

Waterbody: Starkweather Creek (WBICs: 805100 & 805200)

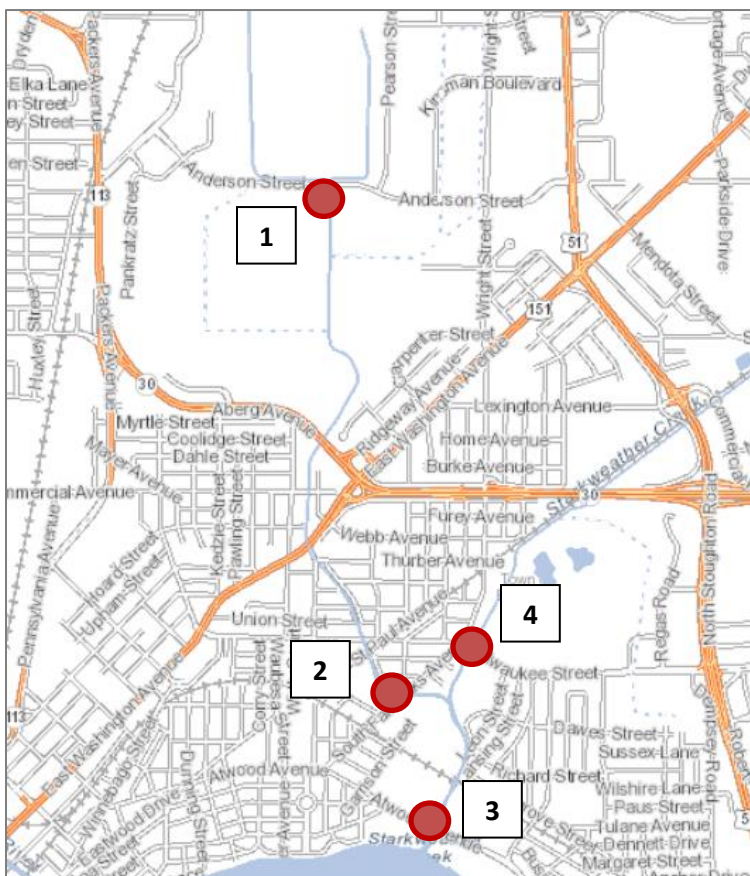
County: Dane

Water chemistry sampling rounds reported: 1 of 3

Fish tissue results reported: None

Why Starkweather Creek was selected for monitoring: PFAS were found in drinking water wells in the City of Madison in proximity to Starkweather Creek. Additionally, Truax Field Air National Guard Base historically held fire suppression training activities with AFFF, a now-known source of PFAS contamination. The headwaters of the West Branch of Starkweather Creek originate on or near Truax Field and the Dane County Regional Airport. Other historical sources of contamination are likely located in the Starkweather Creek watershed.

Monitoring Locations: Four locations were selected for monitoring in Starkweather Creek. Three locations were selected on the West Branch and Mainstem of Starkweather Creek to cover the longitudinal span of the Creek. A fourth monitoring location was selected on the East Branch of Starkweather Creek to determine background conditions of PFAS in the watershed. Additionally, fish tissue samples were collected in the mainstem of Starkweather Creek near the mouth of Lake Monona. Water chemistry results will be paired with fish tissue analysis for PFAS to aid in the potential development of a water quality standard.



- 1) West Branch Starkweather at Anderson St
- 2) West Branch Starkweather Creek at Fair Oaks Ave
- 3) Starkweather Creek at Atwood Ave
- 4) East Branch Starkweather Creek at Milwaukee St

