

# Alger County

**Northern Pike**

**Au Train Basin**

**Alger County**

**Hg Analysis:**

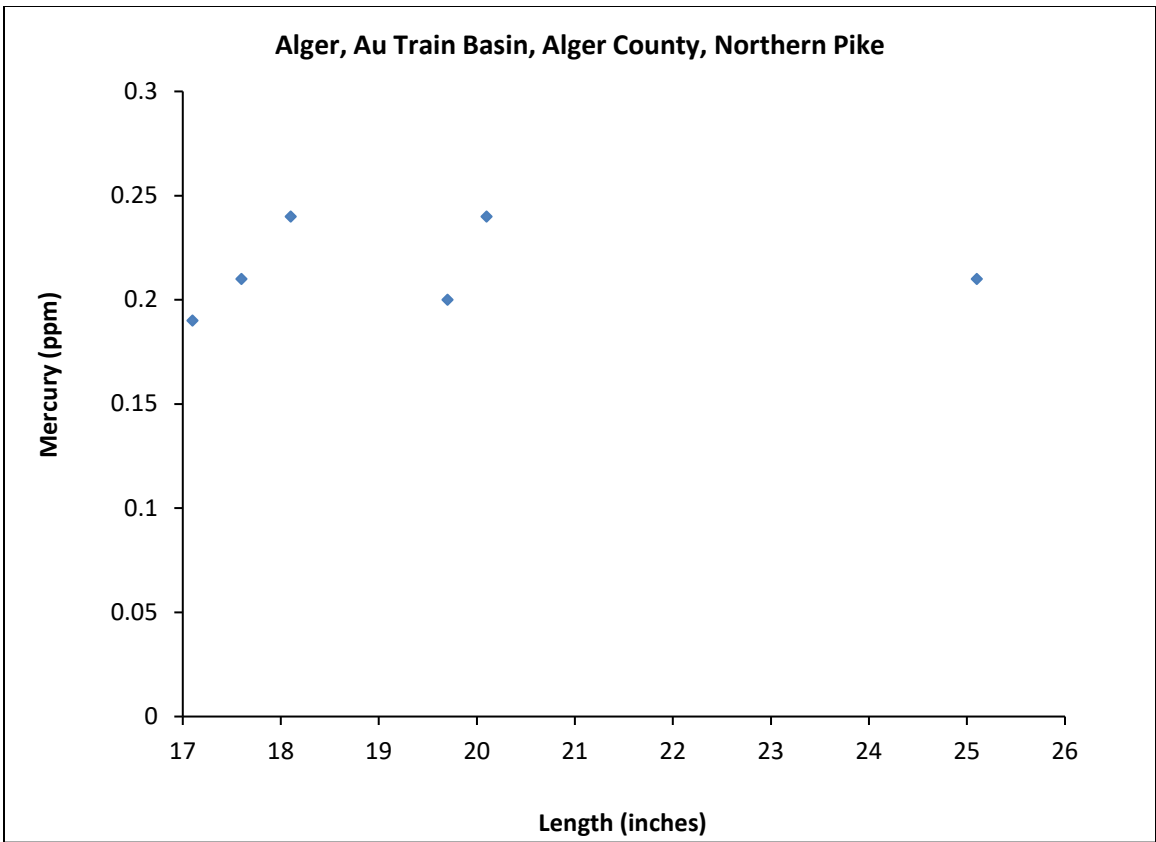
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
1990	1990	6	17.1	24	17.1	25.1
Datasets available: 1990						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.22	0.19	0.24	0.24	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.004	0.006				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Au Train Basin northern pike are covered under the statewide mercury consumption advisory.

**Recommendation:** Dataset is limited due to the small number of legal length samples and is insufficient to provide a guideline. The statewide guidelines apply: No one should eat more than 1 meal per month of northern pike larger than 30 inches or more than 2 meals per month of northern pike smaller than 30 inches in length.



**Yellow Perch**

**Au Train Basin**

**Alger County**

**Hg Analysis:**

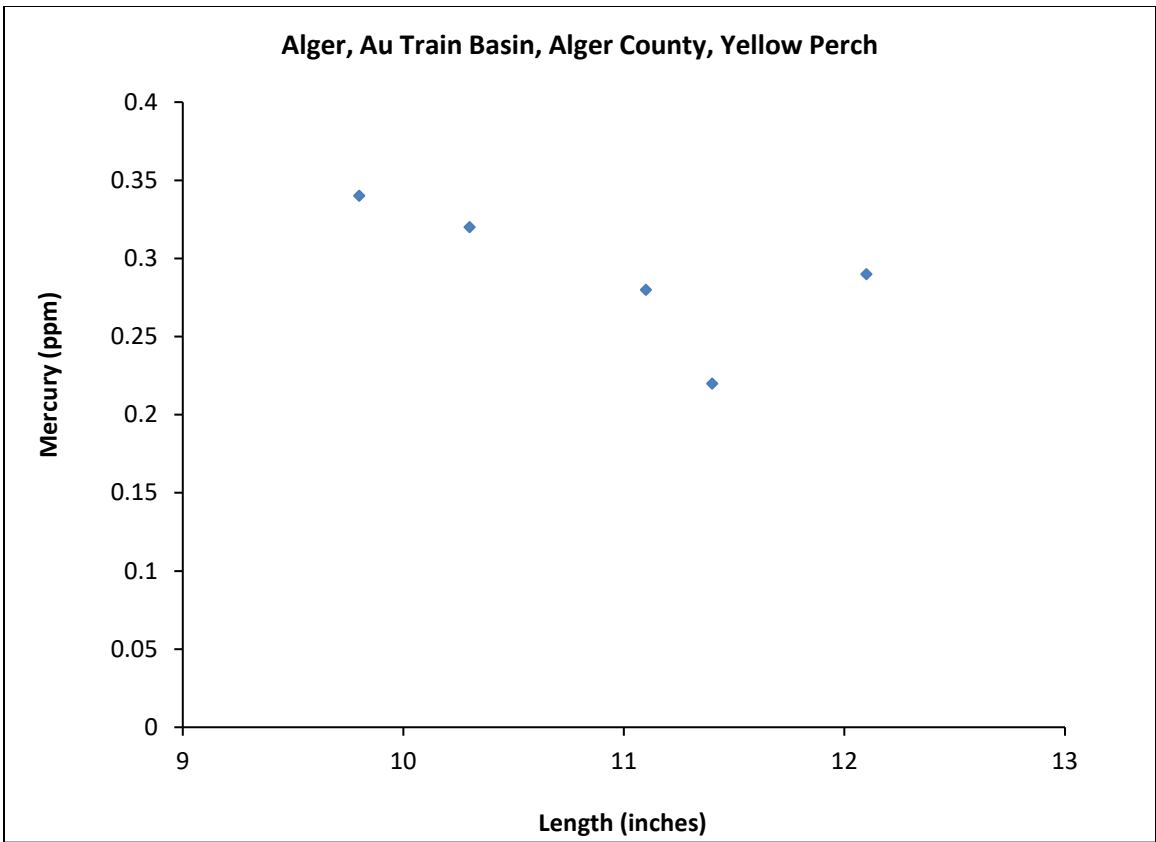
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1990	1990	5	9.8	na	9.8	12.1
Datasets available: 1990						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	5	0.29	0.22	0.34	0.35	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.438	0.386				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available:						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Au Train Basin yellow perch are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 2 meals per month of Au Train Basin yellow perch due to mercury.



**Northern Pike**

**Au Train Lake**

**Alger County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent					
1987	2017	27	17.2	24	23.6	34.4
Datasets available: 1987, 1993, 2017						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	13	0.503	0.270	1.800	0.750	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.006	0.036				

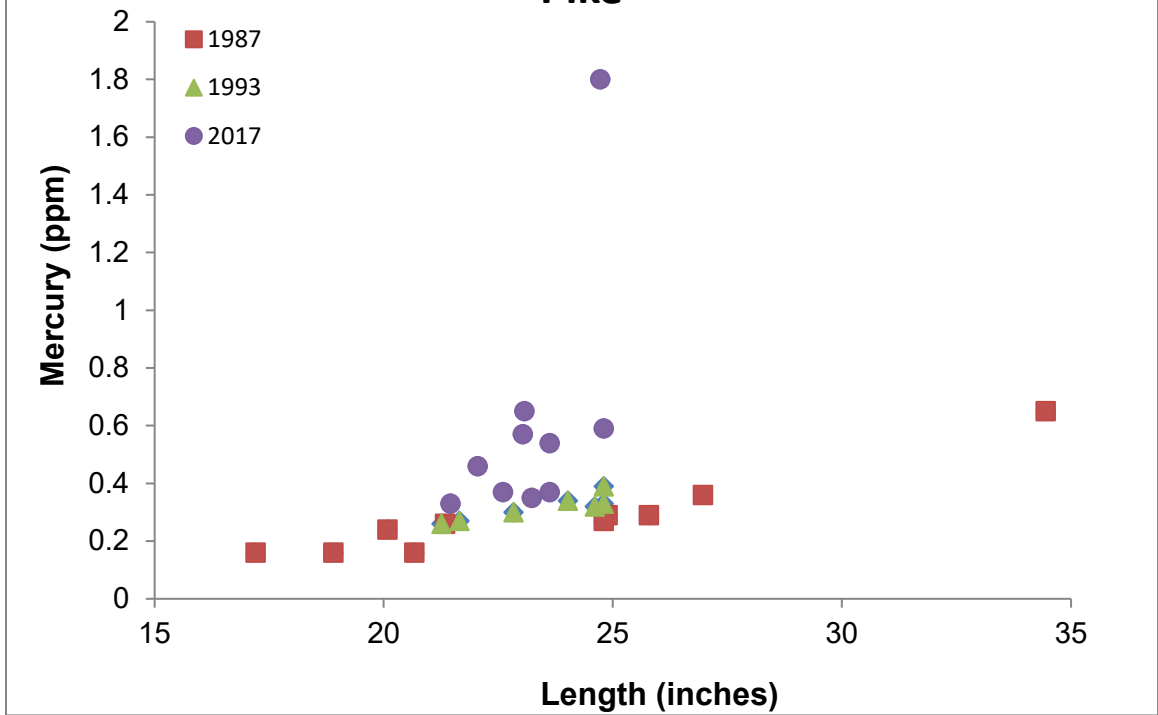
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent					
Datasets available:						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
PFOS	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing MDHHS Advisory:** No one should eat more than 2 meals per month of northern pike under 30 inches or more than 1 meal per month of fish larger than 30 inches from Au Train Lake in Alger County due to mercury.

**Recommendation:** No one should eat more than 1 meal per month of northern pike of any size from Au Train Lake in Alger County due to mercury.

# Alger, Au Train Lake, Alger County, Northern Pike



**Walleye**

**Au Train Lake**

**Alger County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1987	2005	22	13.8	15	14.6	29.8
Datasets available: 1987, 1993, 2003						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	18	0.56	0.23	1.74	0.74	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.425	0.566				

**Organics Analysis:**

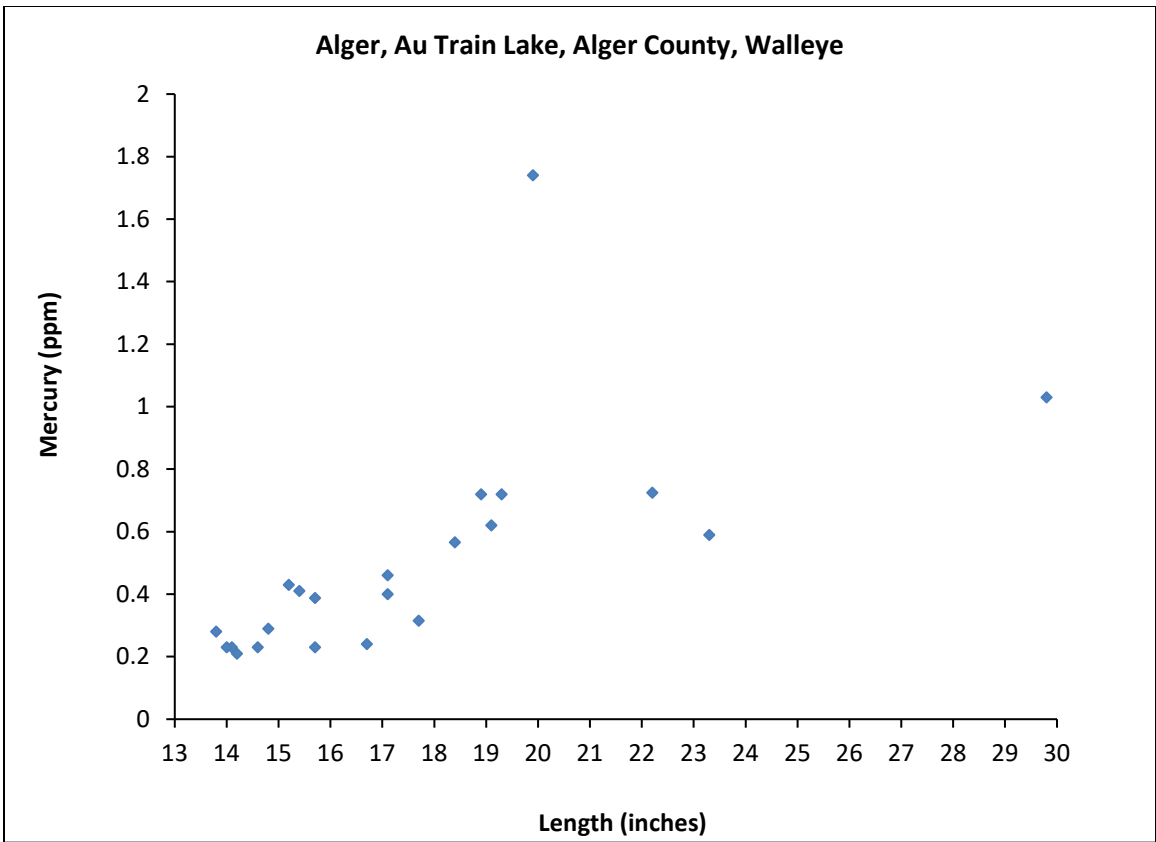
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Au Train Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of Au Train Lake walleye due to mercury.

*Note: Removal of one "outlier" produces a significant regression but does not change UCL significantly.*





**Yellow Perch**

**Au Train Lake**

**Alger County**

**Hg Analysis:**

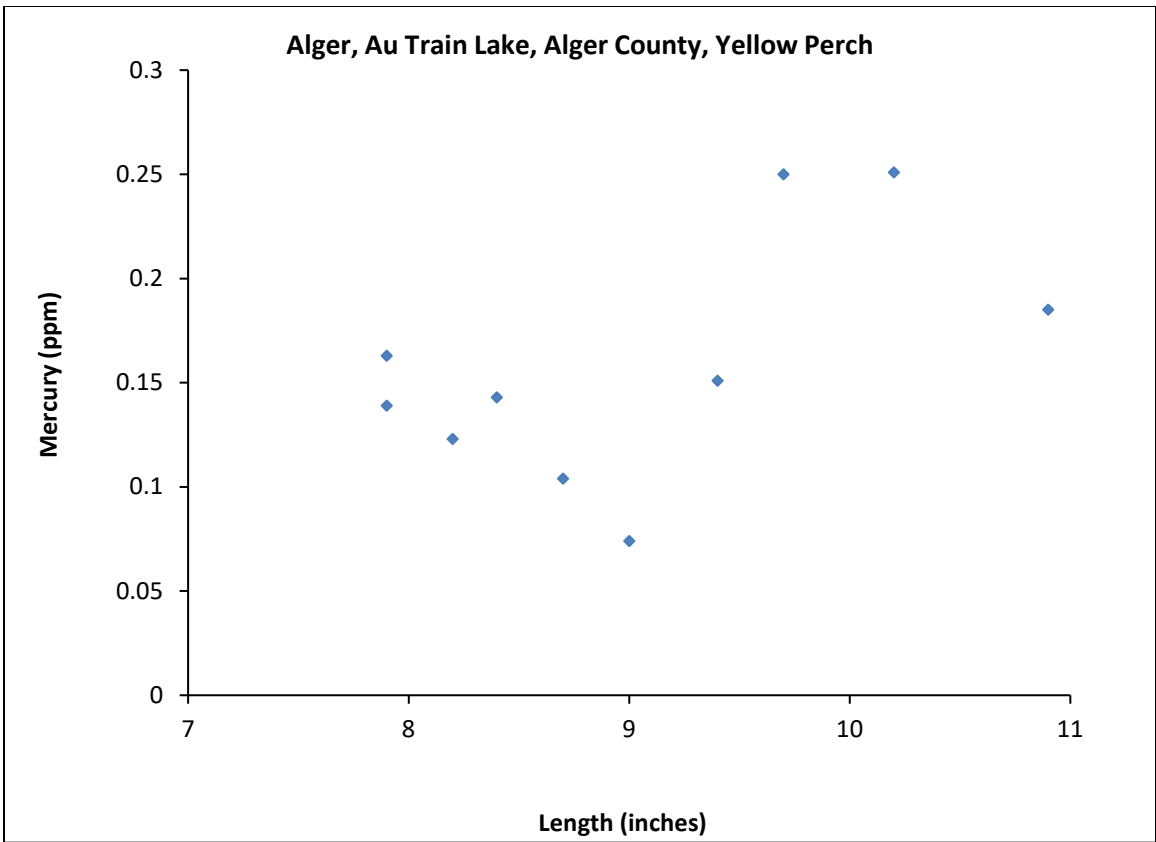
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2005	2005	10	7.9	na	7.9	10.9
Datasets available: 2005						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.16	0.07	0.25	0.20	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.314	0.241				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

**Existing Advisory:** Women and children should not eat more than one meal per week of Au Train Lake yellow perch larger than 12 inches due to mercury.

**Recommendation:** No one should eat more than 4 meals per month of Au Train Lake yellow perch due to mercury.



**Walleye**

**Beaver Lake**

**Alger County**

**Hg Analysis:**

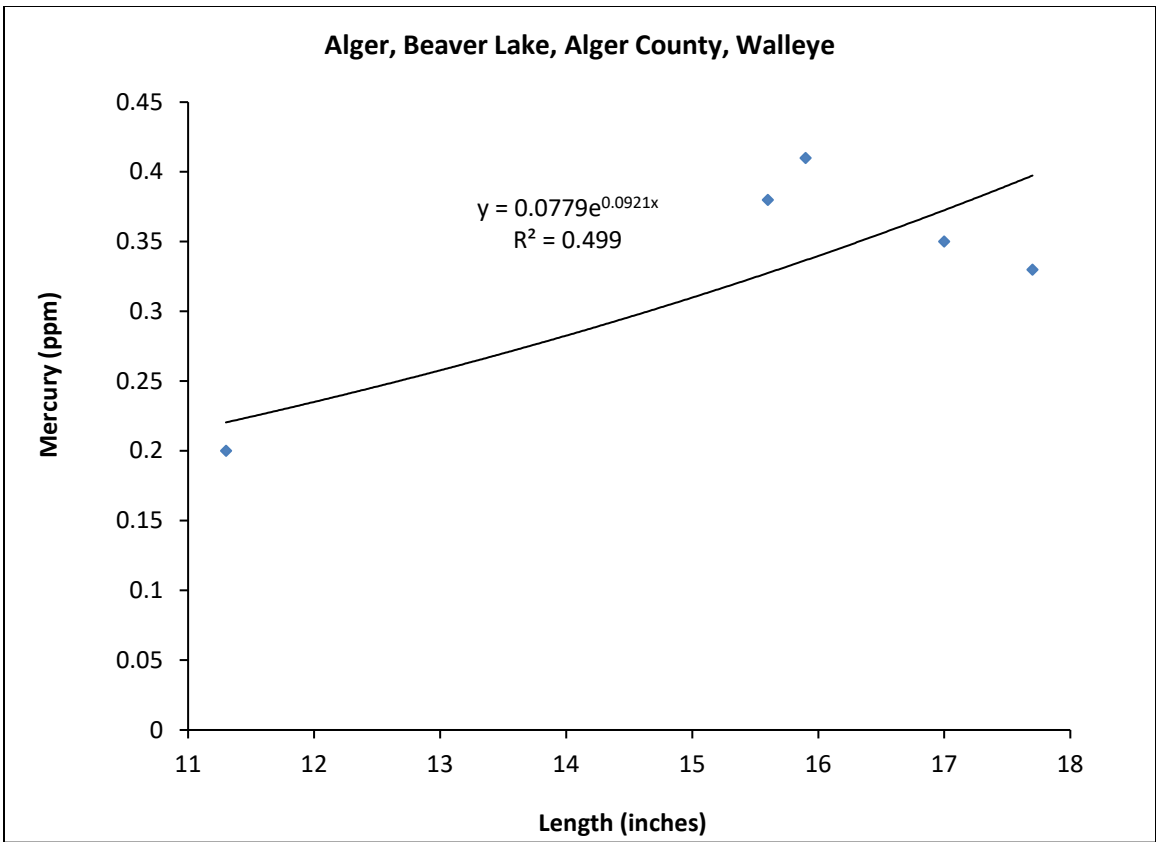
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples		Meal Category
Earliest	Most Recent				Min	Max	
2003	2003	5	11.3	15	11.3	17.7	
Datasets available: 2003							
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
Mercury	5	0.334	0.200	0.410	0.430	2	
Chemical	Linear Regression	Exponential Regression	Regression was not used because the slope is determined by one data point.				
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	0.578	0.660					

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples		Meal Category
Earliest	Most Recent				Min	Max	
--	--	--	--	--	--	--	
Datasets available: --							
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
PCB	0	na	--	--	--	--	
DDT	0	na	--	--	--	--	
Chlordane	0	na	--	--	--	--	
Toxaphene	0	na	--	--	--	--	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
<b>Final meal category based on UCL:</b>							<b>2</b>

**Existing Advisory:** Beaver Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of Beaver Lake walleye larger than 20 inches or more than 2 meals per month of those fish smaller than 20 inches due to mercury. Statewide length break applied as the size of the fish was limited.



