

Note: Additional data regarding Houghton Lake fisheries is expected as tests are completed.

From: "Armstrong, Brandon (EGLE)"
 To: "njfullmer@charter.net"
 Cc: Brandon (DHHS)"
 Sent: Wednesday May 3 2023 11:40:30AM
 Subject: RE: Fish contaminant monitoring in Houghton Lake

Hi Norm,

I just wanted to follow up with you and let you know that the Houghton Lake fillet PFAS results are back from the lab. Below is a summary of PFOS concentrations in those fillets (in parts per billion; ppb). Still waiting on the other (Hg/PCBs/DDT) contaminant data for these samples. Once the full set of contaminant data is back (hopefully in the next few months) we will hand it off to Brandon Reid's team at MDHHS to determine if any changes to the Eat Safe Fish advisories for Houghton Lake are warranted. Let me know if you have any questions.

Water Body	Lat	Long	Collection Year	Species	Sample Type	N (#)	Min Length (in)	Max Length (in)	Min PFOS (ppb)	Max PFC (ppb)
Houghton Lake	44.3466	-84.7338	2022	Bluegill	Fillet	10	6.7	9.8	9.8	43.0
Houghton Lake	44.3466	-84.7338	2022	Yellow Perch	Fillet	6	5.8	7.4	8.9	36.3
Houghton Lake	44.3466	-84.7338	2022	Largemouth/Smallmouth Bass	Fillet	6	10.5	17.7	3.2	8.1
Houghton Lake	44.3466	-84.7338	2022	Walleye	Fillet	10	15.6	22.1	3.2	10.5

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As a follow-up to your request on putting the Houghton Lake PFOS data in to perspective, below is a table that shows the fish consumption screening values set by MDHHS for PFOS. These values range from 9 part per billion (ppb) to 300 ppb. Please note that MDHHS uses the 95% Upper Confidence Level when setting guidelines/advisories. This is a more conservative method than using an average as it accounts for the variability of the contaminants that we see in the fish. I am cc'ing Brandon Reid at MDHHS who runs the Eat Safe Fish program if you have any questions related to fish consumption advisories.

**State of Michigan
Fish Consumption Screening Value Ranges for PFOS**

Meal Category	FCSV Ranges	
	$\mu\text{g/g (ppm)}^b$	ng/g (ppb)^c
meals per month ^a		
16	≤ 0.009	≤ 9
12	>0.009 to 0.013	>9 to 13
8	>0.013 to 0.019	>13 to 19
4	>0.019 to 0.038	>19 to 38
2	>0.038 to 0.075	>38 to 75
1	>0.075 to 0.15	>75 to 150
6 meals per year	>0.15 to 0.3	>150 to 300
Do Not Eat	>0.3	>300

^a Units are in months unless otherwise stated.

^b micrograms of chemical per gram of wet weight fish tissue ($\mu\text{g/g}$) that is the same as parts per million (ppm).

^c nanograms of chemicals per grams of wet weight fish tissue (ng/g) that is the same as parts per billion (ppb)

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