06/20/19	1) Starkweather Creek	2) W Br Starkweather	3) W Br Starkweather	4) E Br Starkweather	Field Blank
Analyte (ng/l)	Anderson St	Fair Oaks Ave	Atwood Ave	Milwaukee St	
10:2 FTSA	ND	ND	ND	ND	ND
11Cl-PF3OUdS	ND	ND	ND	ND	ND
4:2 FTSA	0.11*	0.42	0.22*	ND	ND
6:2 FTSA	16	56	31	0.18*	ND
8:2 FTSA	4.1	7.9	3.3	ND	ND
9Cl-PF3ONS	ND	ND	ND	ND	ND
DONA	ND	ND	ND	ND	ND
FOSA	0.93	0.94	0.57	ND	ND
HFPO-DA	ND	ND	ND	ND	ND
N-EtFOSA	ND	ND	ND	ND	ND
N-EtFOSAA	ND	ND	ND	ND	ND
N-EtFOSE	0.56	ND	0.88	ND	ND
N-MeFOSA	ND	ND	ND	ND	ND
N-MeFOSAA	ND	ND	0.11*	0.072*	ND
N-MeFOSE	ND	ND	ND	ND	ND
PFBA	7.9	13	20	16	ND
PFBS	10	24	20	9	ND
PFDA	1.5	5.6	2	0.3*	ND
PFDoA	0.54	0.79	0.25*	ND	ND
PFDoS	ND	ND	ND	ND	ND
PFDS	ND	ND	ND	ND	ND
PFHpA	6.3	11	6.7	1.1	ND
PFHpS	2.2	7.9	4	ND	ND
PFHxA	21	42	26	4.3	ND
PFHxDA	ND	ND	ND	ND	ND
PFHxS	71	160	96	2.6	ND
PFNA	1.1	2.9	1.8	0.31	ND
PFNS	0.047*	0.17	ND	ND	ND
PFOA	23	43	27	2.6	ND
PFODA	ND	ND	ND	ND	ND
PFOS	79	270	160	2.6	ND
PFPeA	11	14	ND	ND	ND
PFPeS	8.7	20	12	ND	ND
PFTeDA	ND	ND	ND	ND	ND
PFTrDA	ND	ND	ND	ND	ND
PFUnA	0.15*	0.46	0.2*	ND	ND

*Between LOD and LOQ

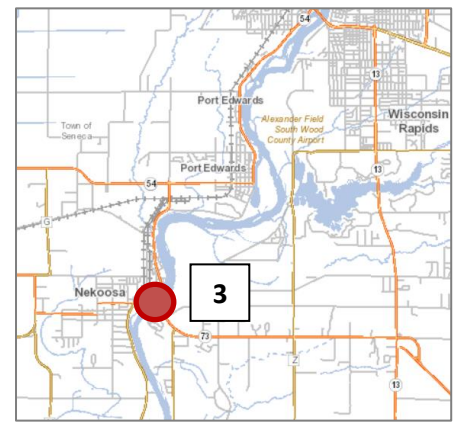
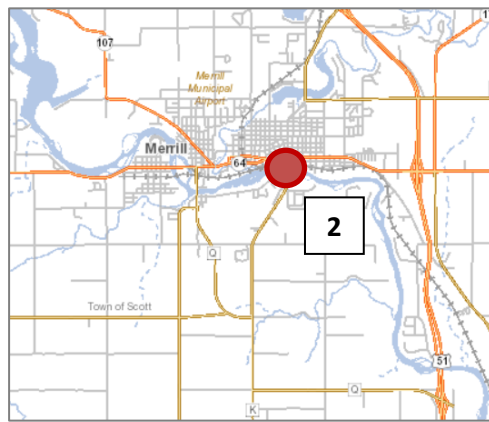
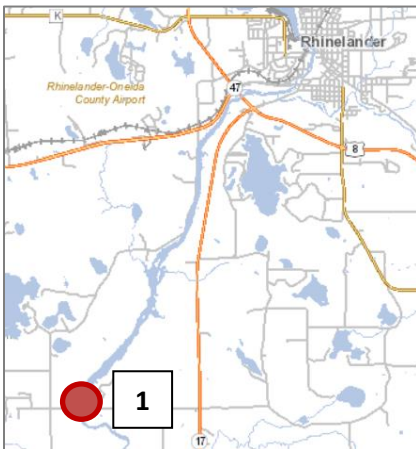
ND =Non-Detect

Waterbody: Wisconsin River (WBIC: 1179900)
County: Oneida, Lincoln and Wood
Water chemistry sampling rounds reported: 1 of 3
Fish tissue results reported: None

Why the Wisconsin River was selected for monitoring: PFAS was detected in public water supply drinking water wells in the City of Rhinelander. Additionally, a study conducted by the WDNR Wildlife Bio-sentinel Program found that PFAS was elevated in plasma of bald eagles collected from a large reach of the “middle” Wisconsin River.