**Yellow Perch**

**Beaver Lake**

**Alger County**

**Hg Analysis:**

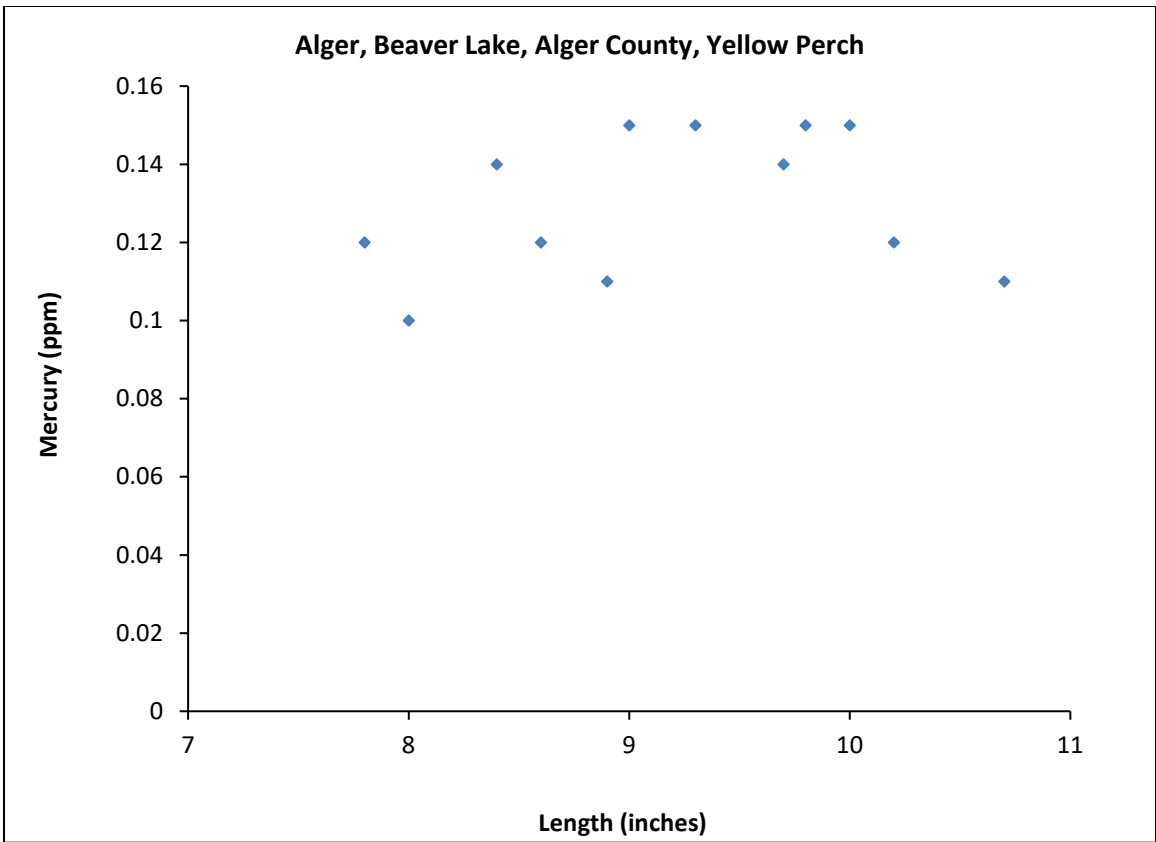
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2003	2003	12	7.8	na	7.8	10.7
Datasets available: 2003						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	12	0.13	0.10	0.15	0.14	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.059	0.060				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

**Existing Advisory:** Beaver Lake yellow perch are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 4 meals per month of Beaver Lake yellow perch due to mercury.



**Northern Pike**

**Deer Lake**

**Alger County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2004	2004	10	23.4	24	23.4	28
Datasets available: 2004						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	1.23	0.73	1.84	1.50	0.5
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.074	0.060				

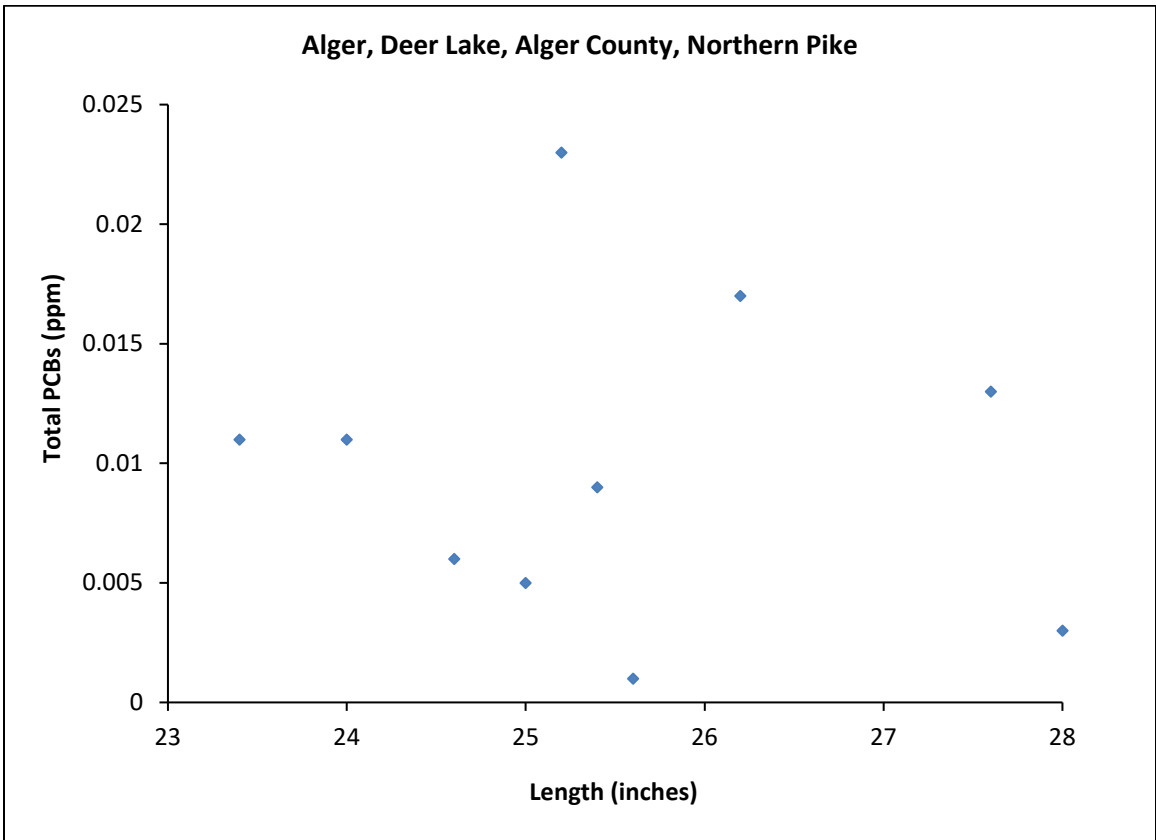
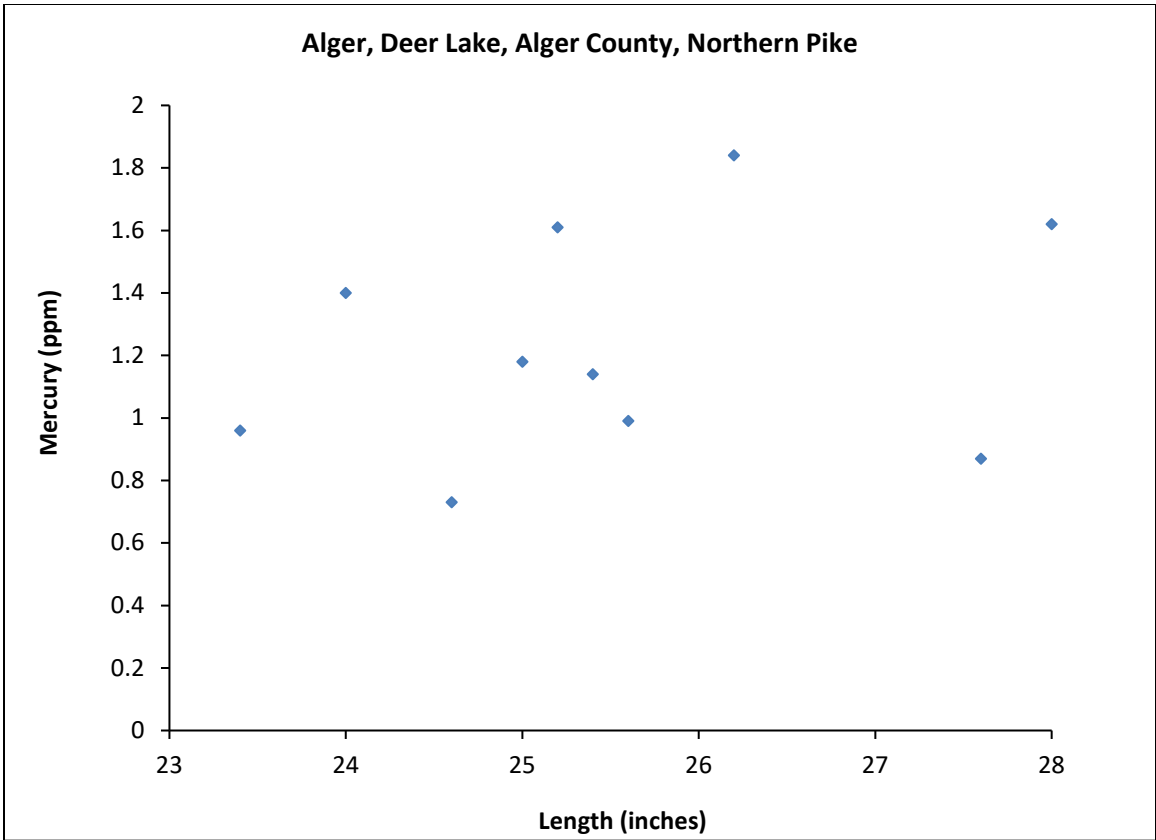
**Organics Analysis:**

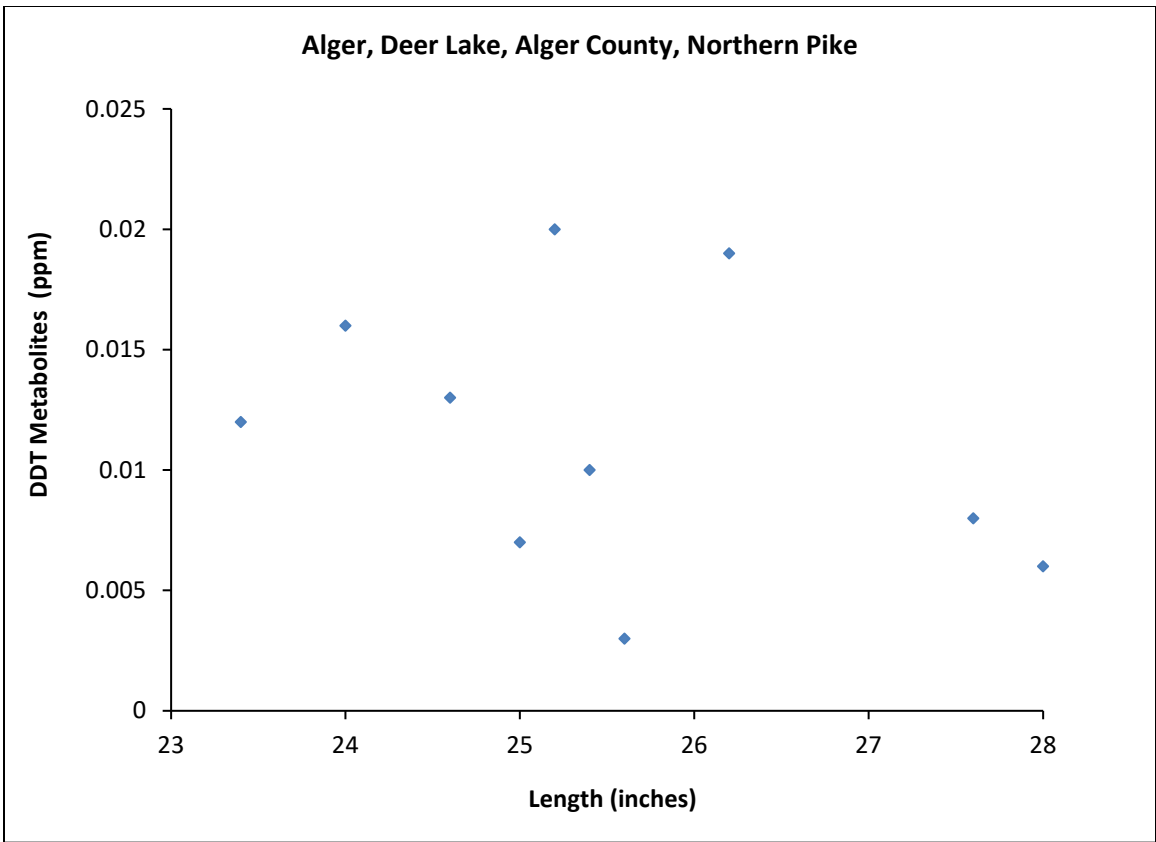
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2004	2004	10	23.4	24	23.4	28
Datasets available: 2004						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	0.01	0.001	0.02	0.01	16
DDT	10	0.01	0.003	0.02	0.02	16
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.009	0.030				
DDT	0.123	0.130				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>0.5</b>

**Existing Advisory:** Women and children should not eat more than one meal per month of Deer Lake northern pike smaller than 26 inches and no one should eat any Deer Lake northern pike larger than 26 inches due to mercury.

**Recommendation:** No one should eat more than 6 meals per year of Deer Lake (Alger County) northern pike less than 30 inches or any of those fish over 30 inches due to mercury. Statewide length break applied as the size of the fish was limited.







**Northern Pike**

**Echo Lake**

**Alger County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1995	1995	10	23.2	24	23.2	31.2
Datasets available: 1995						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.64	0.40	1.03	0.81	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.704	0.683				

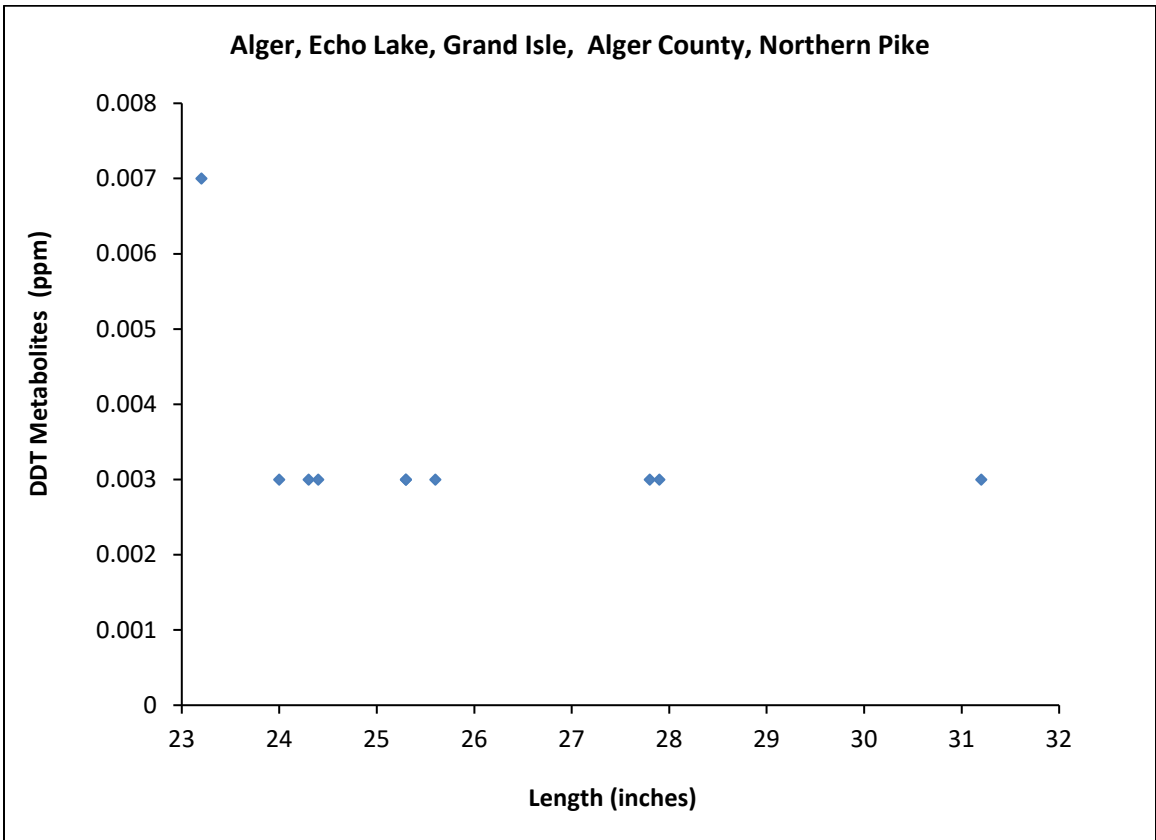
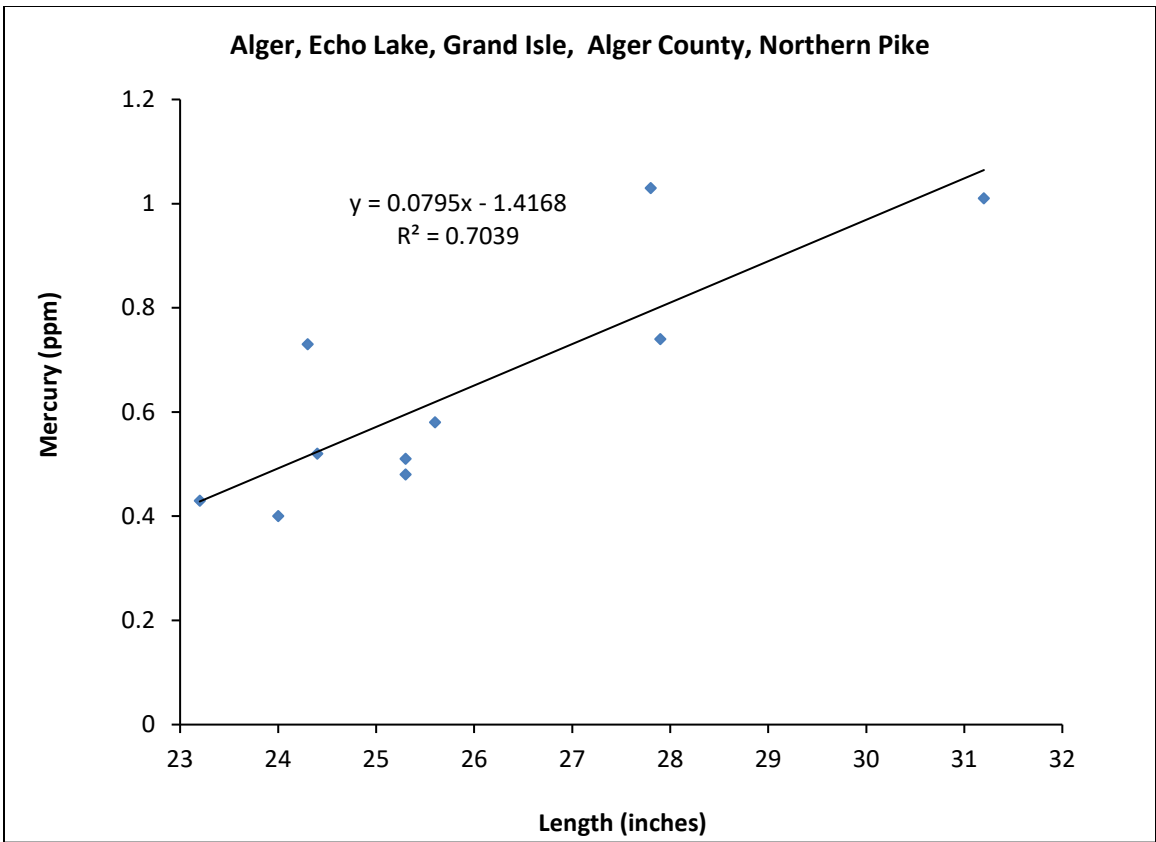
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1995	1995	10	23.2	24	23.2	31.2
Datasets available: 1995						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	ND	--	--	--	--
DDT	10	0.003	0.003	0.007	0.004	16
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	0.155	0.155				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Echo Lake northern pike are covered by the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of Echo Lake northern pike smaller than 32 inches or more than 6 meals per year of those fish larger than 32 inches due to mercury. Length break based on regression estimates.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
24	0.491	2
25	0.571	1
26	0.650	1
27	0.730	1
28	0.809	1
29	0.889	1
30	0.968	1
31	1.048	1
32	1.127	0.5
<i>Shaded area denotes extrapolated estimates</i>		



**Yellow Perch**

**Echo Lake**

**Alger County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1995	1995	9	7.1	na	7.1	11.8
Datasets available: 1995						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	9	0.26	0.08	0.53	0.37	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.704	0.611				

**Organics Analysis:**

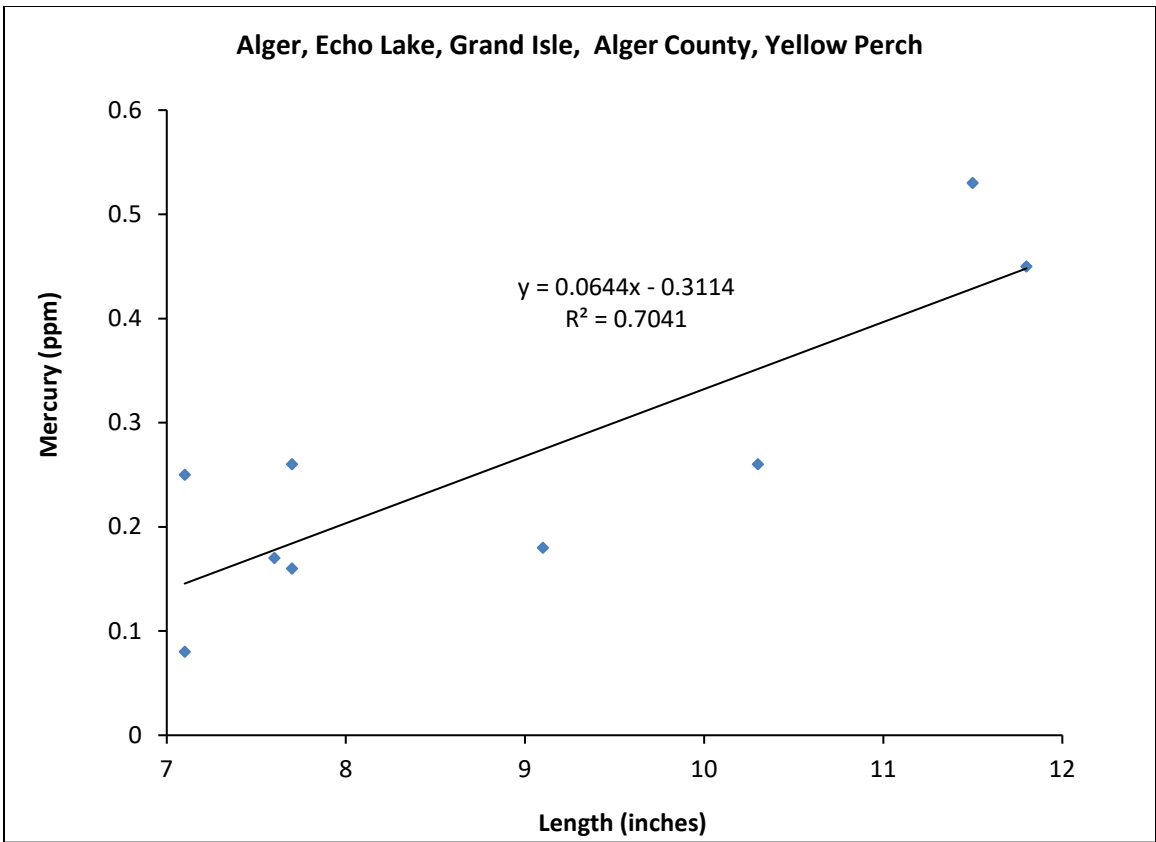
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1995	1995	9	7.1	na	7.1	11.8
Datasets available: 1995						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	9	ND	--	--	--	--
DDT	9	ND	--	--	--	--
Chlordane	9	ND	--	--	--	--
Toxaphene	9	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Echo Lake yellow perch greater than 9 inches in length are covered by the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 4 meals per month of Echo Lake yellow perch smaller than 9 inches or more than 2 meals per month of those fish larger than 9 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
6	0.075	12
7	0.139	4
8	0.204	4
9	0.268	4
10	0.333	2
11	0.397	2
12	0.461	2
13	0.526	2
14	0.590	1

