

## PFAS Sampling Results in the Marinette and Peshtigo Area Due to Foam Sightings

In September 2019, following reports of foam sightings by community members, DNR mobilized an environmental consultant to collect and analyze foam and surface water microlayer (SML) samples (i.e., samples taken from the surface of the waterbody) from the Peshtigo River and at a roadside ditch near the intersection of Leaf and Kraus Roads in the Town of Peshtigo. The DNR received the sample results for the foam and SML samples that were collected from these two locations in Marinette County. All sample locations and sample results for PFOS and PFOA (perfluorooctane sulfonic acid and perfluorooctanoic acid) are displayed on the attached map. Analytical reports for the foam and SML samples are also attached. Additional information regarding the state-wide fish and water chemistry study can be found on the DNR's [Water quality PFAS initiatives page](#).

The sampling in September for the foam sighting is in addition to samples collected by the DNR in the Peshtigo River in August 2019 as part of a statewide monitoring project to sample fish tissue and water chemistry at select sites around the state near known or probable sources of per- and polyfluoroalkyl substances (PFAS). Three water samples were collected in the Peshtigo River associated with this initiative; fish tissue data were not collected. The August sampling was not due to a specific foam sighting incident.

### PFOS and PFOA were detected in the September foam and SML samples, and the August surface water samples

Sample Results for Foam, SML, and Water (see attached map)								
Sample Location	Sample ID	Location Description	Water Body	Date Collected	Substance Sample	Sample Depth	PFOA (ppt)	PFOS (ppt)
1	1	Above HWY 64 at Boat Landing	Peshtigo River	8/14/2019	Water	3 - 6 in	0.73	0.19J
2	2	Below the City of Peshtigo Dam between Railroad Bridges	Peshtigo River	8/14/2019	Water	3 - 6 in	0.87	0.27J
3	3	Below the City of Peshtigo	Peshtigo River	8/14/2019	Water	3 - 6 in	1.0	0.41
4	4S	Below the City of Peshtigo Dam	Peshtigo River	9/18/2019	SML	top 2mm of water	2.1	6.2I
	4F	Below the City of Peshtigo Dam	Peshtigo River	9/18/2019	Foam	Surface	230	17,000E
5	5S	Roadside ditch leading to Little River	Leaf/Kraus Ditch	9/18/2019	SML	top 2mm of water	2.3	ND
	5F	Roadside ditch leading to Little River	Leaf/Kraus Ditch	9/18/2019	Foam	Surface	990	17,000E
Values are approximations. For additional information, please see the attached lab report.								

### Sample results of varying concentration

There are some likely reasons for the variation in water sample results. between the foam and the sampling at varying depths in the surface water for PFAS. PFAS substances are well known for

exhibiting “surfactant properties,” meaning that some PFAS may have a high affinity to reside at the water’s surface and the ambient air. To capture PFAS at where PFAS contaminated water intersects with air, SML samples were collected by ‘scooping’ water off the top 2 millimeters of the water’s surface using a sample bottle.

In contrast, the water samples collected as part of the August statewide monitoring project were collected 3-6 inches below the surface of the water as part of an effort to determine water chemistry conditions where fish are likely to reside. The difference in sample location combined with the surfactant properties of PFAS may explain why the September SML samples contained more PFAS than the August water samples. Finally, the foam appeared after a heavy rain event; high water conditions created turbulent flow which is a likely factor in the foam formation.

The DNR is responding to foam events in areas where there is known or suspected PFAS contamination and will identify PFAS compounds as well as the sources of PFAS which may be causing the foam. The DNR is also working closely with the Wisconsin Department of Health Services and local health officials to ensure that the public stays informed of these situations when they develop, and the [precautions to undertake](#) in these events.