Monitoring Locations: Three locations were selected for monitoring on the Wisconsin River that spanned from below Rhinelander, WI to Nekoosa, WI. Sites were selected to spatially maximize coverage of the middle reach of the Wisconsin River. At these sites fish were also collected for fish tissue PFAS concentrations. Water chemistry results will be paired with fish tissue analysis for PFAS to aid in the potential development of a water quality standard.

- 1) Wisconsin River Below Rhinelander, below Hat Rapids Dam
- 2) Wisconsin River in Merrill, below Merrill Flowage
- 3) Wisconsin River in Nekoosa, Below HWY 73



06/27/19	1) Wisconsin River Below Rhinelander	2) Wisconsin River at Merrill	3) Wisconsin River Below HWY 73	Field Blank
Analyte (ng/l)				
10:2 FTSA	ND	ND	ND	ND
11Cl-PF3OUds	ND	ND	ND	ND
4:2 FTSA	ND	ND	ND	ND
6:2 FTSA	0.56	0.18*	ND	ND
8:2 FTSA	ND	ND	ND	ND
9Cl-PF3ONS	ND	ND	ND	ND
DONA	ND	ND	ND	ND
FOSA	0.15*	0.95	0.42	ND
HFPO-DA	ND	ND	ND	ND
N-EtFOSA	ND	ND	ND	ND
N-EtFOSAA	3.5	9.4	3.2	ND
N-EtFOSE	0.64	0.16*	ND	ND
N-MeFOSA	ND	ND	ND	ND
N-MeFOSAA	ND	ND	ND	ND
N-MeFOSE	ND	ND	ND	ND
PFBA	4.6	3.1	4.5	ND
PFBS	0.28	0.17*	1.3	ND
PFDA	ND	0.19*	ND	ND
PFDoA	ND	ND	ND	ND
PFDoS	ND	ND	ND	ND
PFDS	ND	ND	ND	ND
PFHpA	6.1	3.6	2.1	ND
PFHpS	0.14*	ND	ND	ND
PFHxA	6.8	4.2	3	ND
PFHxDA	ND	ND	ND	ND
PFHxS	0.47	0.26	0.53	ND
PFNA	1	0.69	0.51	ND
PFNS	ND	ND	ND	ND
PFOA	23	12	6.5	ND
PFODA	ND	ND	ND	ND
PFOS	3.1	2.7	3	ND
PFPeA	ND	ND	ND	ND
PFPeS	ND	ND	ND	ND
PFTeDA	ND	ND	ND	ND
PFTTrDA	ND	ND	ND	ND
PFUnA	ND	ND	ND	ND

*Between LOD and LOQ

ND =Non-Detect

Waterbody: Silver Creek and Suukjak Sep Creek (WBICs: 1660500 & 1665800)