*Shaded area denotes extrapolated estimates*



**Lake Trout**

**Grand Sable Lake**

**Alger County**

**Hg Analysis:**

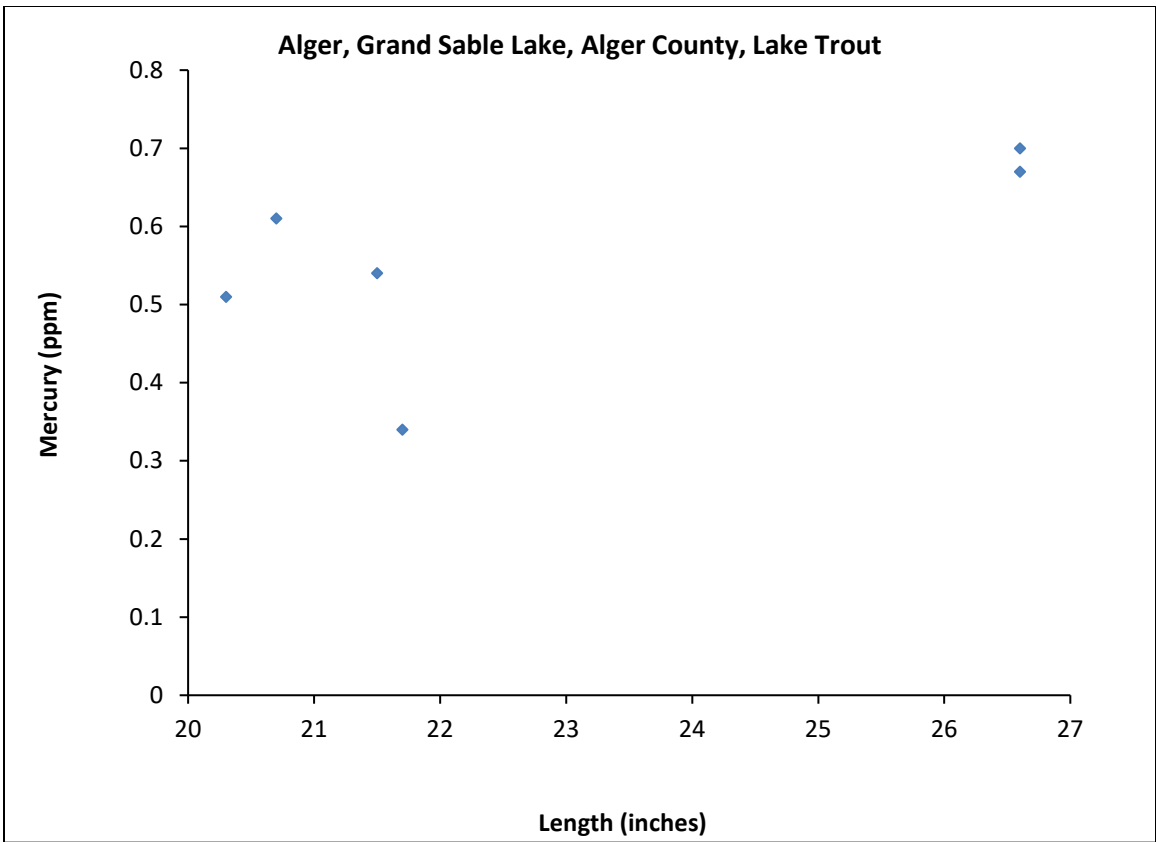
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1987	1987	6	20.3	15	20.3	26.6
Datasets available: 1987						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.56	0.34	0.70	0.70	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.422	0.329				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available:						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** There are no current consumption advisories for Grand Sable Lake lake trout.

**Recommendation:** No one should eat more than 1 meal per month of Grand Sable Lake lake trout due to mercury.





**Northern Pike**

**Grand Sable Lake**

**Alger County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1987	1987	3	17.9	24	17.9	37.8
Datasets available: 1987						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	3	0.740	0.230	1.390	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Grand Sable Lake northern pike are covered under the statewide mercury consumption advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. Statewide guidelines apply. No one should eat more than 1 meal per month of northern pike larger than 30 inches or more than 2 meals per month of northern pike smaller than 30 inches in length.

**Largemouth  
& Smallmouth Bass  
Hg & Se Analysis:**

**Kingston Lake**

**Alger County**

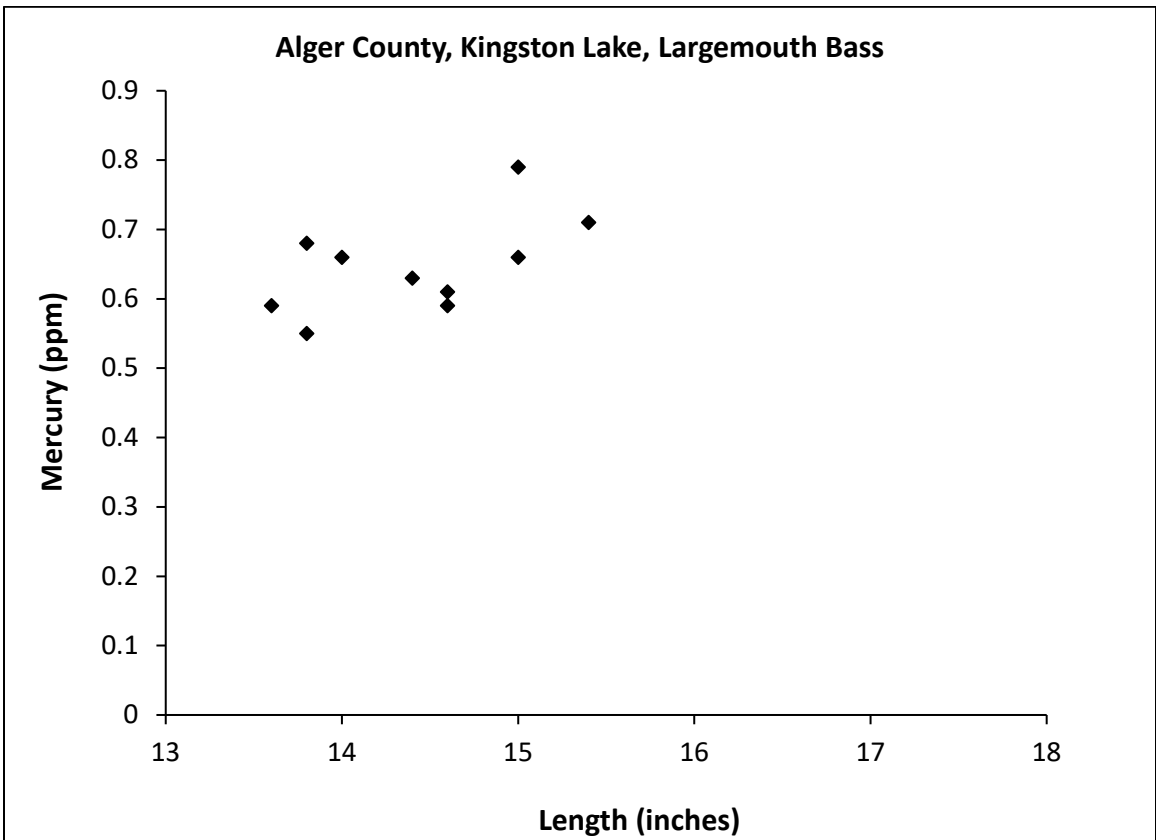
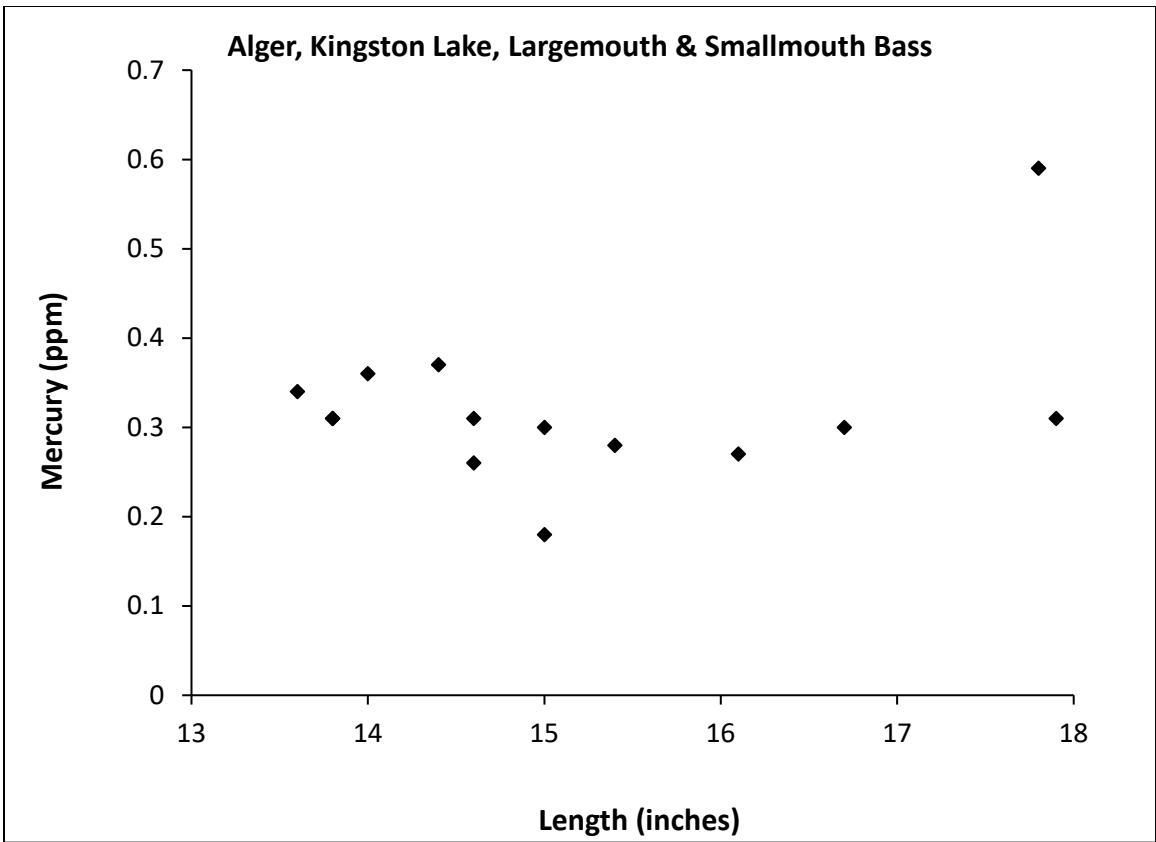
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
2003	2008	12	13.6	14	13.6	17.9	
Datasets available: 2003, 2008							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
Mercury	14	0.32	0.18	0.59	0.37	2	
Selenium	10	0.65	0.55	0.79	0.70	16	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	0.117	0.069					
Selenium	0.326	0.329					

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
--	--	--	--	--	--	--	
Datasets available: --							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
PCB	0	na	--	--	--	--	
DDT	0	na	--	--	--	--	
Chlordane	0	na	--	--	--	--	
Toxaphene	0	na	--	--	--	--	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
<b>Final meal category based on UCL:</b>							<b>2</b>

**Existing Advisory:** Kingston Lake largemouth bass are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 2 meals per month of largemouth or smallmouth bass smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches. Statewide length break applied as the size of the fish was limited.



**Muskellunge**

**Kingston Lake**

**Alger County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
2003	2003	2	30.7	42	30.7	30.8
Datasets available: 2003						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	2	0.30	0.15	0.45	2.21	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Kingston Lake muskellunge are covered under the statewide mercury consumption advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The statewide advice due to mercury applies to Kingston Lake muskellunge: No one should eat more than 1 meal per month of muskellunge.

**Walleye**

**Kingston Lake**

**Alger County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
2003	2003	4	17.3	15	17.3	24.6	
Datasets available: 2003							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
Mercury	4	0.40	0.14	0.68	0.79	--	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	--	--					

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
--	--	--	--	--	--	--	
Datasets available: --							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
PCB	0	na	--	--	--	--	
DDT	0	na	--	--	--	--	
Chlordane	0	na	--	--	--	--	
Toxaphene	0	na	--	--	--	--	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
<b>Final meal category based on UCL:</b>							--

**Existing Advisory:** Kingston Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The statewide guidelines apply: No one should eat more than 1 meal per month of walleye larger than 20 inches or more than 2 meals per month of walleye smaller than 20 inches.

**Bluegill**

**Little Round Lake**

**Alger County**

**Hg Analysis:**

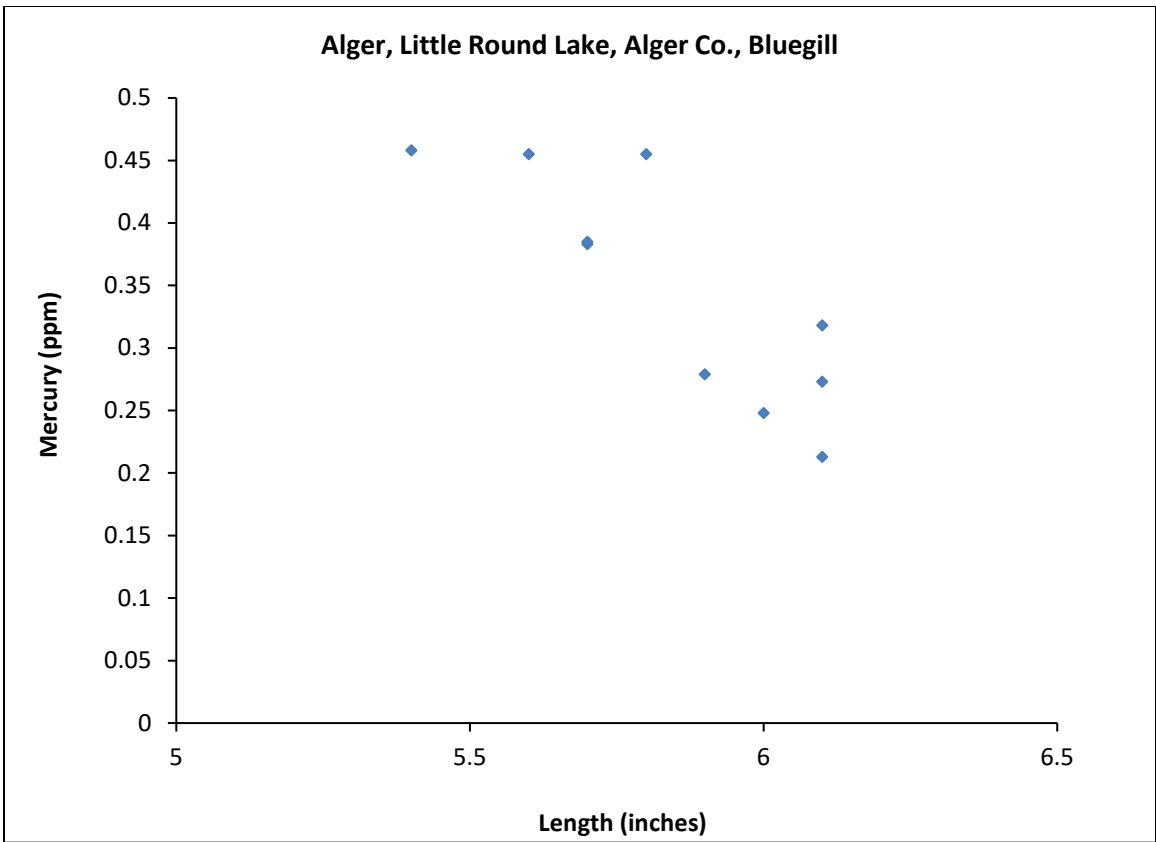
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2006	2006	10	5.4	na	5.4	6.1
Datasets available: 2006						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.35	0.21	0.46	0.41	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.724*	0.700*	*Negative regression			

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** There are no current consumption advisories for Little Round Lake bluegill.

**Recommendation:** No one should eat more than 2 meals per month of Little Round Lake bluegill (sunfish) due to mercury.



**Northern Pike**

**Nawakwa Lake**

**Alger County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)*	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1999	1999	22	11.8	na	11.8	28
Datasets available: 1999						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	22	0.47	0.13	0.96	0.56	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.423	0.576				

**Organics Analysis:**

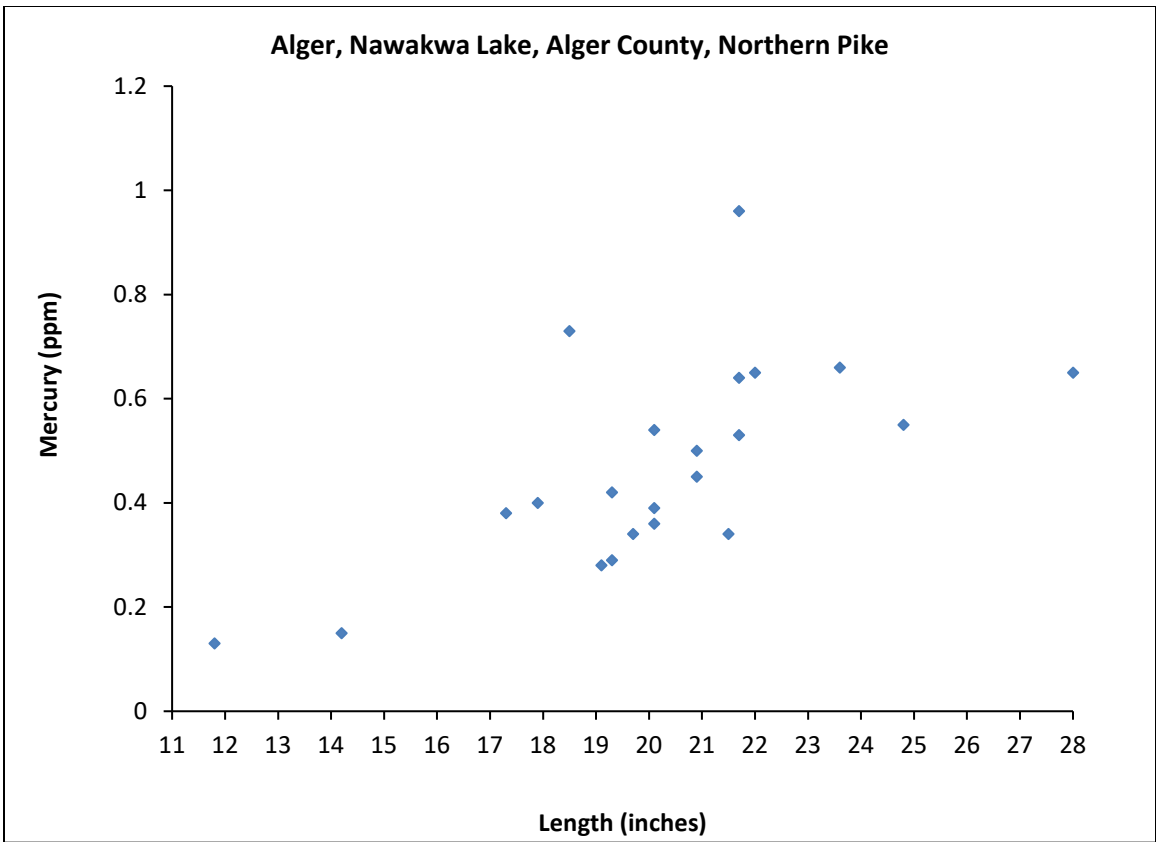
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available:						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

\* - no size limit on northern pike from Nawakwa Lake

**Existing Advisory:** Nawakwa Lake northern pike are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of Nawakwa Lake northern pike less than 30 inches or 6 meals per year of those fish over 30 inches due to mercury. Statewide length break applied as the size of the fish was limited.





