

Michigan Department of Environment, Great Lakes, and Energy

Huron River Watershed Regan Drain Sampling Update

November 2020

EGLE's Water Resources Division Surface Water Assessment Section and Southeast District staff collected surface water samples for PFAS analysis from the Huron River and Regan Drain on October 14, 2020. This sampling was conducted to track down the source of contamination in surface water samples previously collected from Washago Pond, an impoundment of the Regan Drain. Table 1 lists sampling location details and corresponding PFOS and PFOA concentrations for samples (parts per trillion (ppt)). A map of this new PFOS data including previous PFOS sampling results is also included (Figure 1). EGLE sent splits of a subset of samples to two different labs (Vista Analytical and Eurofins/TestAmerica). Sample results are reported for the two labs in Table 1 and are differentiated on the map with asterisks (Figure 1).

PFOA concentrations did not exceed the Rule 57 Human Noncancer Value (HNV) of 12,000 ppt at any location. Four of the eight sampling locations had a detectable PFOS concentration below the reporting limit (J-flagged). PFOS exceeded the HNV of 12 ppt at three sampling locations:

1. Washago Pond (RG0005): 22.5 to 30 ppt
2. The Regan Drain upstream of Washago Pond (RG0010): 25.0 and 34 ppt PFOS
3. The main branch of Regan Drain near Burelle Avenue (RG0500): 88.8 ppt PFOS

Results were below the reporting limit further upstream on the main branch at RG1000 and RG2000 (Figure 1; Table 1). Results from the duplicate samples collected on the west branch of Regan Drain (RGW0100; 6.97 and 7.38 ppt) were below the HNV of 12 ppt for PFOS but elevated above the anthropogenic background (2 ppt). The west branch flows into the main branch just downstream of the RG0500 sampling location.

The elevated concentrations found in this area suggest that a potential PFAS source(s) exists between Bell Road (RG0500) and South Huron Road (RG1000) on the main branch of Regan Drain and/or between Burelle Avenue (RGW0100) and Rust Road (RGW1000) on the west branch of Regan Drain.

Washago Pond is part of the Huron-Clinton Metropark system and open for public shore and ice fishing. It is an impoundment of the Regan Drain, a tributary to the Huron River. It is very unlikely that fish can move from the Huron River into the pond. On August 25th, 2020 EGLE WRD collected pumpkinseed sunfish from Washago Pond. PFOS in the fillets of these fish ranged from non-detect (< 0.25 parts per billion (ppb)) to 110 ppb. These results add further evidence that an upstream source of PFAS contamination exists within the Regan Drain.

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Table 1: EGLE October 14, 2020 Huron River and Regan Drain surface water PFOS results. PFOS results are compared to the Rule 57 Human Noncancer Value of 12 ppt; exceedances are bolded and italicized. PFOA is compared to the HNV of 12,000 ppt.

Sample ID	Water Body	Location Description	Latitude	Longitude	Vista PFOS (ppt)	Eurofins PFOS (ppt)	Vista PFOA (ppt)	Eurofins PFOA (ppt)
TB0001	NA	Trip blank			ND	ND	ND	ND
FB0001	NA	Field blank			ND	ND	ND	ND
EB0001	NA	Equipment blank			ND	ND	ND	ND
HR0023	Huron River	HR u/s Regan Drain	42.13302	-83.37096	2.56 ^J	3.1	2.17 ^J	2.1
HR0022	Huron River	HR d/s Regan Drain; Willow Metropark	42.13089	-83.36985	2.24 ^J	4.5	4.81	2.3
RG0005	Regan Drain	Willow Metropark	42.13046	-83.37297	22.5	30	4.29	5.0
RG0005R	Regan Drain	Willow Metropark	42.13046	-83.37297	27.0	30	4.42	5.2
RG0010	Regan Drain	Regan Drain u/s Washago Pond	42.12649	-83.37362	25.0	34	4.81	5.0
RGS0100	Regan Drain	Regan Drain South Branch near I-275	42.122895	-83.379323	NS	NS	NS	NS
RGW0100	Regan Drain	Regan Drain West Branch near Burelle Ave	42.129814	-83.3833	6.97	NA	1.99	NA
RGW0100D	Regan Drain	Regan Drain West Branch near Burelle Ave	42.129814	-83.3833	7.38	NA	1.96	NA
RG0500	Regan Drain	Regan Drain near Bell and Burelle Ave	42.130295	-83.382671	88.8	NA	8.50	NA
RG1000	Regan Drain	Regan Drain at S Huron Rd	42.137293	-83.388862	2.21 ^J	NA	1.91	NA
RG2000	Regan Drain	Regan Drain at Rust Rd.	42.138067	-83.392332	1.95 ^J	NA	1.80	NA
RGW1000	Regan Drain	Regan Drain West Branch at Rust Rd.	42.132	-83.392096	NS	NS	NS	NS