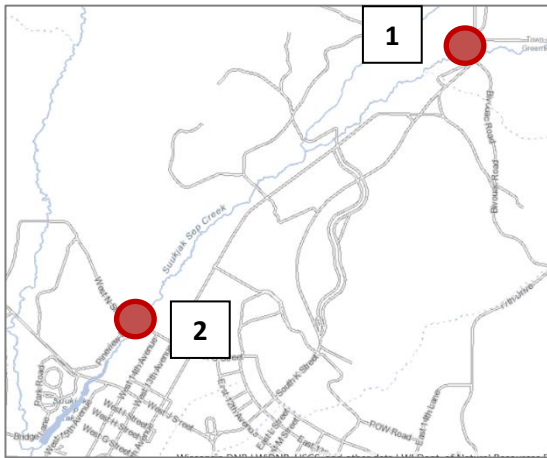
County: Monroe

Water chemistry sampling rounds reported: 1 of 3

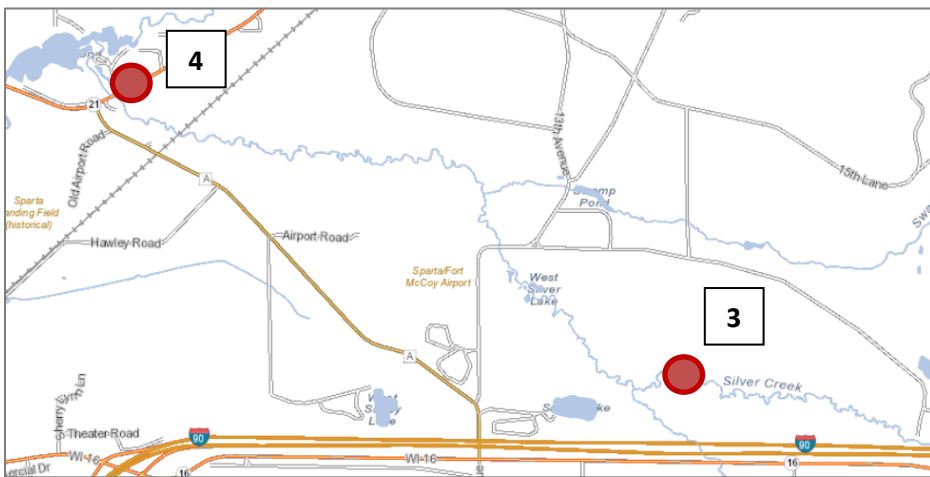
Fish tissue results reported: No fish samples collected in 2019

Why the Silver Creek and Suukjak Sep Creek were selected for monitoring: PFAS contamination is suspected at two locations that are historic fire suppression training locations on or near the U.S. Army Fort McCoy training center.

Monitoring Locations: Two location were selected on each waterbody; one location upstream of the old fire suppression training areas on one location downstream. The upstream locations should serve as a control to understand background concentrations of PFAS in streams within the region.



- 1) Suukjak Sep Creek at 17th Road
- 2) Suukjak Sep Creek at West N Street
- 3) Silver Creek at Fort McCoy access Bridge
- 4) Silver Creek at HWY 21



06/25/19	1) Suukjak Sep Creek	2) Suukjak Sep Creek	3) Silver Creek	4) Silver Creek	Field Blank
	17 th Road	West N Street	Fort McCoy access Bridge	Hwy 21	
Analyte (ng/l)					
10:2 FTSA	ND	ND	ND	ND	ND
11Cl-PF3OUdS	ND	ND	ND	ND	ND
4:2 FTSA	ND	ND	ND	ND	ND
6:2 FTSA	ND	0.077	ND	2.2	ND
8:2 FTSA	ND	ND	ND	0.42	ND
9Cl-PF3ONS	ND	ND	ND	ND	ND
DONA	ND	ND	ND	ND	ND
FOSA	ND	ND	ND	ND	ND
HFPO-DA	ND	ND	ND	ND	ND
N-EtFOSA	ND	ND	ND	ND	ND
N-EtFOSAA	ND	ND	ND	ND	ND
N-EtFOSE	ND	ND	ND	ND	ND
N-MeFOSA	ND	ND	ND	ND	ND
N-MeFOSAA	ND	ND	ND	ND	ND
N-MeFOSE	ND	ND	ND	ND	ND
PFBA	1.5*	1.9*	1.6*	2.5*	ND
PFBS	0.07*	ND	0.12*	1.5	ND
PFDA	ND	ND	ND	ND	ND
PFDoA	ND	ND	ND	ND	ND
PFDoS	ND	ND	ND	ND	ND
PFDS	ND	ND	ND	ND	ND
PFHpA	ND	0.49	ND	0.86	ND
PFHpS	ND	ND	ND	ND	ND
PFHxA	ND	0.84	ND	2.2	ND
PFHxDA	ND	ND	ND	ND	ND
PFHxS	ND	2.9	0.26	8.9	ND
PFNA	0.10*	0.085*	ND	0.18*	ND
PFNS	ND	ND	ND	ND	ND
PFOA	0.16*	1.4	0.11*	4.0	ND
PFODA	ND	ND	ND	ND	ND
PFOS	ND	3.2	0.59	21.0	ND
PFPeA	ND	ND	ND	1.2	ND
PFPeS	ND	0.29	ND	1.2	ND
PFTeDA	ND	ND	ND	ND	ND
PFTTrDA	ND	ND	ND	ND	ND
PFUnA	ND	ND	ND	ND	ND