**Rock Bass**

**Nawakwa Lake**

**Alger County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2008	2008	10	7.7	na	7.7	10.1
Datasets available: 2008						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.26	0.13	0.45	0.33	2
Selenium	10	0.46	0.35	0.70	0.53	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.629	0.690				
Selenium	0.000	0.007				

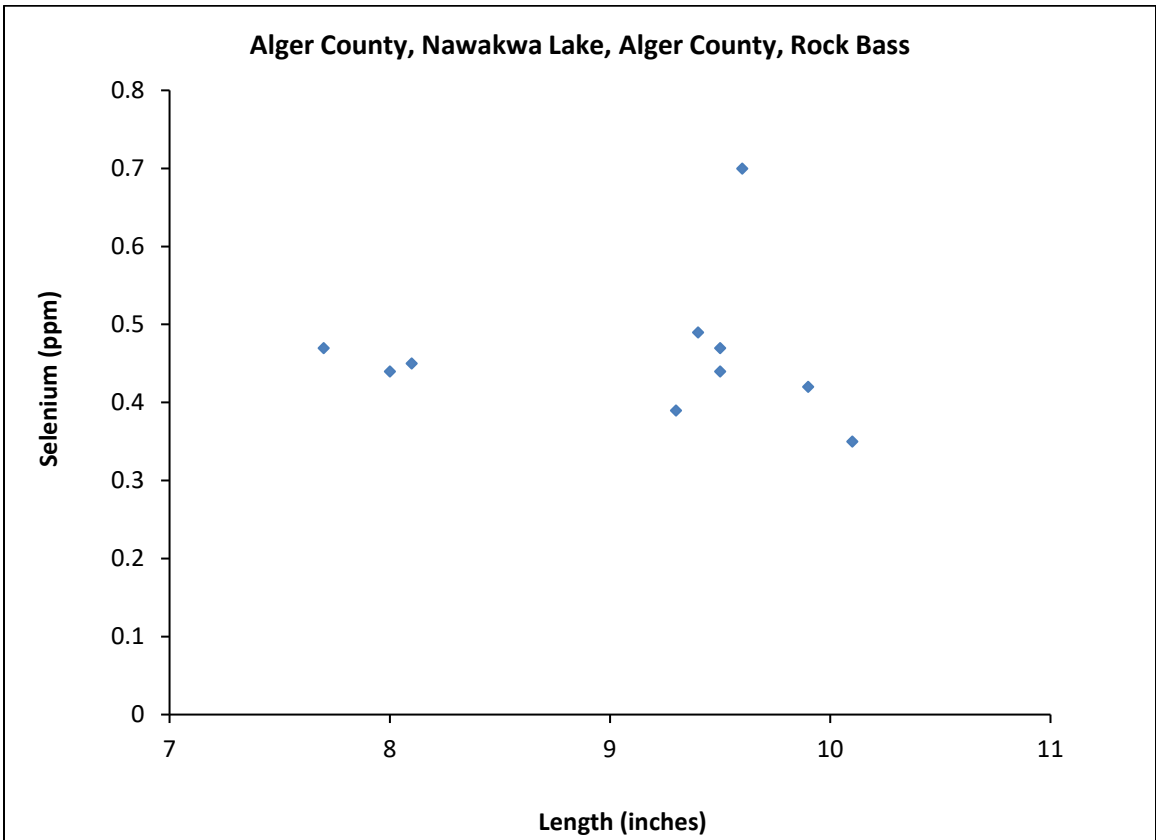
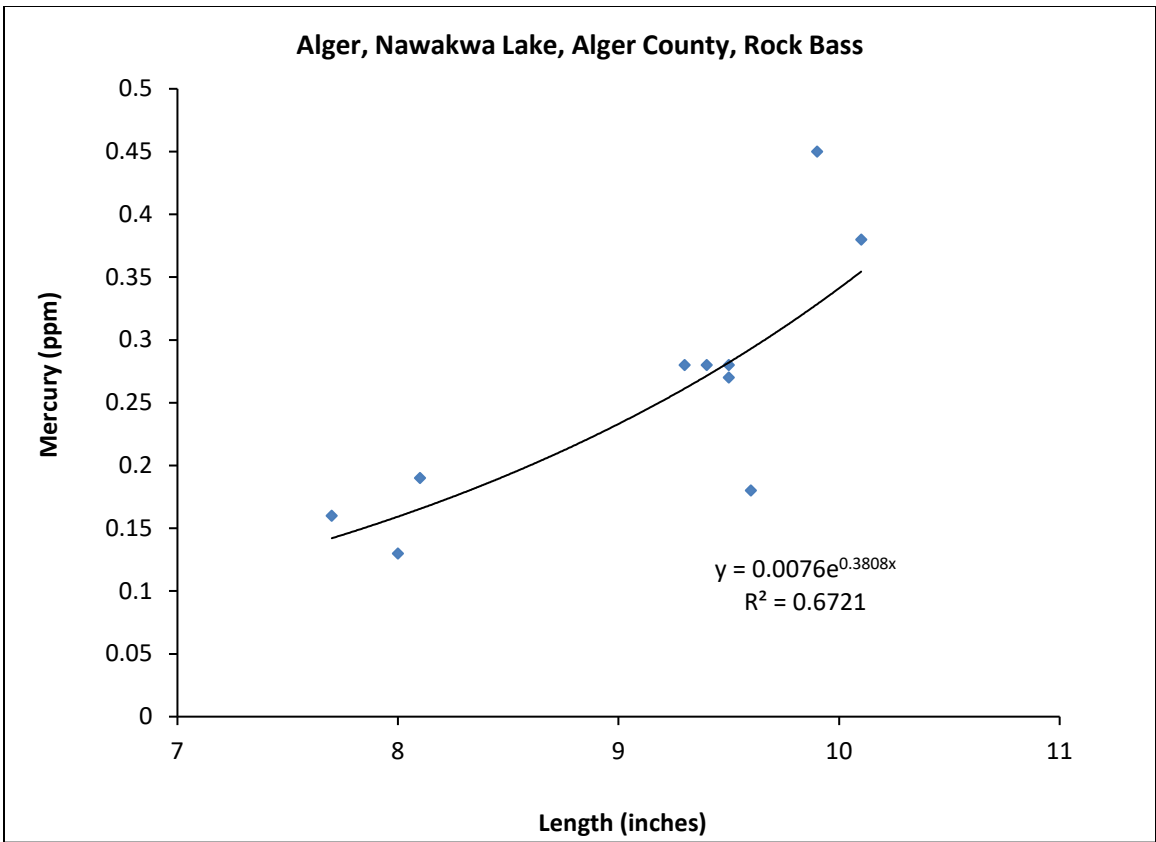
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Kingston Lake rock bass greater than 9 inches in length are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 4 meals per month of Kingston Lake rock bass smaller than 9 inches or more than 2 meals per month of those fish larger than 9 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
6	0.075	12
7	0.109	8
8	0.160	4
9	0.234	4
10	0.342	2
11	0.501	2
12	0.733	1
13	1.073	1
14	1.571	0.5
<i>Shaded area denotes extrapolated estimates</i>		



**Walleye**

**Nawakwa Lake**

**Alger County**

**Hg Analysis:**

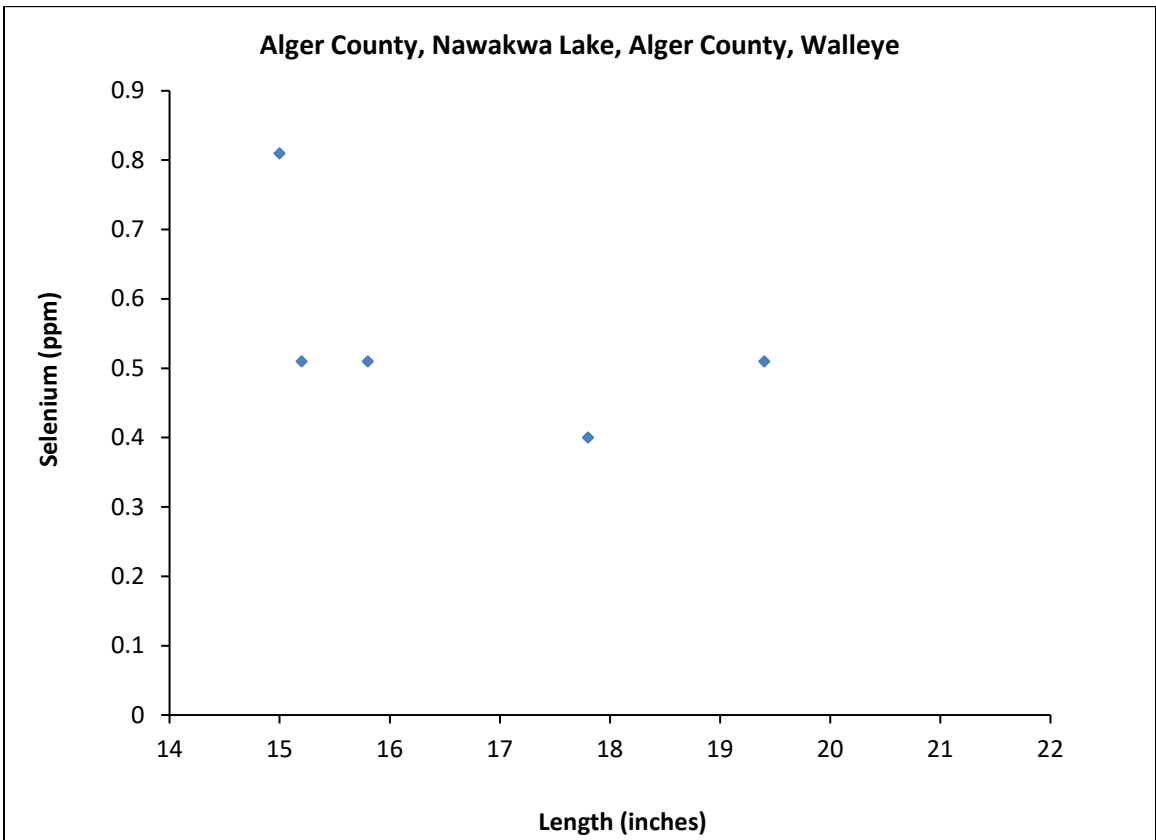
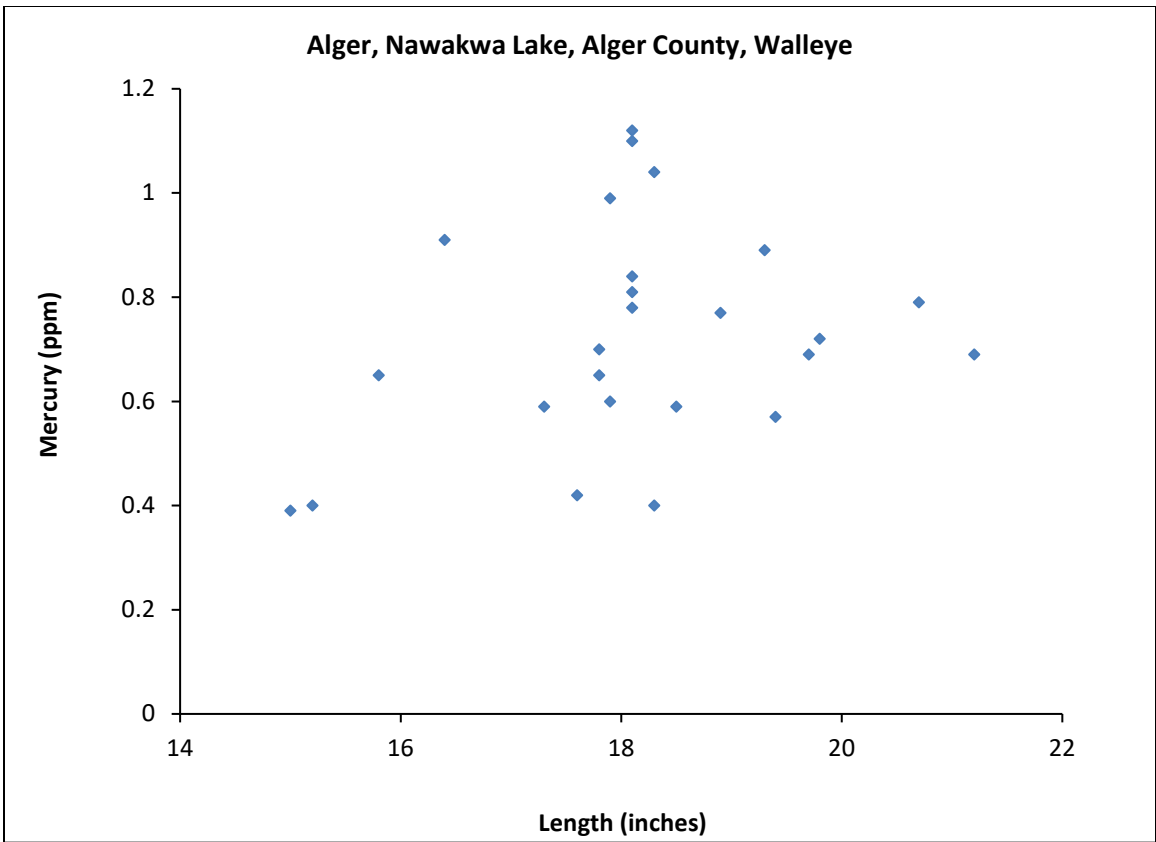
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1999	2008	25	15	15	21.2	
Datasets available: 1999, 2008						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	25	0.72	0.39	1.12	0.81	1
Selenium	5	0.55	0.40	0.81	0.74	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.076	0.121				
Selenium	0.280	0.285				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Nawakwa Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of Nawakwa Lake walleye less than 20 inches or 6 meals per year of those fish greater than 20 inches due to mercury.



**Northern Pike**

**Sixteenmile Lake**

**Alger County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		
Earliest	Most Recent						
2019	2019	10	18.2	NA*	18.2	24.1	
Datasets available: 2019							
Chemical	Sample Size (Legal)	Mean (ppm)		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.574		0.350	1.000	0.737	1
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	0.496	0.485					

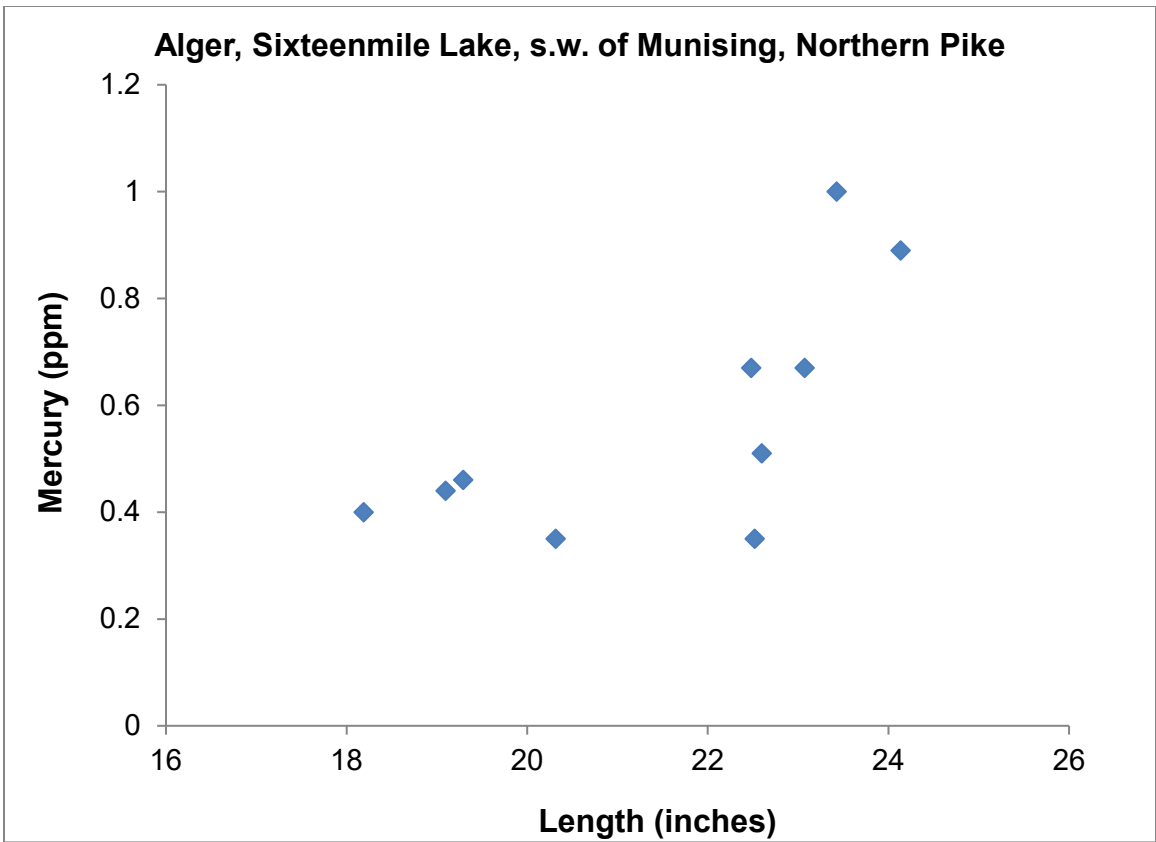
\*Sixteenmile Lake is a water body where up to 5 Northern Pike of any size may be taken with only 1 greater than 24 inches allowed in the daily possession limit.

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		
Earliest	Most Recent						
Datasets available:							
Chemical	Sample Size (Legal)	Mean (ppm)		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--		--	--	--	--
DDT	0	--		--	--	--	--
Chlordane	0	--		--	--	--	--
Toxaphene	0	--		--	--	--	--
PFOS	0	--		--	--	--	--
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
PFOS	--	--					
<b>Final meal category based on UCL:</b>							<b>1</b>

**Existing MDHHS Advisory:** Northern Pike from Sixteenmile Lake in Alger County are covered under the statewide mercury guidance. No one should eat more than 2 meals per month of northern pike smaller than 30 inches in length or no more than 1 meal per month of fish larger than 30 inches in length from due to mercury.

**Recommendation:** No one should eat more than 1 meal per month of northern pike of any size from Sixteenmile Lake in Alger County due to mercury.



# Baraga County



**Largemouth Bass**

**Aligan Lake  
(Connected to Crooked Lake)**

**Baraga County**

**Hg Analysis:**

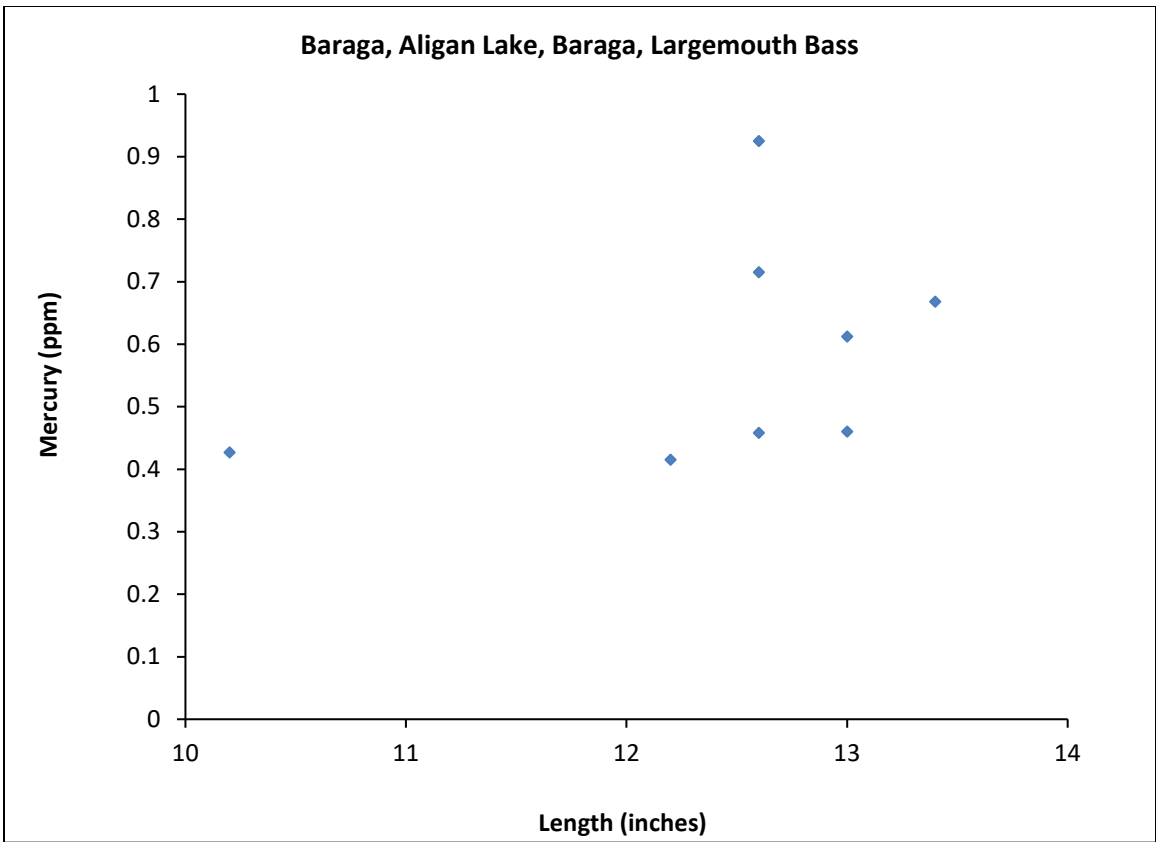
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
2005	2005	8	10.2	14	10.2	13.4
Datasets available: 2005						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	8	0.59	0.42	0.92	0.74	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.149	0.193				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Aligan Lake largemouth bass are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of Aligan Lake largemouth or smallmouth bass smaller than 18 inches or more than 6 meals per year of those fish larger than 18 inches due to mercury. Statewide length break applied. The size range of fish in this sample set is limited and comprised of sublegal size samples.



**Northern Pike**

**Aligan Lake  
(Connected to Crooked Lake)**

**Baraga County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
2005	2005	3	26.8	24	26.8	33.5
Datasets available: 2005						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	3	0.88	0.51	1.12	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** No one should eat Aligan Lake northern pike due to mercury.

**Recommendation:** No one should eat more than 1 meal per month of Aligan Lake northern pike smaller than 30 inches or more than 6 meals per year of those fish larger than 30 inches due to mercury.

*Note: A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The recommendation is one step more restrictive than the statewide guidance based on the mean concentration of the three samples. In addition, this lake has relatively high mercury levels in largemouth bass, which suggests a higher than typical methylmercury contamination.*

**Yellow Perch**

**Aligan Lake  
(Connected to Crooked Lake)**

**Baraga County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2005	2005	3	7.9	na	7.9	10.2
Datasets available: 2005						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	3	0.362	0.188	0.468	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Legal Size Range of Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Women and children should not eat more than one meal per week of Aligan Lake yellow perch less than 8 inches or more than one meal per month of yellow perch between 8 and 10 inches and no one should eat those fish larger than 10 inches due to mercury.

**Recommendation:** No one should eat more than 2 meals per month of Aligan Lake yellow perch due to mercury.

*Note: A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The recommendation is one step more restrictive than the statewide guidance based on the mean concentration of the three samples. In addition, this lake has relatively high mercury levels in largemouth bass, which suggests a higher than typical methylmercury contamination.*

**Northern Pike**

**Beaufort Lake**

**Baraga County**

**Hg Analysis:**

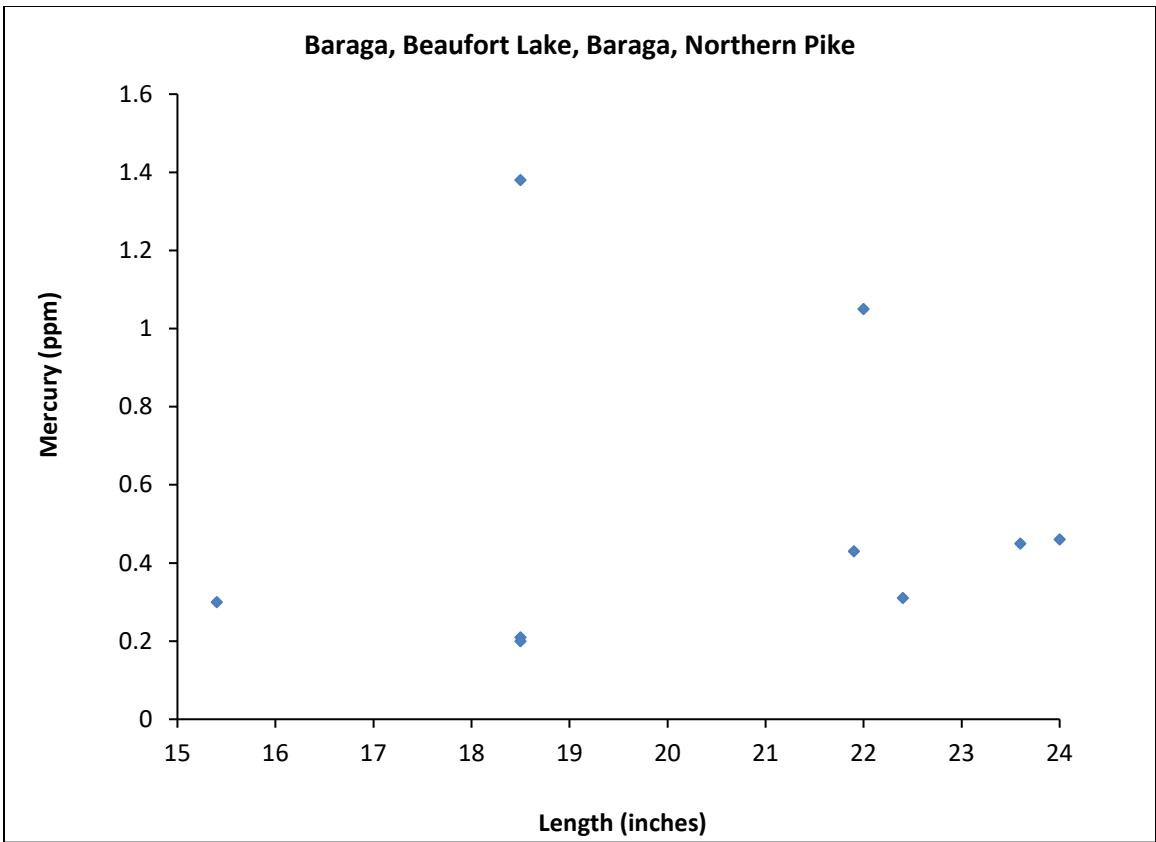
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
1987	1987	9	15.4	24	15.4	24
Datasets available: 1987						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	9	0.53	0.20	1.38	0.85	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.003	0.054				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Beaufort Lake northern pike are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of Beaufort Lake northern pike smaller than 30 inches or more than 6 meals per year of those fish larger than 30 inches due to mercury. Statewide length break was applied. Size range of fish in this sample set is limited and includes sublegal length samples.



