



Sampling Highlights for Phase 3 (2023)

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INFLUENT (INCOMING WASTEWATER)

This table shows the flow-weighted composite of all forcemain influent for PFOA and PFOS for each month sampled in 2023. A flow-weighted composite is a combined sample made up of influent from all force mains where the portion of the sample from each force main is proportional to the force main flow contribution.

	Jan 2023	Feb 2023	Mar 2023	April 2023	May 2023	June 2023	July 2023	Sept 2023	Oct 2023	Nov 2023	Dec 2023	Mich. Influent Study
PFOA (ppt)	4.2J	6.3J	6.0	6.0	4.5	4.1J+	8.8	5.0	3.7	5.1	3.9	4.6
PFOS (ppt)	6.5J	7.9J	6.3	6.9	5.0	4.3	<0.47	5.0	2.6	4.0	4.0	7.5

[Michigan Influent Study data](#) included for comparison.

EFFLUENT (OUTGOING WASTEWATER)

This table shows the effluent concentration for PFOA and PFOS for each month sampled in 2023

	Jan 2023	Feb 2023	Mar 2023	April 2023	May 2023	June 2023	July 2023	Sept 2023	Oct 2023	Nov 2023	Dec 2023	WDNR Surface Water Criteria
PFOA (ppt)	16.8	8.6J	9.3	12	11	7.4J+	12	7.8	7.2	8.0	8.6	95
PFOS (ppt)	4.1	5.6J+	5.5	5.4	5.6	3.8	4.9	5.2	3.2	4.0	4.3	8

WDNR Surface Water Criteria for non-public drinking water sources included for comparison.

Additional notes for influent and effluent tables:

- J = estimated; when the value is below the level of detection and the established capabilities of the instrument, it is considered estimated.
- J+ = estimated with high bias.
- August 2023 = No August influent data. Laboratory analysis was cancelled due to shipping delays and misrouting, which caused the sample to arrive at the laboratory above the required temperature range.

BIOSOLIDS – CLASS A CAKE (2022 Pile)

This table shows the Class A cake pile for cake made in 2022, sampled again in 2023.

	March 2023	June 2024	September 2023	December 2023	Combined median PFOA+PFOS
PFOA (ppb)	1.7-1.7*	21	24	25.8	
PFOS (ppb)	9.7-9.9*	24 I J	14	14.7	
Sum (PFOA + PFOS)	11.4-11.6	45	38	40.5	38

The combined median was calculated based on the four sums of PFOA and PFOS from the four quarterly samples collected.

BIOSOLIDS – CLASS A CAKE (2023 Pile)

This table shows the Class A cake pile for cake made in 2023. Note that the sampling schedule was only twice in 2023; the first event was when the pile passed bacteria testing for land application and the second sampling event was one quarter later, which reflected the goal of the 2023 sampling to assess sample collection methods to improve data quality for monitoring. Each event sampled different areas of the pile: shallow (S), middle (M) and deep (D). All results are shown below.

	July 2023 – S1	July 2023 – S2	July 2023 – S3	July 2023 – S4	July 2023 – M	July 2023 – D1	July 2023 – D2
PFOA (ppb)	23	7.0	3.5	3.1J	4.0	2.7J	3.3J
PFOS (ppb)	<0.51	<0.60	<0.68	<0.70	<0.70	<0.84	<0.87
Sum (PFOA + PFOS)	23	7	3.5	3.1	4	2.7	3.3

Data breaks a cross to next table

	Oct 2023 – S1	Oct 2023 – S2	Oct 2023 – S3	Oct 2023 – S4	Oct 2023 – M	Oct 2023 – D1	Oct 2023 – D2	Combined median PFOA+PFOS
PFOA (ppb)	6.0	3.2	2.3J	3.0J	5.6	3.0J	3.2J	
PFOS (ppb)	13	14	12	13	13	15	15	
Sum (PFOA + PFOS)	19	17.2	14.3	16	18.6	18	18.2	15.1

The combined median was calculated as the median of the 14 sums of PFOA and PFOS for all 14 samples collected during 2023.

BIOSOLIDS – CLASS B METROGRO

	March 2023	June 2024	September 2023	December 2023	Combined median PFOA+PFOS
PFOA (ppb)	1.3 J	1.5 J	0.92 J	<7.8	
PFOS (ppb)	9.7 IJ	<0.70	8.9 IJ	10 IJ	
Sum (PFOA + PFOS)	11	1.5	9.82	10	9.91

The combined median was calculated based on the four sums of PFOA and PFOS from the four quarterly samples collected.

For reference: [Wisconsin Department of Natural Resources Interim Strategy For Land Application Of Biosolids And Industrial Sludges Containing PFAS](#)