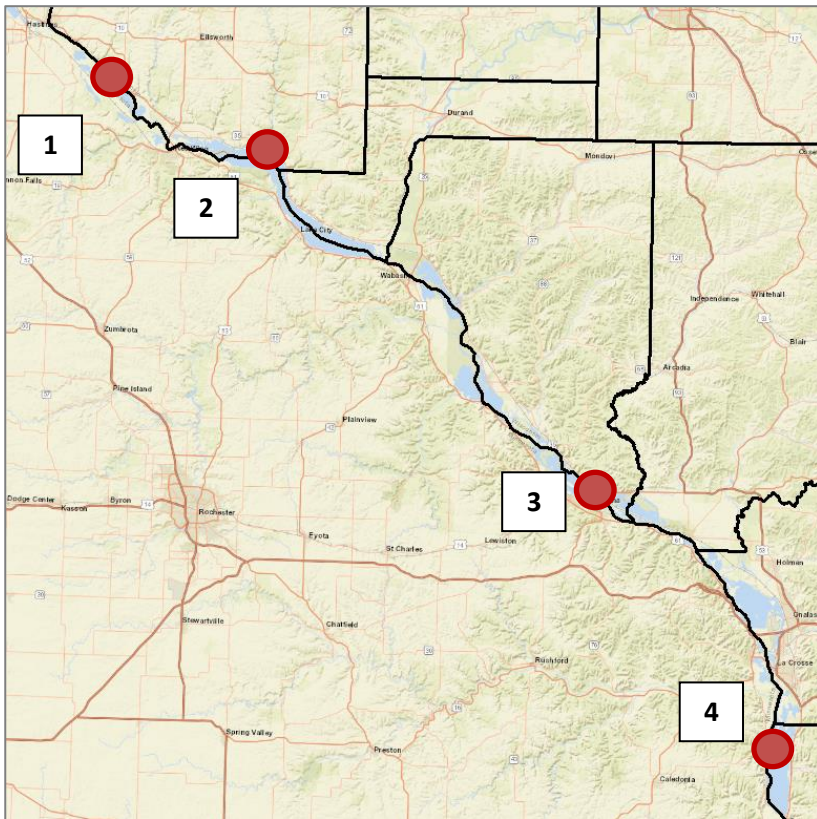
*Between LOD and LOQ

ND =Non-Detect

Waterbody: Mississippi River (WBIC: 72100)
County: Pierce, Pepin, Buffalo and Vernon
Water chemistry sampling rounds reported: 1 of 3
Fish tissue results reported: None

Why the Mississippi River was selected for monitoring: Given the large watershed and history of industrial users within the watershed, there are likely many possible diffuse sources of PFAS in the river. One well-documented source of PFAS contamination is a 3M plant located just outside of St Paul Minnesota.

Monitoring Locations: Water chemistry monitoring stations were selected in Pools 3, 4, 6 & 8 to match scheduled WDNR Fisheries Management fish contaminants monitoring. Water chemistry results will be paired with fish tissue analysis for PFAS to aid in the potential development of a water quality standard.



- 1) Mississippi River Pool 3
- 2) Mississippi River Pool 4
- 3) Mississippi River Pool 6
- 4) Mississippi River Pool 8