**Walleye**

**Beaufort Lake**

**Baraga County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
1987	1987	9	9.4	15	9.4	21.3
Datasets available: 1987						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	9	0.340	0.170	0.720	0.470	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.617	0.742				

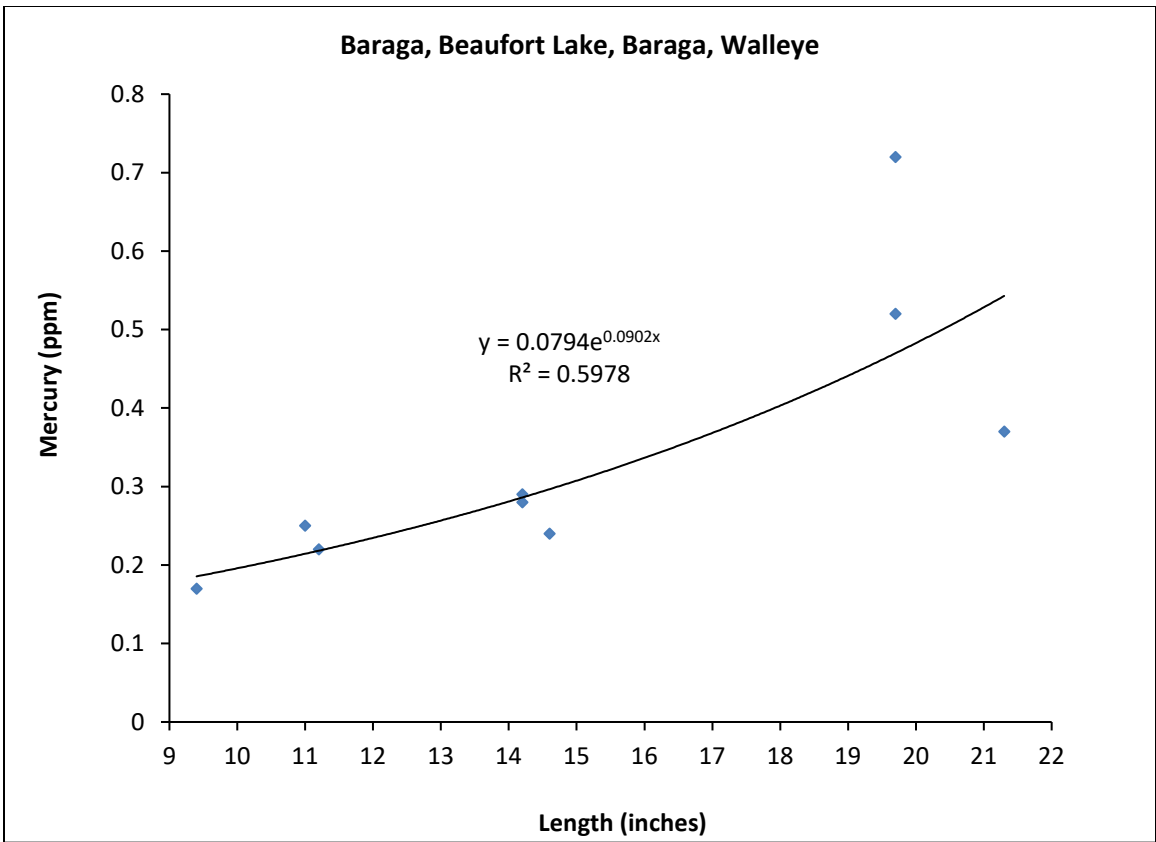
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Beaufort Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of walleye larger than 22 inches or more than 2 meals per month of walleye smaller than 22 inches due to mercury. Length break based on regression.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
14	0.28	2
15	0.31	2
18	0.40	2
19	0.44	2
20	0.48	2
21	0.53	2
22	0.58	1
<i>Shaded area denotes extrapolated estimates</i>		





**Northern Pike**

**Craig Lake**

**Baraga County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
1991	2005	11	18.1	24	24	39
Datasets available: 1991, 2005						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	9	1.44	0.84	3.52	2.10	0.5
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.602	0.756				

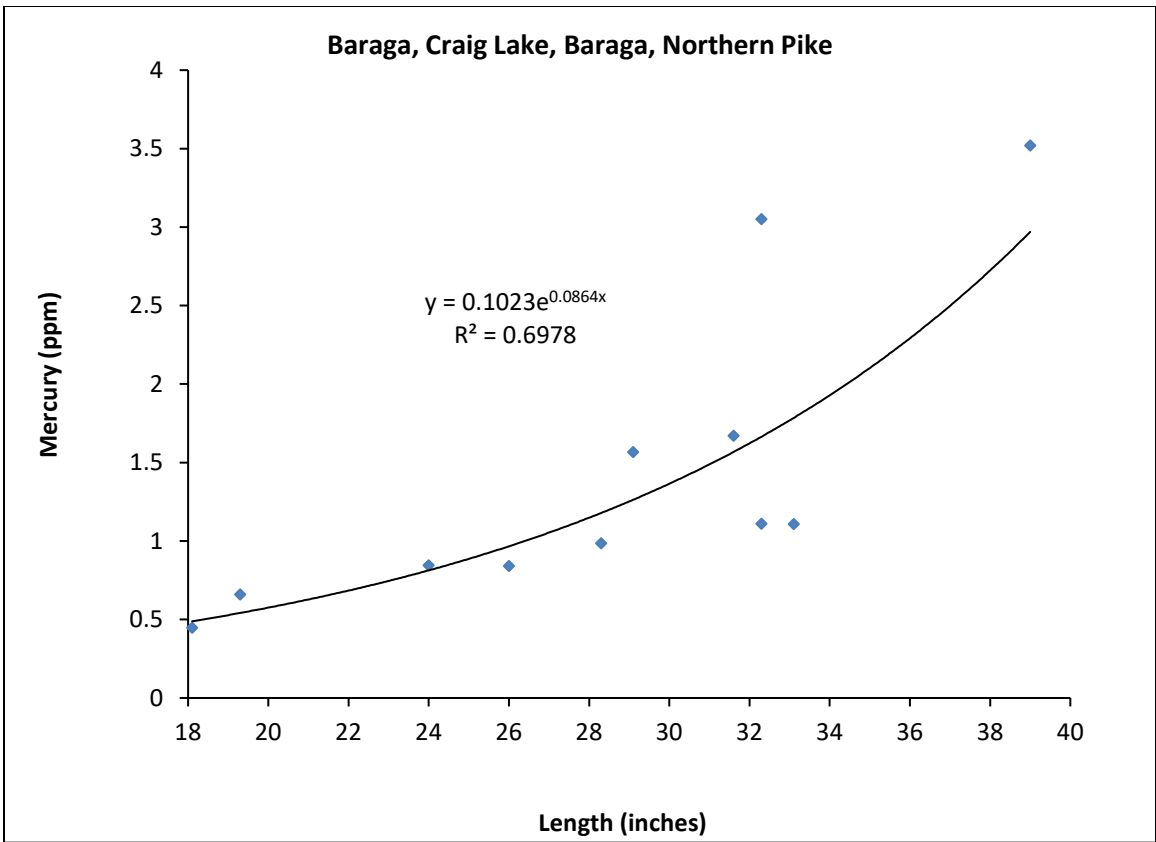
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
1991	1991	4	19.3	24	18.1	32.3
Datasets available: 1991						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	4	ND	--	--	--	--
DDT	4	ND	--	--	--	--
Chlordane	4	ND	--	--	--	--
Toxaphene	4	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>0.5</b>

**Existing Advisory:** Women and children should eat no more than one meal per month of Craig Lake northern pike between smaller than 30 inches and no one should eat those fish larger than 30 inches due to mercury.

**Recommendation:** No one should eat more than 6 meals per year of Craig Lake northern pike smaller than 34 inches and no one should eat any of those fish larger than 34 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
24	0.81	1
26	0.97	1
28	1.15	0.5
30	1.37	0.5
32	1.62	0.5
34	1.93	0.5
36	2.29	0
38	2.73	0
<i>Shaded area denotes extrapolated estimates</i>		



**Walleye**

**Craig Lake**

**Baraga County**

**Hg Analysis:**

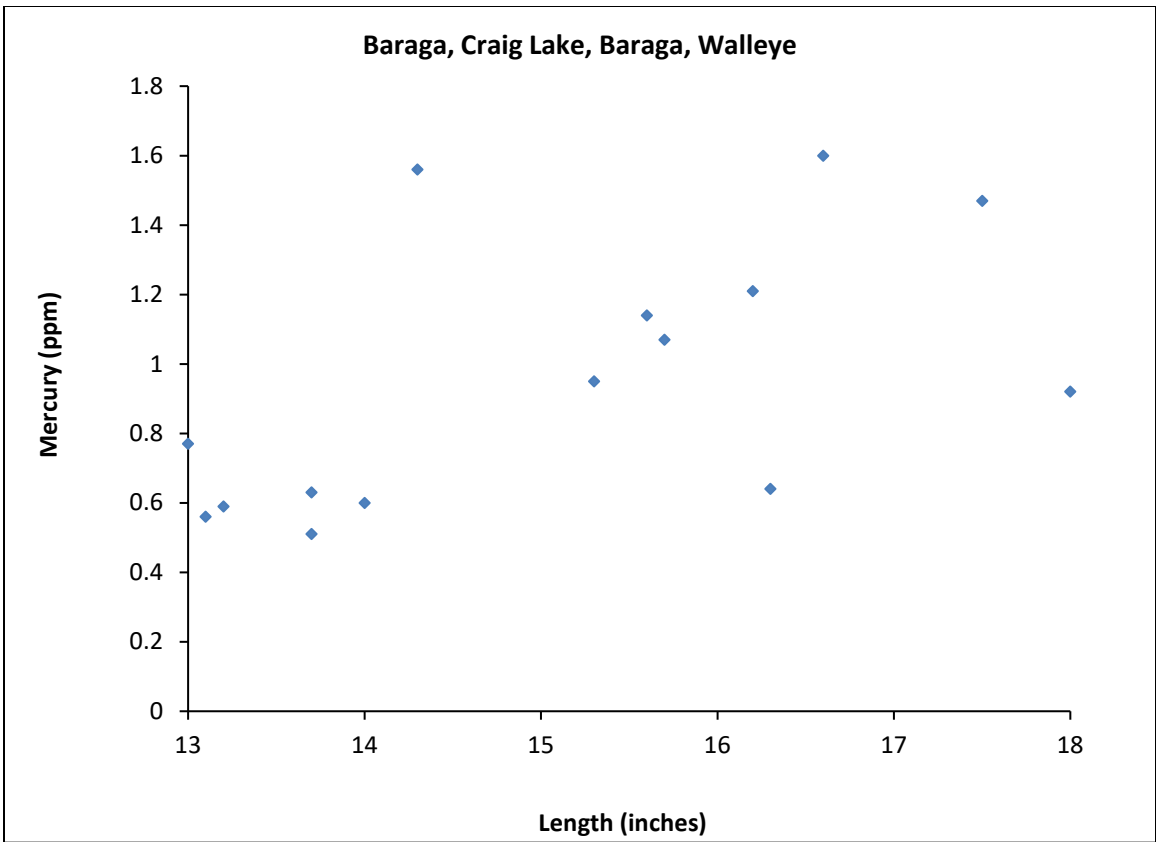
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1989	1991	15	13	15	15.3	18
Datasets available: 1989, 1991						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	8	1.12	0.64	1.47	1.38	0.5
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.334	0.383				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1989	1991	15	13	15	15.3	18
Datasets available: 1989, 1991						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	8	ND	--	--	--	--
DDT	8	ND	--	--	--	--
Chlordane	8	ND	--	--	--	--
Toxaphene	8	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>0.5</b>

**Existing Advisory:** Craig Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 6 meals per year of Craig Lake walleye less than 20 inches or any of those fish greater than 20 inches due to mercury. Statewide length break applied.



**Largemouth Bass**

**Crooked Lake**

**Baraga County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
2006	2006	4	13	14	13	13.7
Datasets available: 2006						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	4	0.433	0.270	0.490	--	--
Selenium	4	0.333	0.300	0.380	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				
Selenium	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Crooked Lake largemouth bass are covered under the statewide mercury consumption advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. Statewide guidelines apply: No one should eat more than 2 meals per month of largemouth or smallmouth bass smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches.

**Rock Bass**

**Falls River**

**Baraga County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2021	2021	10	8.2	NA	8.2	10.4
Datasets available: 2021						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.336	0.180	0.630	0.436	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.278	0.370				

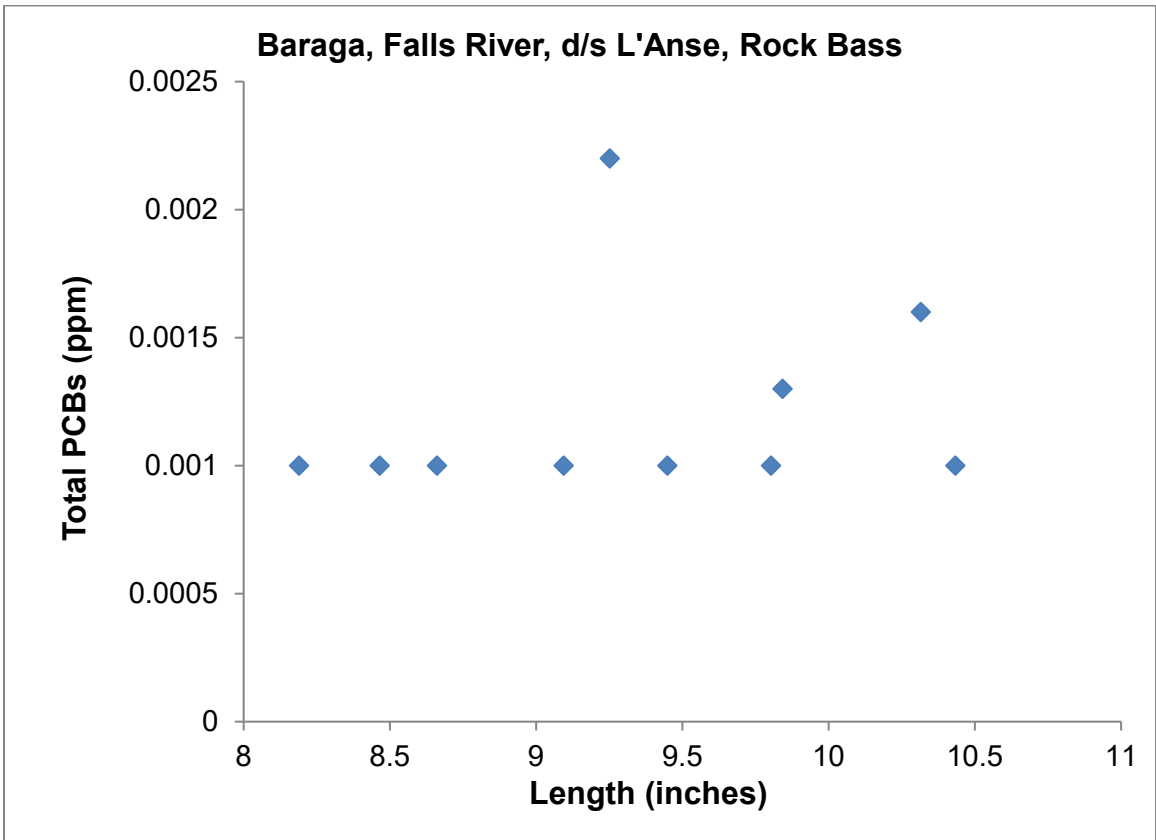
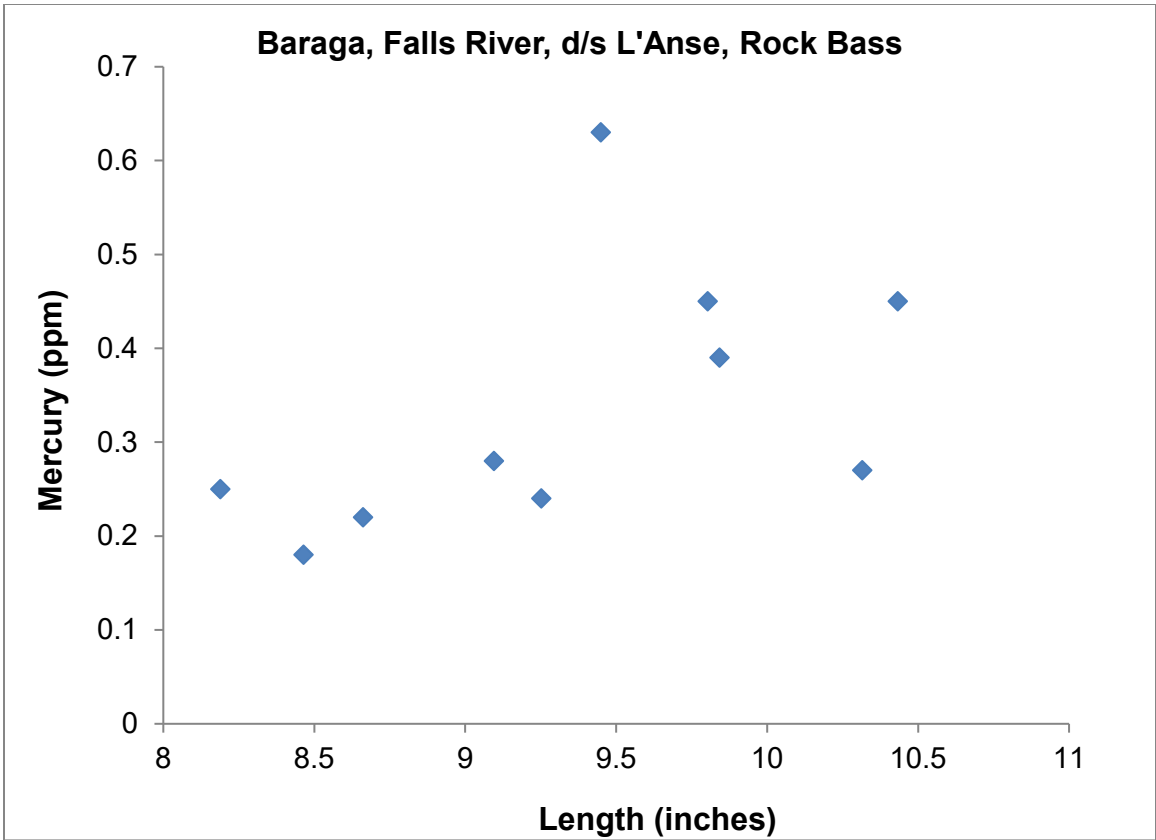
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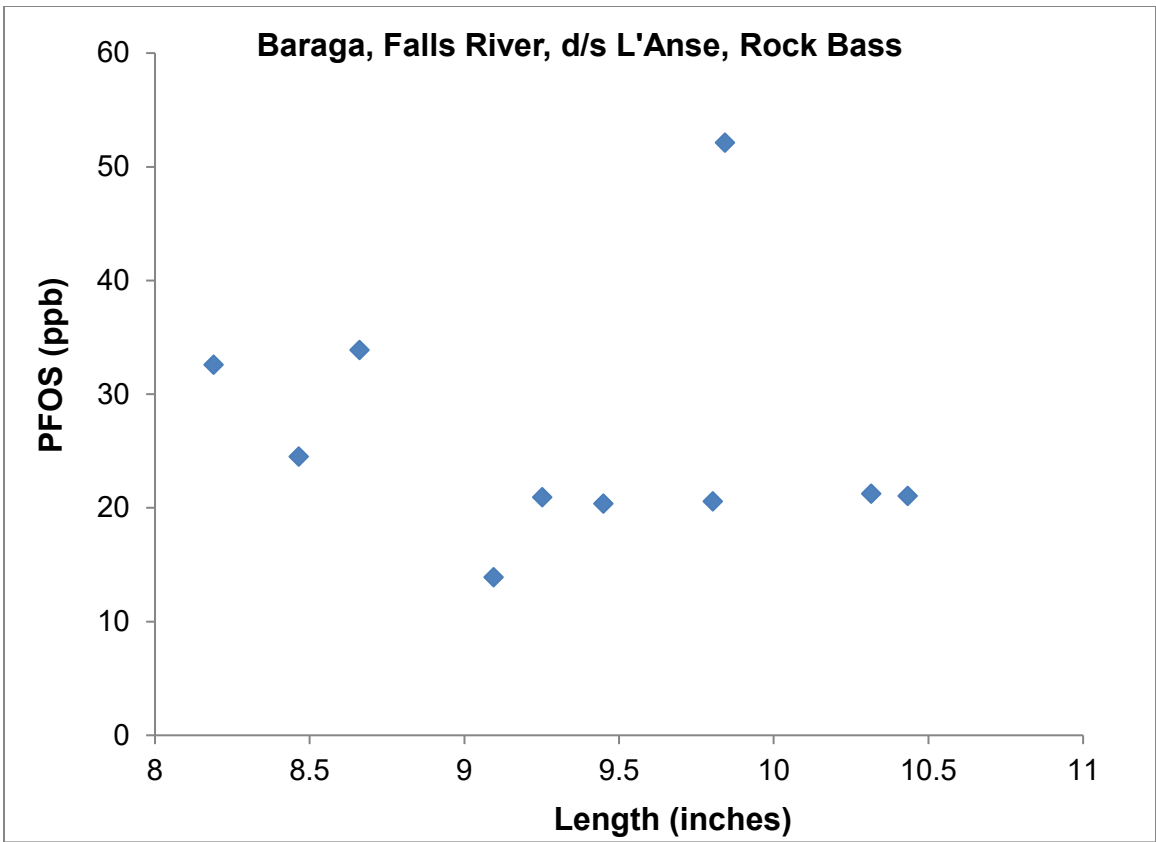
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2021	2021	10	8.2	NA	8.2	10.4
Datasets available: 2021						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	0.001	<0.001	0.002	0.001	16
DDT	10	0.001	<0.001	0.001	0.001	16
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
PFOS	10	26.1 ppb	13.9 ppb	52.1 ppb	33.9 ppb	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.049	0.071				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	0.012	0.028				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing MDHHS Advisory:** Rock bass from the Falls River in Baraga County are currently covered under the statewide mercury guideline. No one should eat more than 4 meals per month of rock bass of any size.