ND = Non-detect; NS = No sample collected because waterbody was dry at time of sampling; NA = Not applicable/ split sample not collected; J = Result is above detection limit, below the reporting limit; R = Replicate sample; D = Duplicate Sample

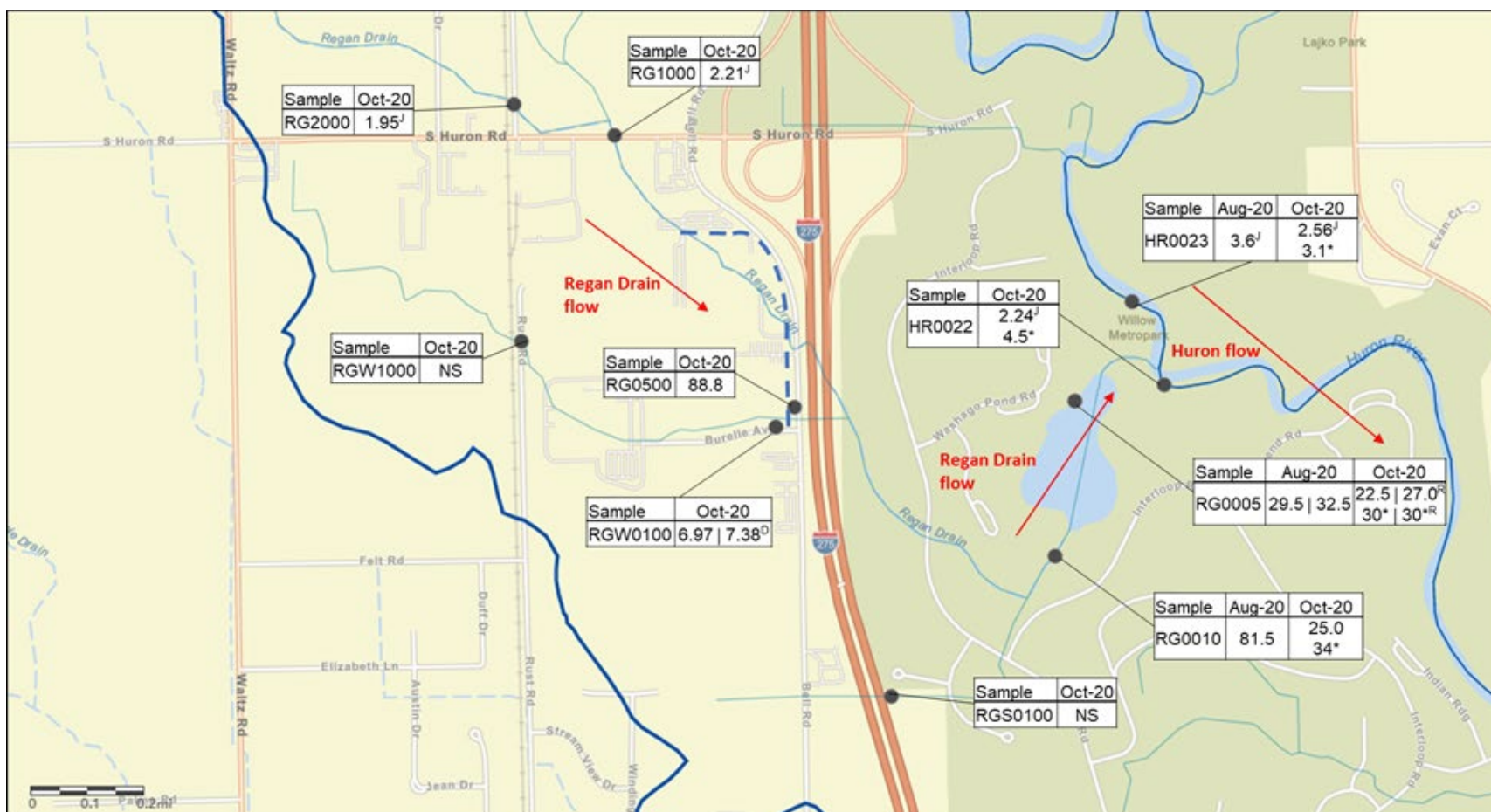


Figure 1: PFOS (ppt) in surface water samples collected from the Huron River and Regan Drain, a tributary to the Huron River. Sample dates are listed as Month-Year. The Main Branch of the Regan Drain flows next to Bell Road until the confluence with the West Branch (dotted blue line on map). Sample RG0500 was taken just upstream of the West Branch on the Main Branch of Regan Drain. All samples analyzed by Vista Analytical unless noted with an asterisk (*); results with an asterisk were analyzed by Eurofins/Test America. J = Result is above detection limit, below the reporting limit. R = Replicate Sample. D = Duplicate Sample.