06/27/19	1) Mississippi R	2) Mississippi R	3) Mississippi R	4) Mississippi R	Field Blank
	Pool 3	Pool 4	Pool 6	Pool 8	
Analyte (ng/l)					
10:2 FTSA	ND	ND	ND	ND	ND
11Cl-PF3OUds	ND	ND	ND	ND	ND
4:2 FTSA	ND	ND	ND	ND	ND
6:2 FTSA	0.93	0.15*	ND	0.14*	ND
8:2 FTSA	ND	ND	ND	ND	ND
9Cl-PF3ONS	ND	ND	ND	ND	ND
DONA	ND	ND	ND	ND	ND
FOSA	ND	ND	ND	ND	ND
HFPO-DA	ND	ND	ND	ND	ND
N-EtFOSA	ND	ND	ND	ND	ND
N-EtFOSAA	ND	ND	ND	ND	ND
N-EtFOSE	ND	ND	ND	ND	ND
N-MeFOSA	ND	ND	ND	ND	ND
N-MeFOSAA	ND	ND	ND	ND	ND
N-MeFOSE	ND	ND	ND	ND	ND
PFBA	23	10	11	15	ND
PFBS	2	1.3	1.2	1.7	ND
PFDA	ND	ND	ND	ND	ND
PFDoA	ND	ND	ND	ND	ND
PFDoS	ND	ND	ND	ND	ND
PFDS	ND	ND	ND	ND	ND
PFHpA	0.84	0.43*	0.4*	0.58*	ND
PFHpS	ND	ND	ND	ND	ND
PFHxA	1.7	0.78	0.83	1.3	ND
PFHxDA	ND	ND	ND	ND	ND
PFHxS	1	0.53	0.54	0.89	ND
PFNA	0.6	0.44	0.43	0.71	ND
PFNS	ND	ND	ND	ND	ND
PFOA	5.2	2.6	2.3	3.8	ND
PFODA	ND	ND	ND	ND	ND
PFOS	3.1	1.7	1.7	2.5	ND
PFPeA	ND	ND	ND	ND	ND
PFPeS	0.17*	ND	ND	0.13*	ND
PFTeDA	ND	ND	ND	ND	ND
PFTTrDA	ND	ND	ND	ND	ND
PFUnA	ND	ND	ND	ND	ND

*Between LOD and LOQ

ND =Non-Detect

Waterbody: Menominee River (WBICs: 634500, 609400, 609200 & 609000)

County: Marinette

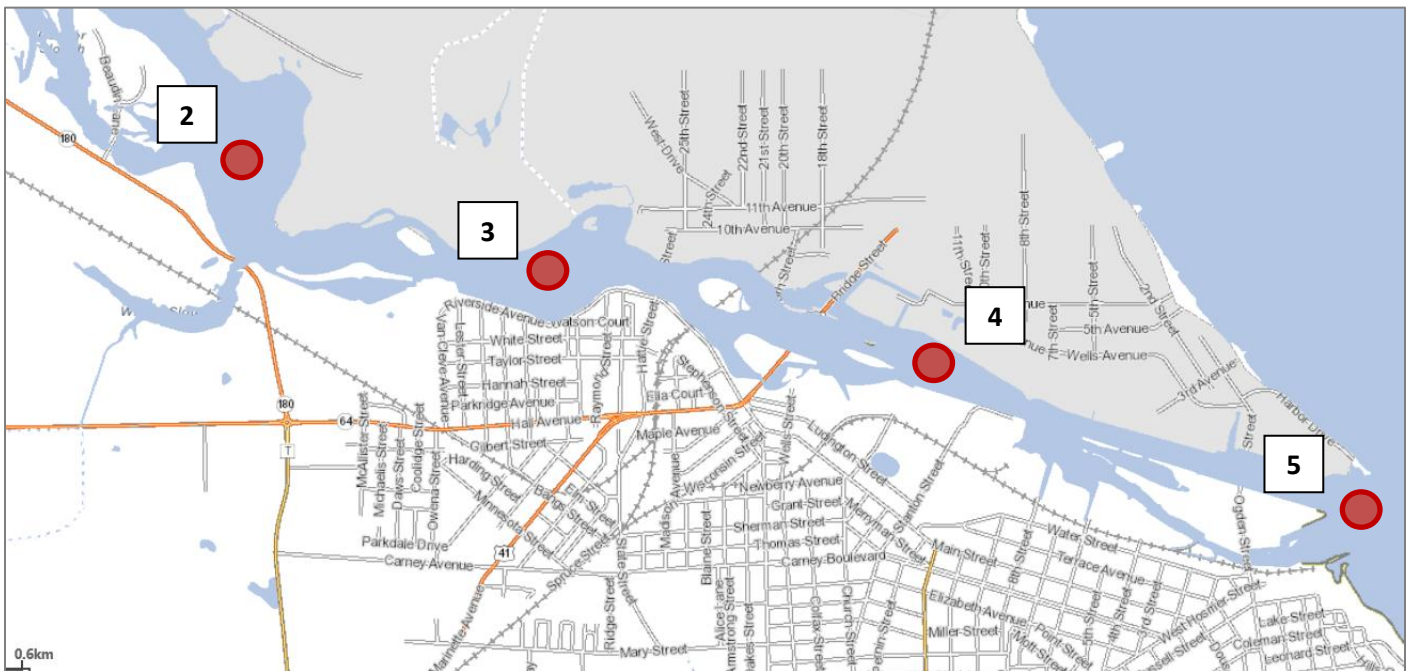
Water chemistry sampling rounds reported: 1 (partial) of 3