**Recommendation:** No one should eat more than 2 meals per month of rock bass of any size from the Falls River in Baraga County due to mercury. PFOS causes a less restrictive guideline.

Note: The Keweenaw Bay Indian Community collected these fish for EGLE.







**Largemouth Bass**

**King Lake**

**Baraga County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		
Earliest	Most Recent				Min	Max	
2005	2005	8	12.9	14	13.5	15.2	
Datasets available: 2005							
Chemical	Sample Size (Legal)	Mean		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.56		0.52	0.71	0.64	1
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	0.741	0.728					

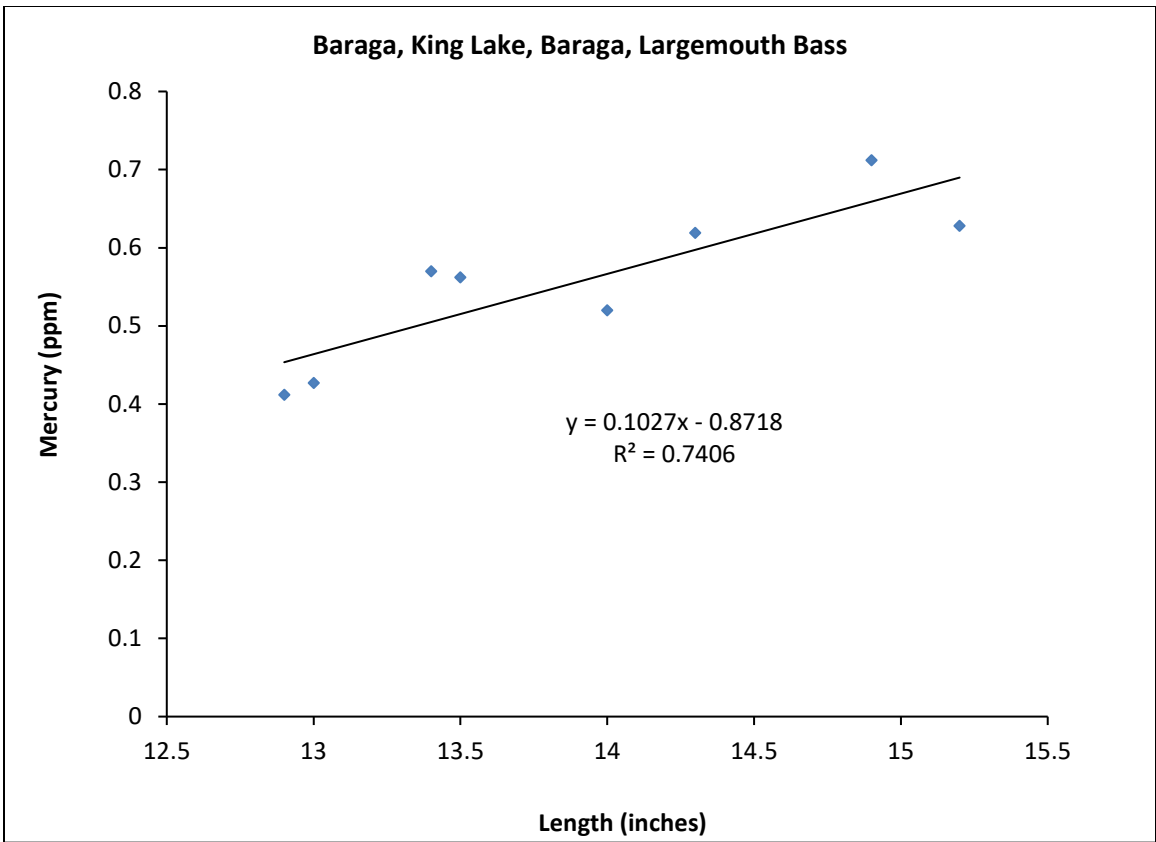
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		
Earliest	Most Recent				Min	Max	
--	--	--	--	--	--	--	
Datasets available: --							
Chemical	Sample Size (All)	Mean (ppm)		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na		--	--	--	--
DDT	0	na		--	--	--	--
Chlordane	0	na		--	--	--	--
Toxaphene	0	na		--	--	--	--
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
<b>Final meal category based on UCL:</b>							<b>1</b>

**Existing Advisory:** King Lake largemouth bass are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of King Lake largemouth or smallmouth bass smaller than 18 inches or more than 6 meals per year of those fish larger than 18 inches due to mercury. Statewide length break applied.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
14	0.566	1
15	0.669	1
16	0.771	1
17	0.874	1
18	0.977	1
19	1.080	1
20	1.182	0.5
21	1.285	0.5
22	1.388	0.5
<i>Shaded area denotes extrapolated estimates</i>		



Northern Pike

Vermilac Lake

Baraga County

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
1988	1988	5	19.7	na*	19.7	22.6
Datasets available: 1988						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	5	0.394	0.330	0.450	0.460	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.169	0.174				

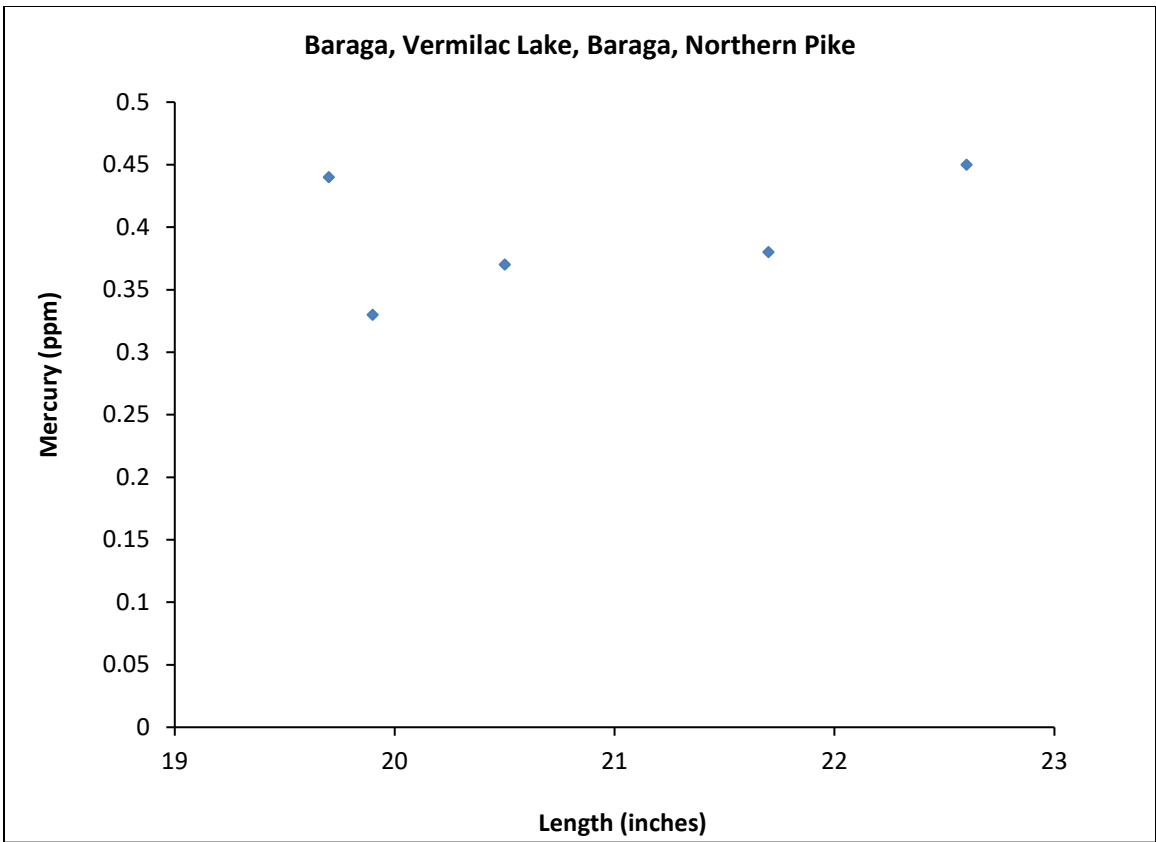
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available:						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

\* - no minimum size limit on northern pike from this lake

**Existing Advisory:** Vermilac Lake northern pike are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of northern pike larger than 30 inches or more than 2 meals per month of northern pike smaller than 30 inches in length due to mercury. Statewide length break was applied. Size range of fish is limited.



**Walleye**

**Vermilac Lake**

**Baraga County**

**Hg Analysis:**

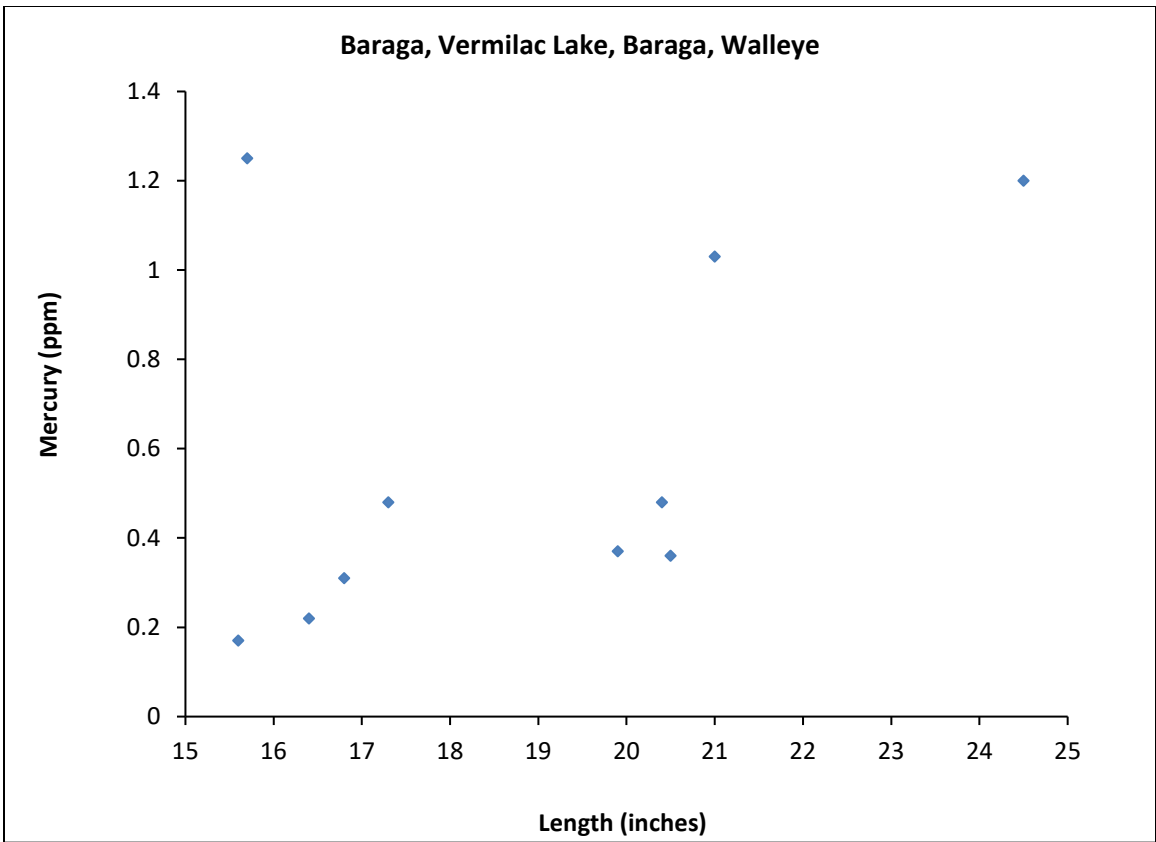
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
2001	2001	10	15.6	15	15.6	24.5
Datasets available: 2001						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.59	0.17	1.25	0.88	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.180	0.257				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Vermilac Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of Vermilac Lake walleye due to mercury.



**Yellow Perch**

**Vermilac Lake**

**Baraga County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	5	7.5	na	7.5	9.6
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	5	0.40	0.32	0.46	0.47	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.650	0.662				

**Organics Analysis:**

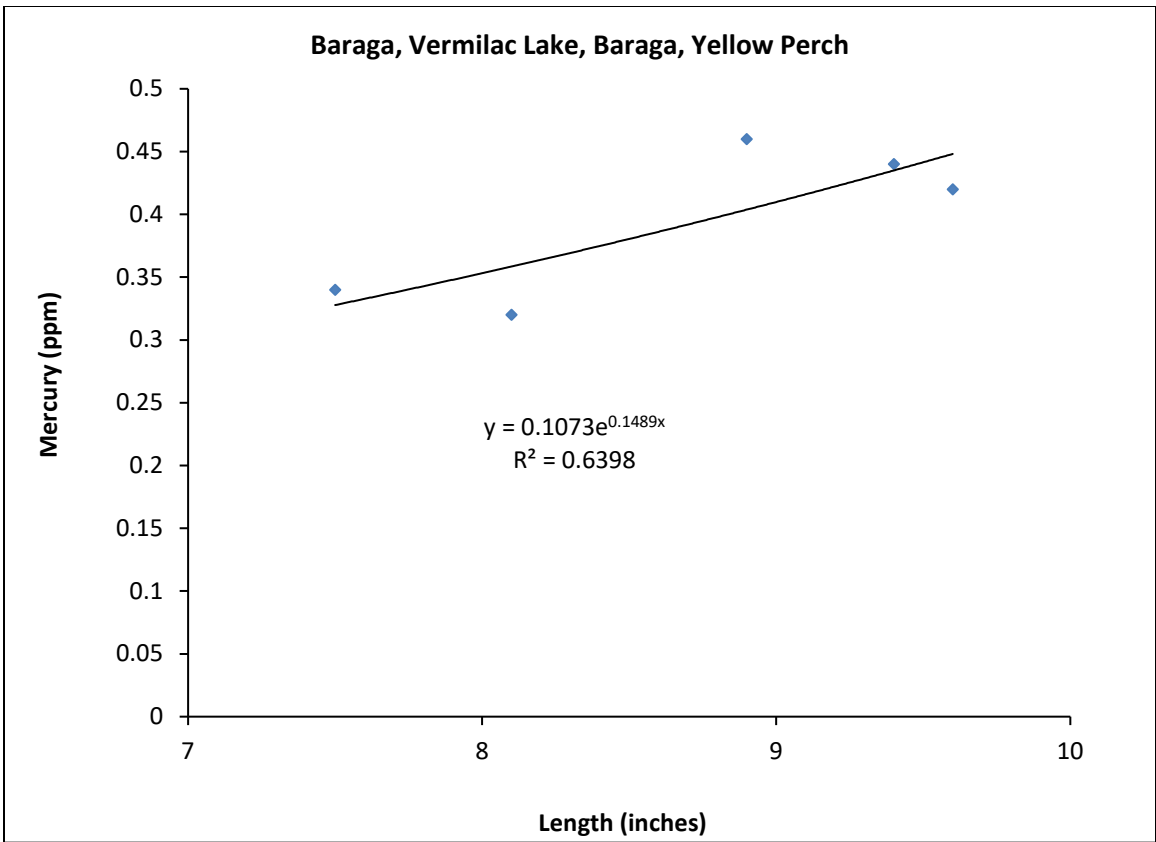
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Legal Size Range of Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Vermilac Lake yellow perch greater than 9 inches in length are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 2 meals per month of Vermilac Lake yellow perch smaller than 10 inches or more than 1 meal per month of those fish larger than 10 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
5	0.226	4
6	0.262	4
7	0.304	2
8	0.353	2
9	0.410	2
10	0.476	2
11	0.552	1
12	0.641	1
13	0.743	1

*Shaded area denotes extrapolated estimates*





# Chippewa County

**Rock Bass**

**Caribou Lake**

**Chippewa County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	2006	15	6.9	na	6.9	11.4
Datasets available: 1986, 2006						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)	Meal Category
Mercury	15	0.38	0.27	0.60	0.44	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.842	0.830				

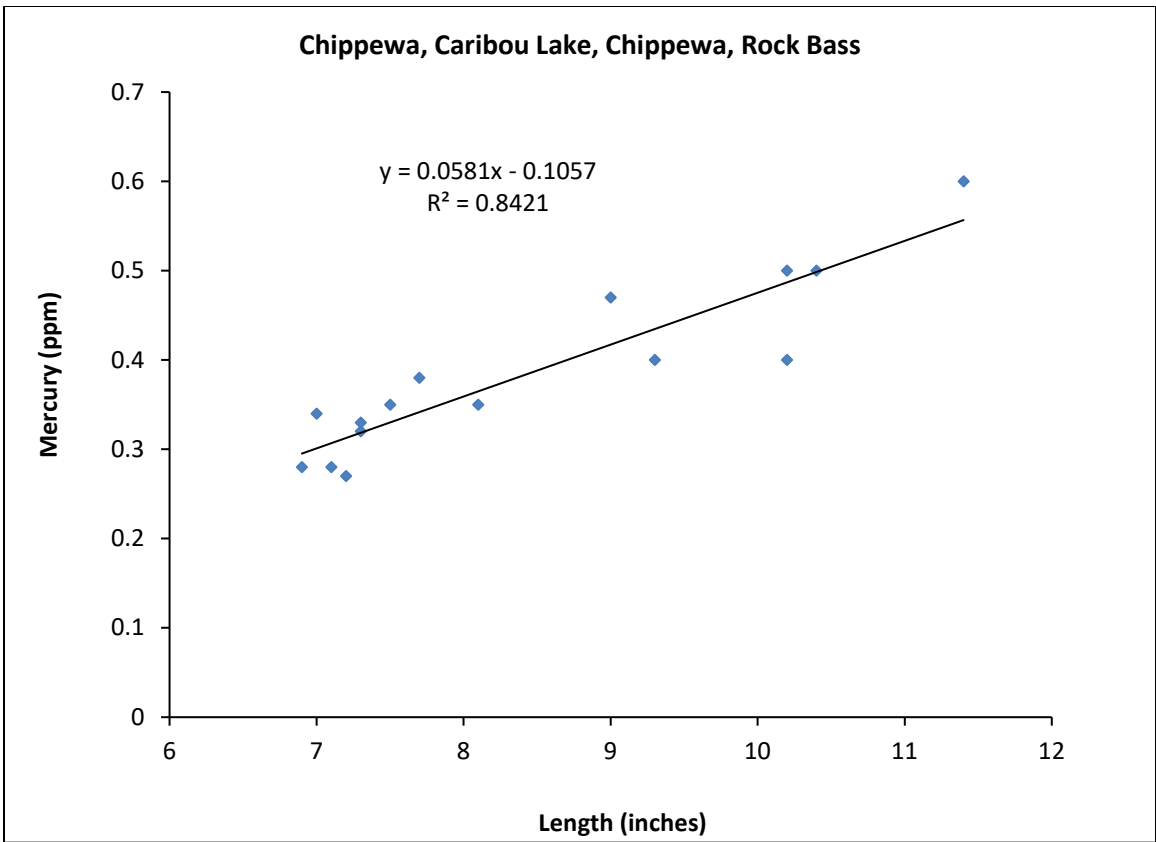
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Caribou Lake rock bass are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 2 meals per month of Caribou Lake rock bass smaller than 10 inches or more than 1 meal per month of those fish larger than 10 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
6	0.243	4
7	0.301	2
8	0.359	2
9	0.417	2
10	0.475	2
11	0.533	1
12	0.592	1
13	0.650	1
14	0.708	1
<i>Shaded area denotes extrapolated estimates</i>		



**Smallmouth Bass**

**Caribou Lake**

**Chippewa County**

**Hg Analysis:**

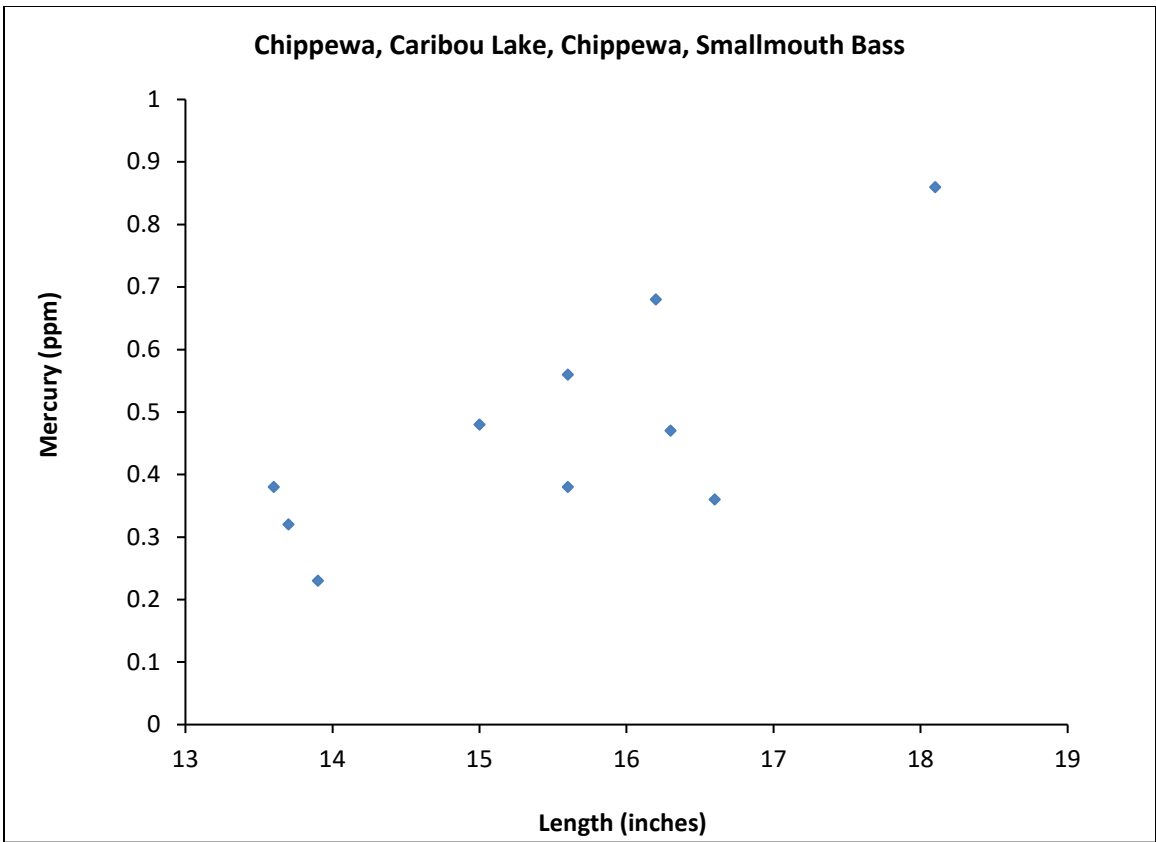
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2006	2006	10	13.6	14	13.6	18.1
Datasets available: 2006						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)	Meal Category
Mercury	10	0.47	0.23	0.86	0.61	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.590	0.566				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Caribou Lake smallmouth bass are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of largemouth or smallmouth bass from Caribou Lake smaller than 18 inches or more than 6 meals per year of those fish larger than 18 inches due to mercury. The statewide length break was applied.



