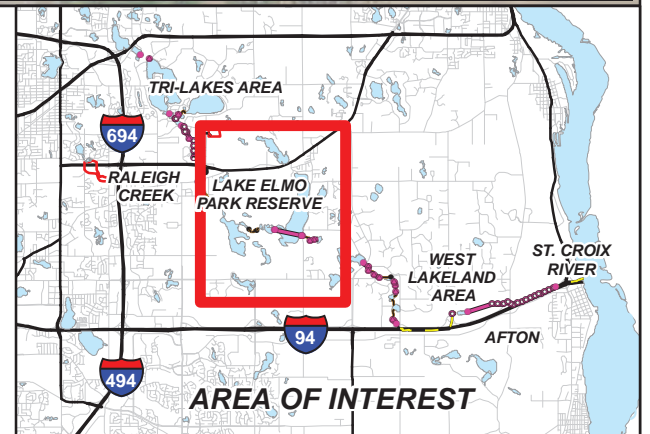




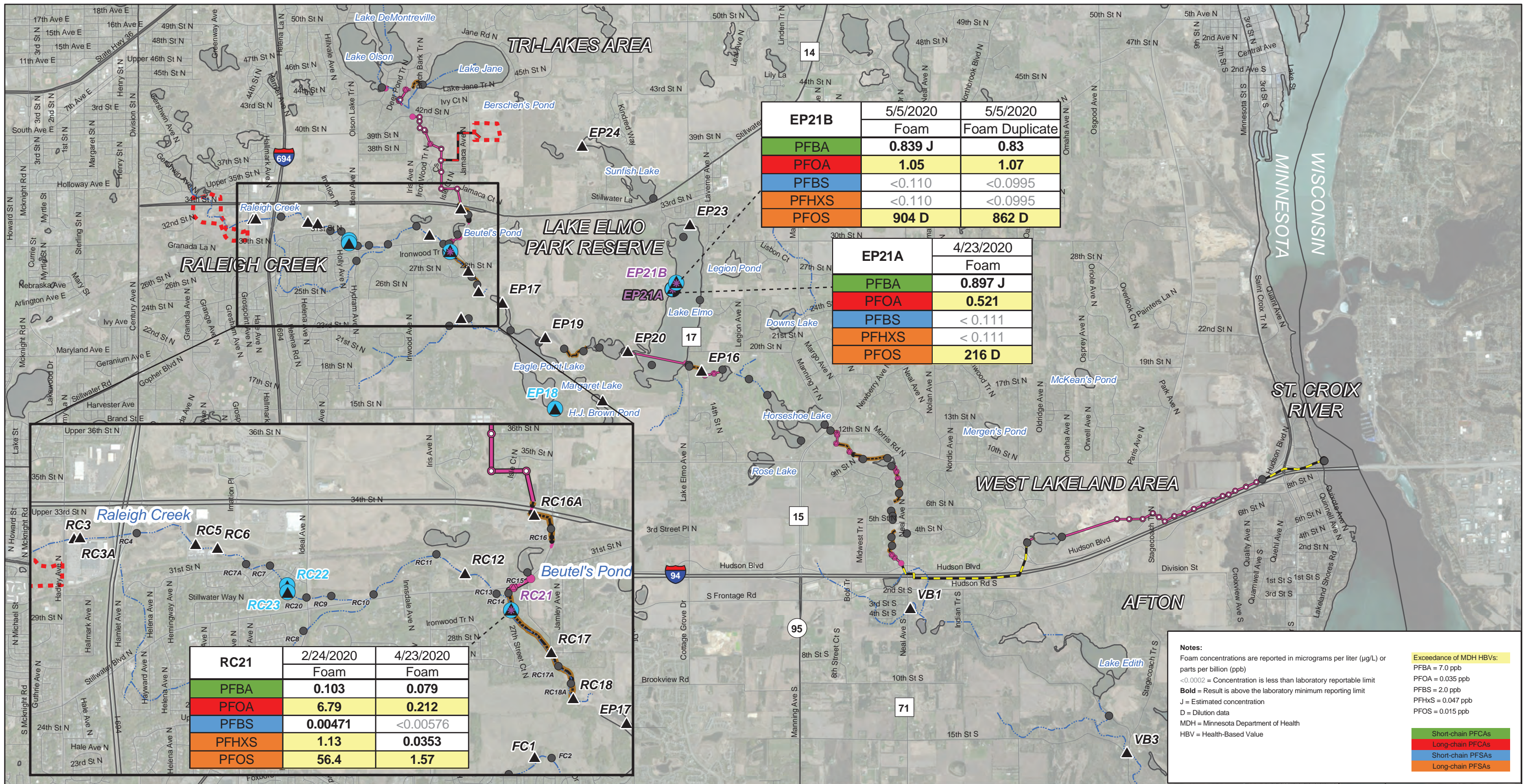


**Figure 6-3b**  
**Surface Water PFAS Analytical Results,**  
**Sediment Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
  - Washington County Landfill connection
  - MnDOT Pipeline
  - Streams and Creeks
  - Surface Water Body
  - Sediment Sample(s)
  - Water and Sediment Samples
  - Water, Sediment, and Foam Samples
  - Water, Sediment, SML, and Foam Samples
  - Previously Sampled Location







**Figure 6-4**  
**Foam PFAS Analytical Results, Sediment**  
**Sampling Event**  
**Six-Month Investigation Progress Report**  
**(November 11, 2019 - May 15, 2020)**  
**Project 1007**  
**Minnesota Pollution Control Agency**

- Project 1007 Structures**
- Catch Basin
  - Manhole
  - Other Structure
  - Channel
  - Culvert
  - Pipe
- Washington County Landfill connection  
 MnDOT Pipeline  
 Streams and Creeks  
 Surface Water Body
- Sediment Sample(s)**  
**Water and Sediment Samples**  
**Water, Sediment, and Foam Samples**  
**Water, Sediment, SML, and Foam Samples**  
 Other Sampling Location

**AECOM**