Fish tissue results reported: None

Why the Menominee River was selected for monitoring: PFAS contamination has been detected in surface water, groundwater, and drinking water wells in the Marinette, WI area. Johnson Controls/Tyco manufactured and tested AFFF and is actively remediating two small streams that drain the City of Marinette south to Lake Michigan.

Monitoring Locations: Water chemistry stations were selected at Chalk Hills Flowage to pair with Fisheries Management fish contaminants monitoring and provide background concentrations. Four other monitoring locations were selected between Upper Scott Flowage and the mouth of Green Bay to capture a gradient of possible PFAS contamination to the lower Menominee River from multiple possible sources. Water chemistry results will be paired with fish tissue analysis for PFAS to aid in the potential development of a water quality standard.

- 1) Chalk Hills Flowage (not shown here, ~50 miles upstream)
- 2) Upper Scott Flowage)
- 3) Lower Scott Flowage
- 4) Menominee River ~250 meters downstream POTW outfall
- 5) Menominee River at mouth to Green Bay



05/29/19 (CHF) & 06/27/19	1) Menominee River	2) Menominee River	3) Menominee River	4) Menominee River	5) Menominee River	Field Blank
	Chalk Hills Flowage	Upper Scott Flowage	Lower Scott Flowage	Bl WWTP outfall	Mouth to Green Bay	
Analyte (ng/l)						
10:2 FTSA	ND	ND	ND	ND	ND	ND
11Cl-PF3OUdS	ND	ND	ND	ND	ND	ND
4:2 FTSA	ND	ND	ND	ND	ND	ND
6:2 FTSA	ND	ND	ND	ND	1.3	ND
8:2 FTSA	ND	ND	ND	ND	ND	ND
9Cl-PF3ONS	ND	ND	ND	ND	ND	ND
DONA	ND	ND	ND	ND	ND	ND
FOSA	ND	ND	ND	ND	ND	ND
HFPO-DA	ND	ND	ND	ND	ND	ND
N-EtFOSA	ND	ND	ND	ND	ND	ND
N-EtFOSAA	ND	ND	ND	ND	ND	ND
N-EtFOSE	ND	ND	ND	ND	ND	ND
N-MeFOSA	ND	ND	ND	ND	ND	ND
N-MeFOSAA	ND	ND	ND	ND	ND	ND
N-MeFOSE	ND	ND	ND	ND	ND	ND
PFBA	ND	2.6	2.7	ND	2.5*	ND
PFBS	ND	ND	ND	ND	ND	ND
PFDA	ND	ND	ND	ND	ND	ND
PFDaA	ND	ND	ND	ND	ND	ND
PFDoS	ND	ND	ND	ND	ND	ND
PFDS	ND	ND	ND	ND	ND	ND
PFHpA	ND	0.3	0.24*	ND	0.41*	ND
PFHpS	ND	ND	ND	ND	ND	ND
PFHxA	ND	ND	ND	ND	ND	ND
PFHxDA	ND	ND	ND	ND	ND	ND
PFHxS	0.068*	0.088*	0.092*	ND	0.094*	ND
PFNA	0.18*	0.19*	0.18*	0.094*	0.19*	ND
PFNS	ND	ND	ND	ND	ND	ND
PFOA	0.32*	0.51*	0.44	ND	0.6	ND
PFODA	ND	ND	ND	ND	ND	ND
PFOS	0.31*	0.29*	0.3*	ND	0.31*	ND
PFPeA	ND	ND	ND	ND	ND	ND
PFPeS	ND	ND	ND	ND	ND	ND
PFTeDA	ND	ND	ND	ND	ND	ND
PFTrDA	ND	ND	ND	ND	ND	ND
PFUnA	ND	ND	ND	ND	ND	ND

*Between LOD and LOQ

ND =Non-Detect