**Walleye**

**Caribou Lake**

**Chippewa County**

**Hg Analysis:**

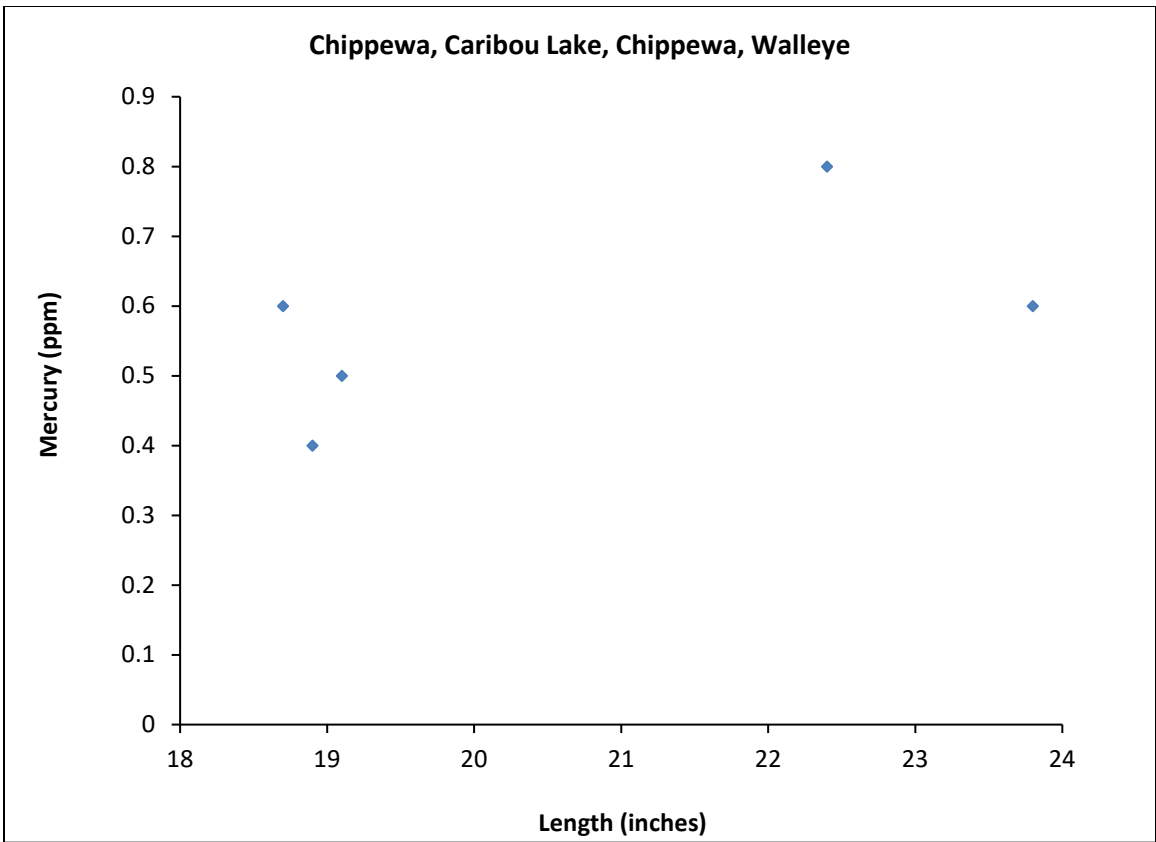
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	1986	5	18.7	15	18.7	23.8
Datasets available: 1986						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)	Meal Category
Mercury	5	0.58	0.40	0.80	0.76	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.368	0.373				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Caribou Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of Caribou Lake walleye due to mercury.



**Northern Pike**

**Carp Lake**

**Chippewa County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
1987	1987	5	18.7	24	18.7	23.8
Datasets available: 1987						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)	Meal Category
Mercury	5	0.28	0.17	0.36	0.37	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.038	0.031				

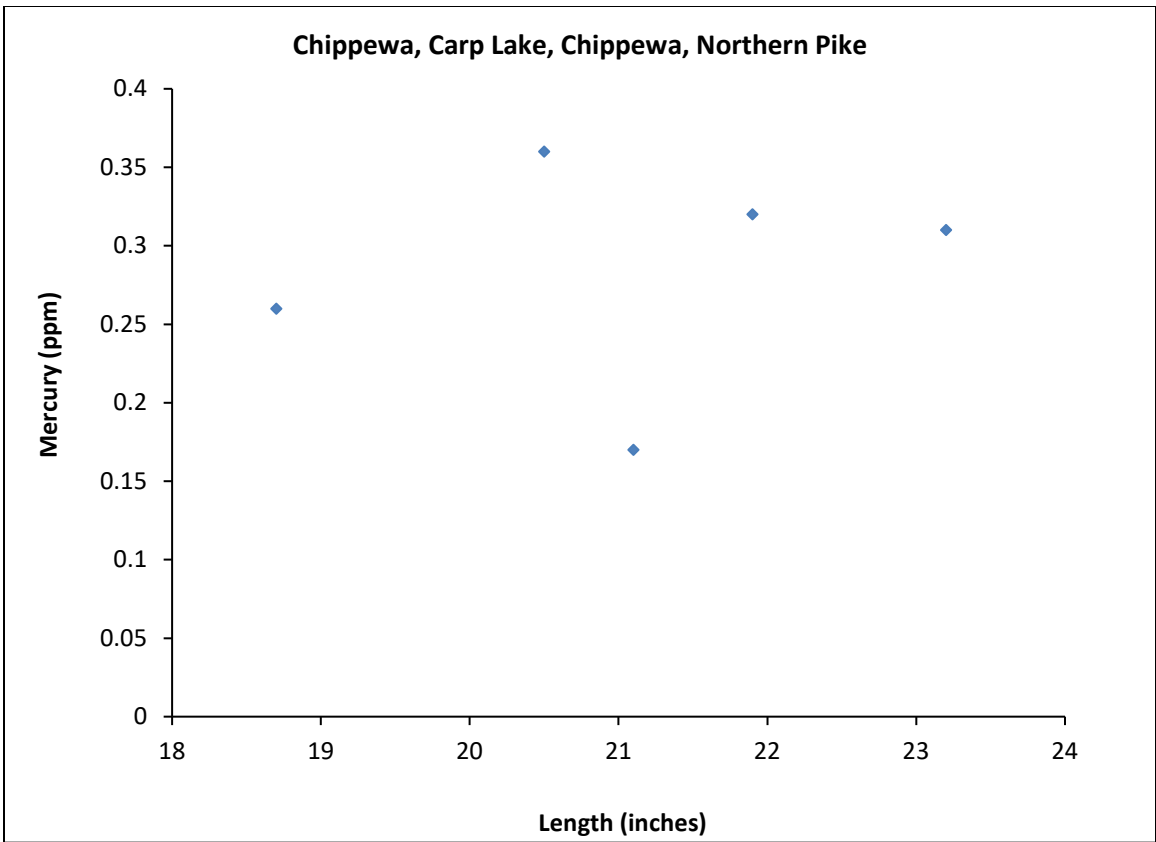
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Carp Lake northern pike are covered under the statewide mercury consumption advisory.

**Recommendation:** Statewide guideline applies. No one should eat more than 1 meal per month of northern pike larger than 30 inches or more than 2 meals per month of northern pike smaller than 30 inches in length due to mercury. The size range of fish in this sample set is limited and includes only sublegal lengths. The dataset is not sufficient to be used to set the guideline. The available mercury data is not atypical, thus the statewide guideline was applied.





**Walleye**

**Carp Lake**

**Chippewa County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1987	1987	9	12.4	15	16.1	18.3
Datasets available: 1987						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)	Meal Category
Mercury	6	0.47	0.31	0.62	0.60	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.597	0.667				

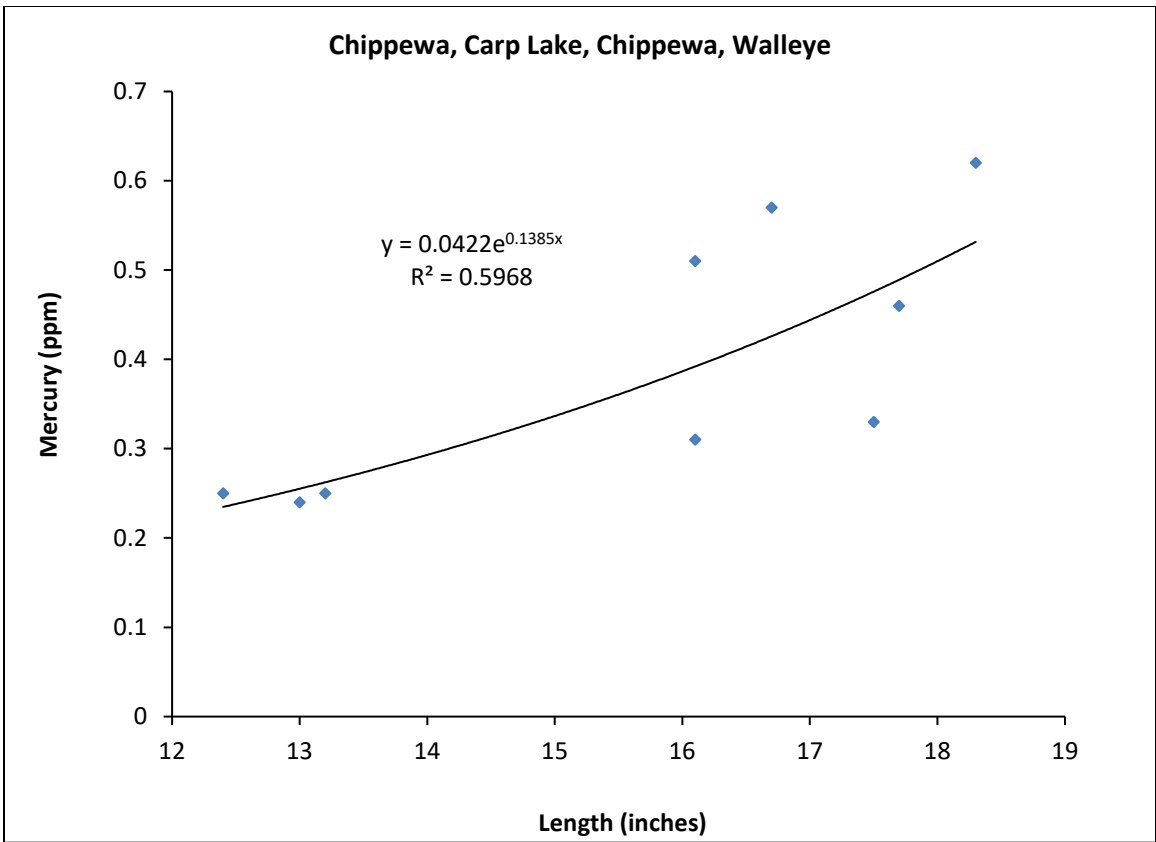
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Carp Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 2 meals per month of Carp Lake walleye smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches due to mercury. Length break based on the regression.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
15	0.34	2
16	0.39	2
17	0.44	2
18	0.51	2
19	0.59	1
20	0.67	1
21	0.77	1
22	0.89	1
23	1.02	1
<i>Shaded area denotes extrapolated estimates</i>		



**Hg Analysis:**

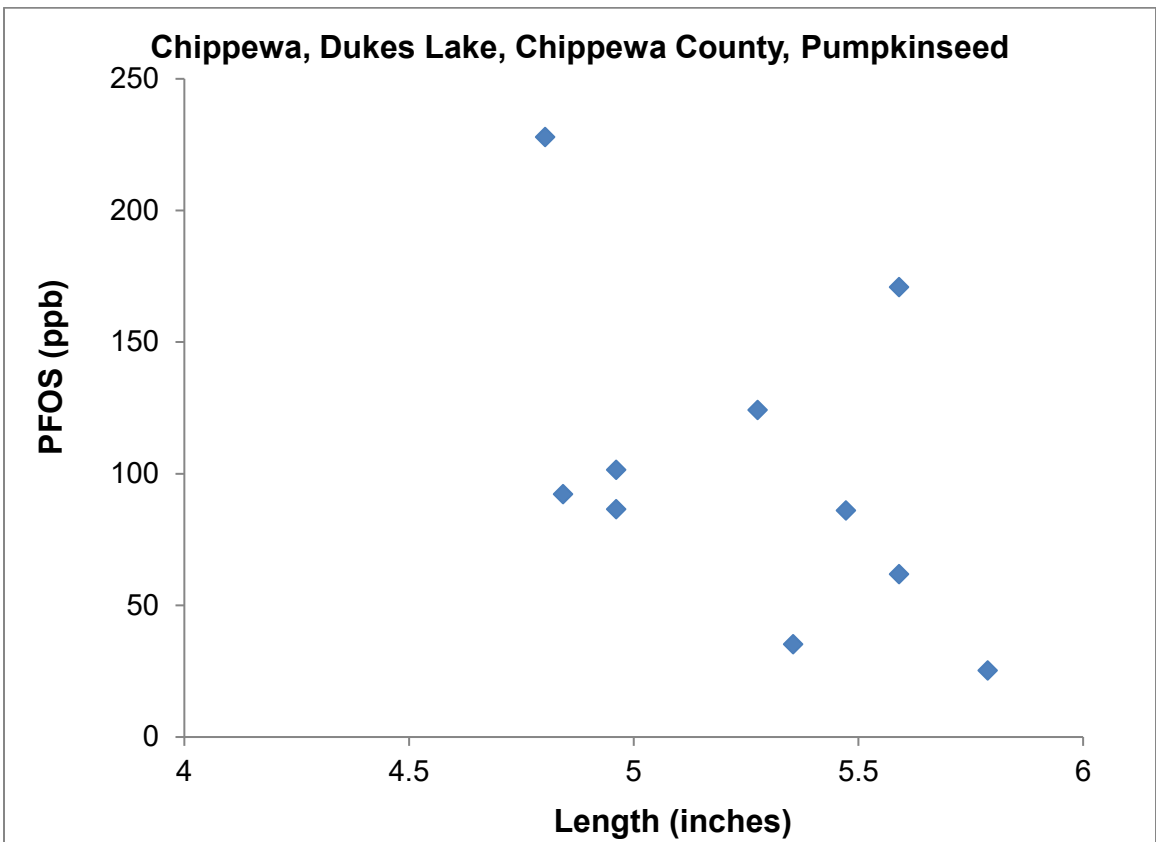
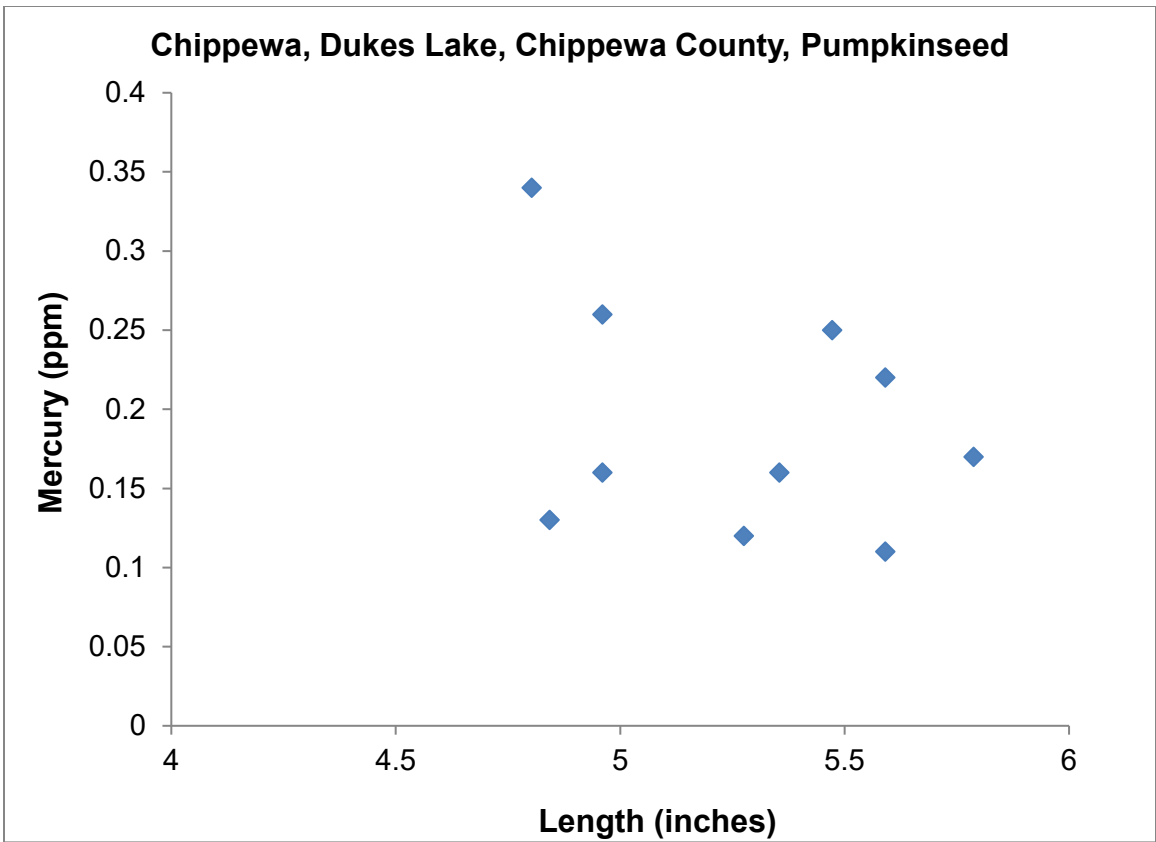
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2021	2021	10	4.8	NA	4.8	5.8
Datasets available: 2021						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.192	0.110	0.340	0.245	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.100	0.067				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2021	2021	10	4.8	NA	4.8	5.8
Datasets available: 2021						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
PFOS	10	101.2 ppb	25.3 ppb	228.0 ppb	145.0 ppb	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	0.211	0.288				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing MDHHS Advisory:** Bluegill and sunfish from Dukes Lake in Chippewa County are currently covered under the statewide mercury guidance. No one should eat more than 8 meals per month of bluegill or sunfish of any size.

**Recommendation:** No one should eat more than 1 meal per month of bluegill or sunfish of any size from Dukes Lake in Chippewa County due to PFOS. Mercury causes less restrictive guidance.



**Rock Bass**

**Dukes Lake**

**Chippewa County**

**Hg Analysis:**

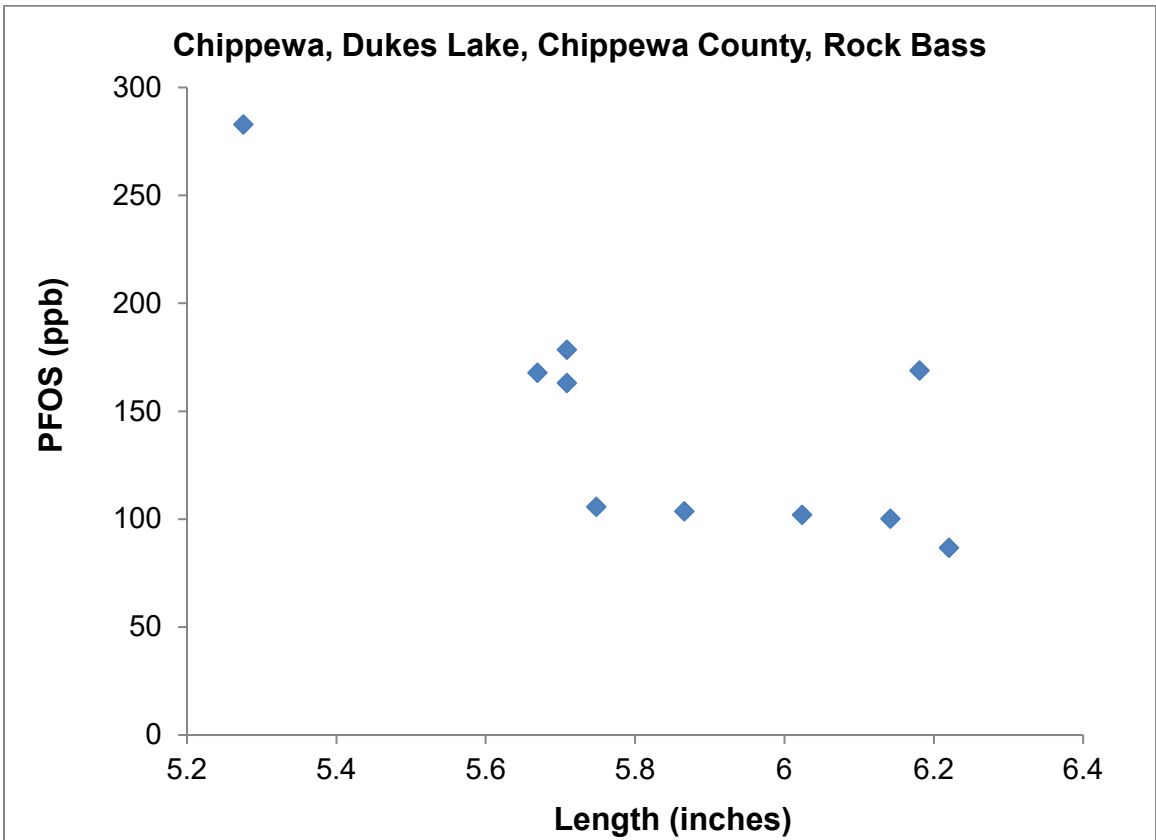
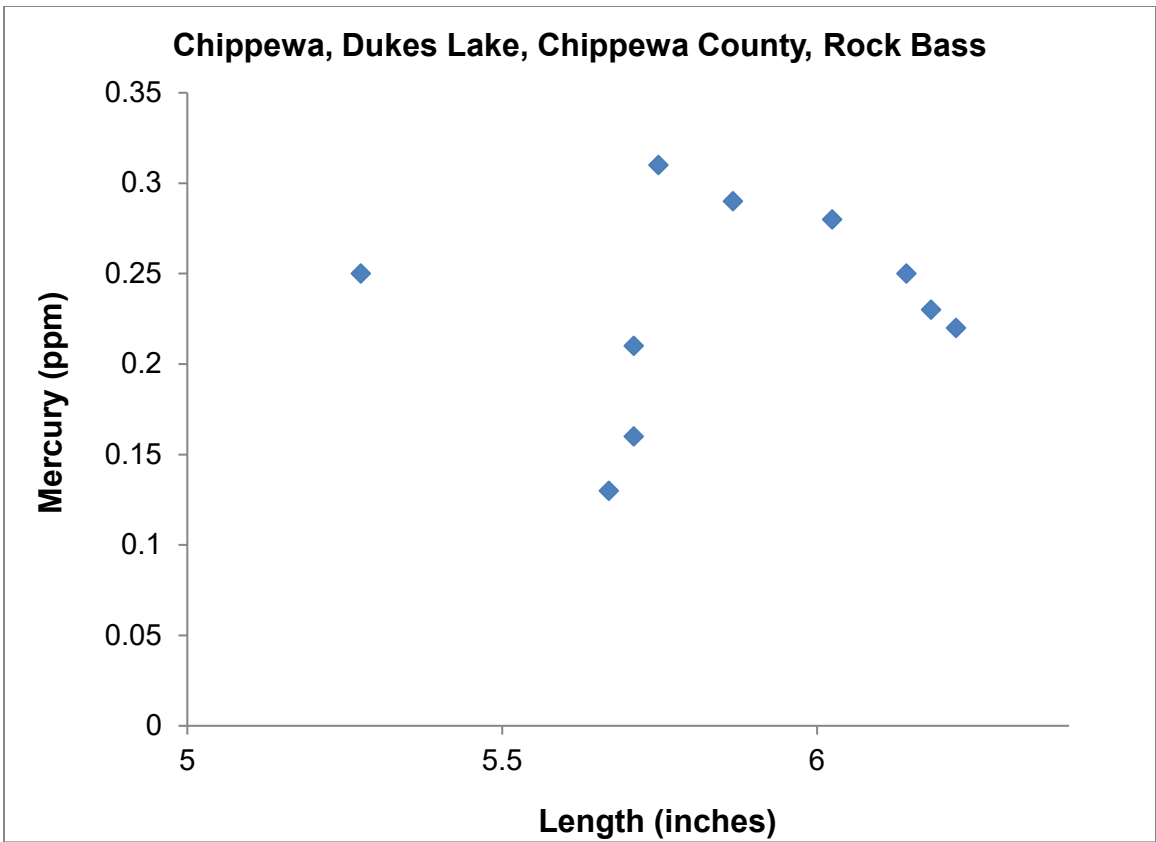
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2021	2021	10	5.3	NA	5.3	6.2
Datasets available: 2021						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.233	0.130	0.310	0.273	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.023	0.036				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2021	2021	10	5.3	NA	5.3	6.2
Datasets available: 2021						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
PFOS	10	146.0 ppb	86.8 ppb	282.9 ppb	188.7 ppb	0.5
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	0.594	0.558				
<b>Final meal category based on UCL:</b>						<b>0.5</b>

**Existing MDHHS Advisory:** Rock bass from Dukes Lake in Chippewa County are currently covered under the statewide mercury guidance. No one should eat more than 4 meals per month of rock bass of any size.

**Recommendation:** No one should eat more than 6 meals per year of rock bass of any size from Dukes Lake in Chippewa County due to PFOS. Mercury causes less restrictive guidance.



**Northern Pike**

**Frenchman Lake**

**Chippewa County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
2004	2004	10	19.3	na*	19.3	27	
Datasets available: 2004							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)		
Mercury	10	0.21	0.13	0.30	0.25	4	
Chemical	Linear Regression	Exponential Regression	*There is no size limit for northern pike on Frenchman Lake (Chippewa).				
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	0.023	0.033					

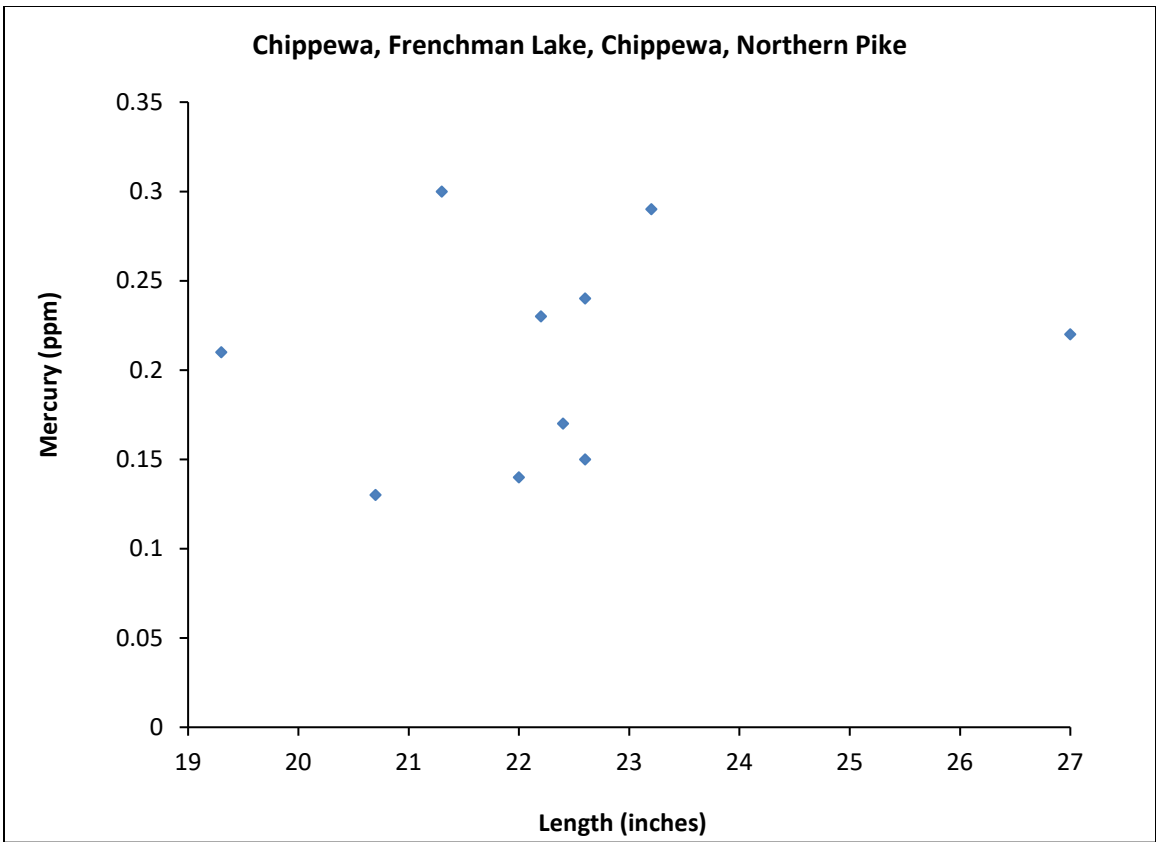
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
--	--	--	--	--	--	--	
Datasets available: --							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)		
PCB	0	--	--	--	--	--	
DDT	0	--	--	--	--	--	
Chlordane	0	--	--	--	--	--	
Toxaphene	0	--	--	--	--	--	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
<b>Final meal category based on UCL:</b>							<b>4</b>

**Existing Advisory:** Frenchman Lake northern pike are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 2 meal per month of northern pike larger than 30 inches or more than 4 meals per month of northern pike smaller than 30 inches in length due to mercury. Statewide length break applied as the size of the fish was limited.





**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2021	2021	5	4.6	NA	4.6	5.6
Datasets available: 2021						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	5	0.064	0.056	0.074	0.074	12
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.035	0.028				

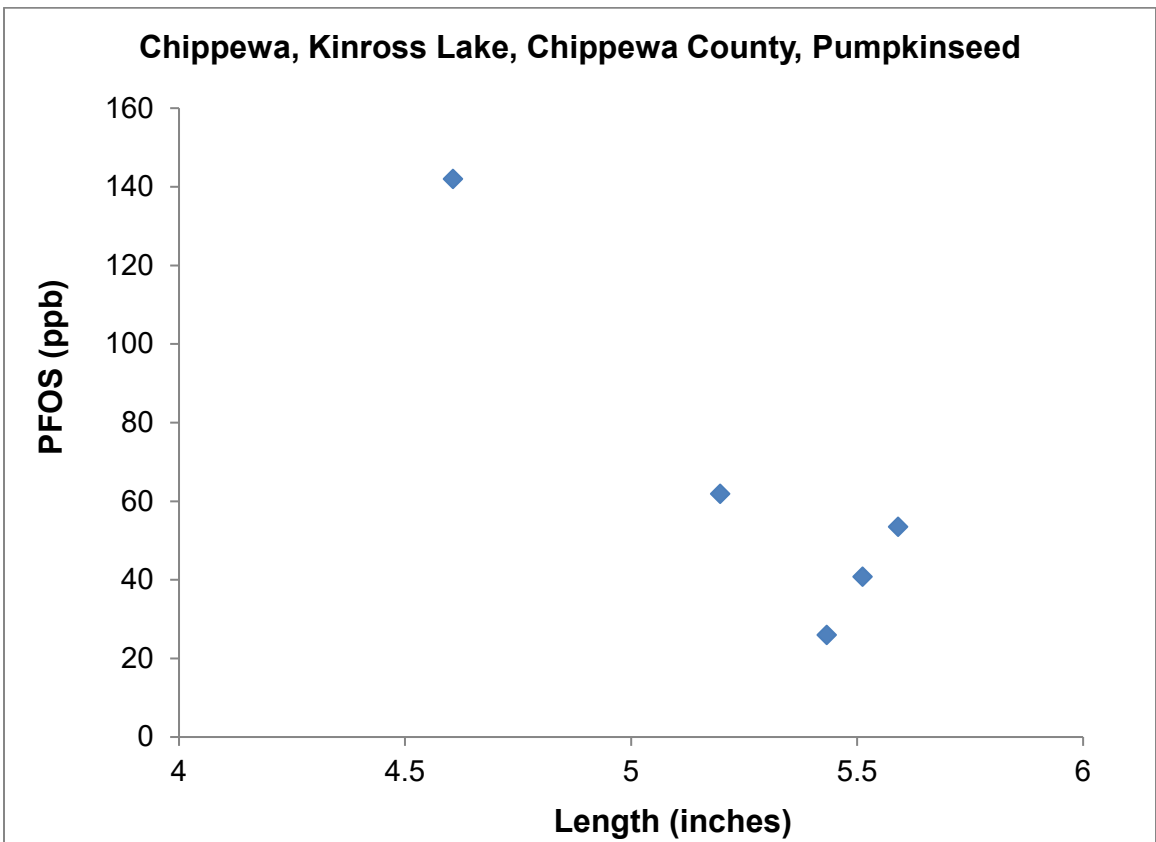
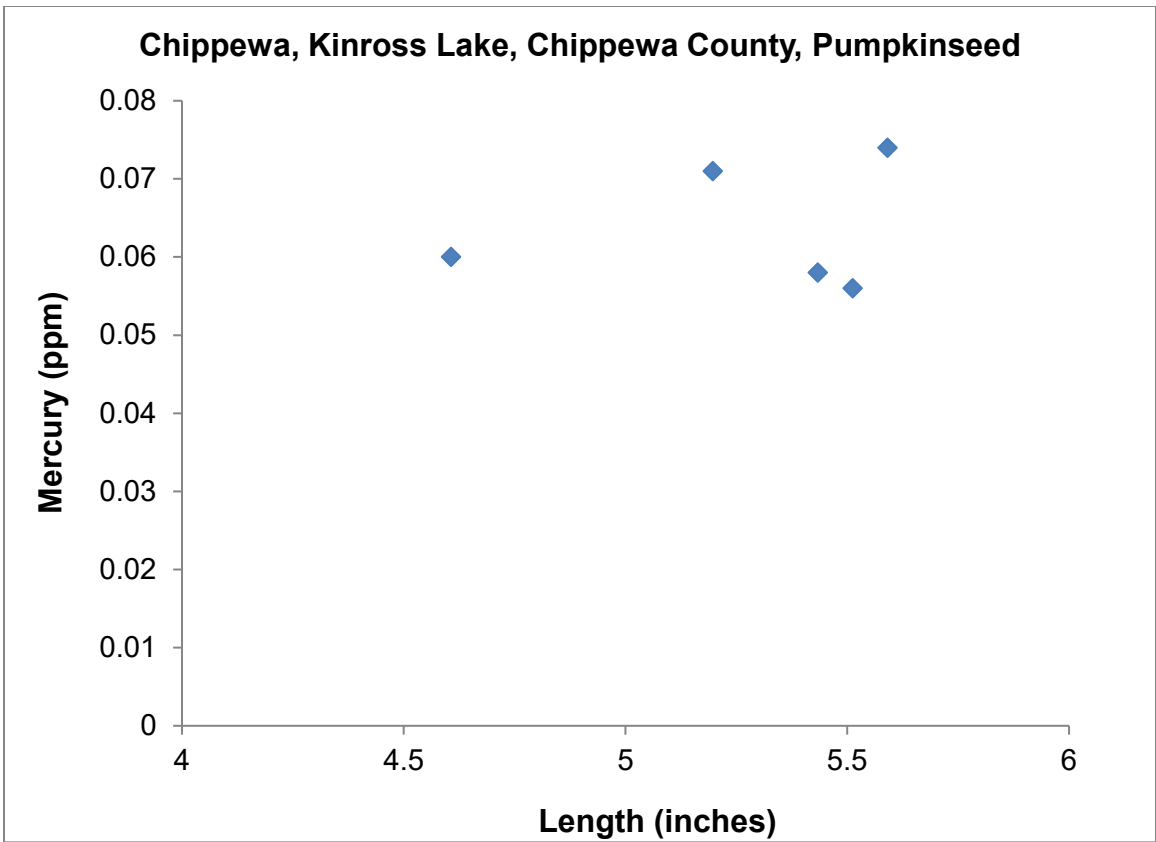
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2021	2021	5	4.6	NA	4.6	5.6
Datasets available: 2021						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
PFOS	5	64.8 ppb	26.0 ppb	142.0 ppb	121.0 ppb	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	0.861*	0.714*				
*Negative regression						
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing MDHHS Advisory:** Bluegill and sunfish from Kinross Lake in Chippewa County are currently covered under the statewide mercury guidance. No one should eat more than 8 meals per month of bluegill or sunfish of any size.

**Recommendation:** No one should eat more than 1 meal per month of bluegill or sunfish from Kinross Lake in Chippewa County due to PFOS. Mercury causes less restrictive guidance.

Note: While there was a significant negative correlation between fish size and PFOS concentration, it is not recommended to implement a size-based advisory unless additional data are available providing a biological reason for the negative correlation.



**Yellow Perch**

**Kinross Lake**

**Chippewa County**

**Hg Analysis:**

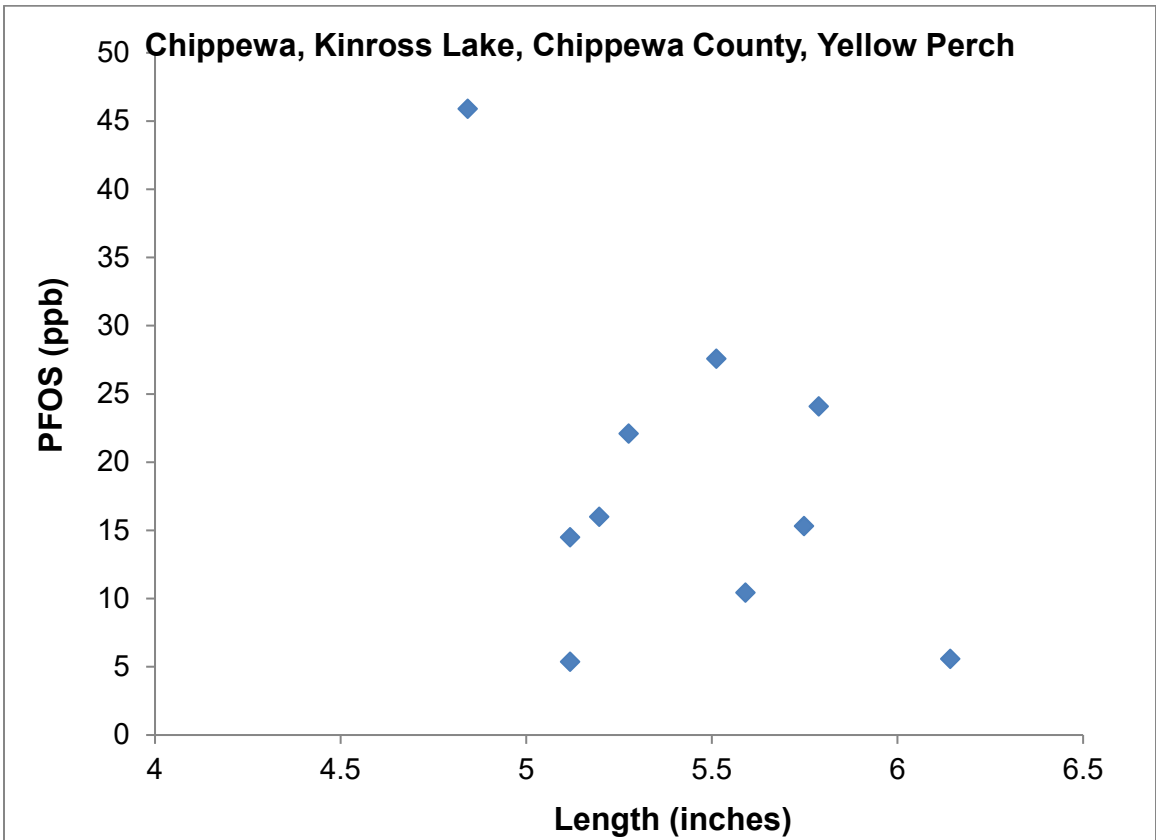
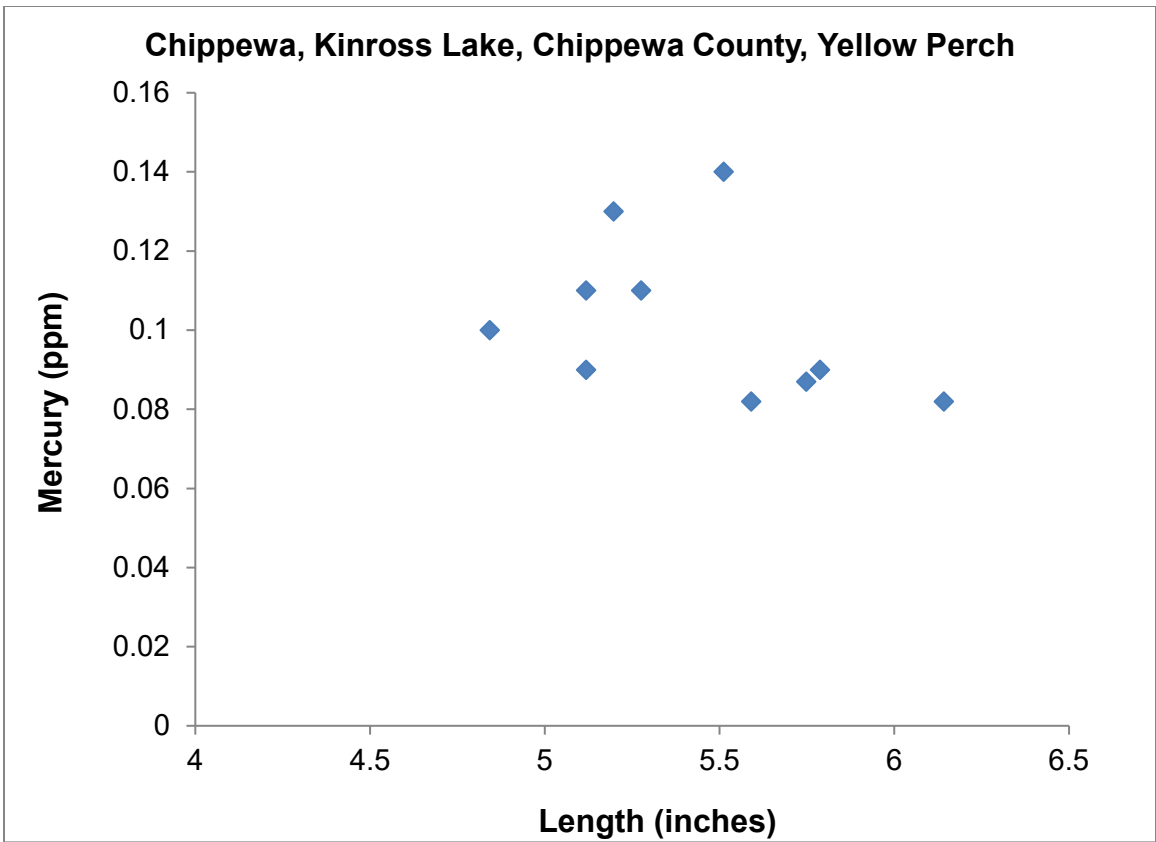
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2021	2021	10	4.8	NA	4.8	6.1
Datasets available: 2021						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.102	0.082	0.140	0.117	8
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.162	0.203				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2021	2021	10	4.8	NA	4.8	6.1
Datasets available: 2021						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
PFOS	10	18.7 ppb	5.4 ppb	45.9 ppb	27.3 ppb	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	0.209	0.153				
<b>Final meal category based on UCL:</b>						<b>4</b>

**Existing MDHHS Advisory:** Yellow perch from Kinross Lake in Chippewa County are currently covered under the statewide mercury guidance. No one should eat more than 4 meals per month of yellow perch of any size.

**Recommendation:** No one should eat more than 4 meals per month of yellow perch from Kinross Lake in Chippewa County due to PFOS. Mercury causes less restrictive guidance.



**Walleye**

**Monocle Lake**

**Chippewa County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2009	2009	7	11.8	15	15.6	18.7
Datasets available: 2009						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)	Meal Category
Mercury	5	0.37	0.13	0.58	0.57	1
Selenium	5	1.64	1.50	1.70	1.75	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.661	0.648				
Selenium	0.715	0.725				

**Organics Analysis:**

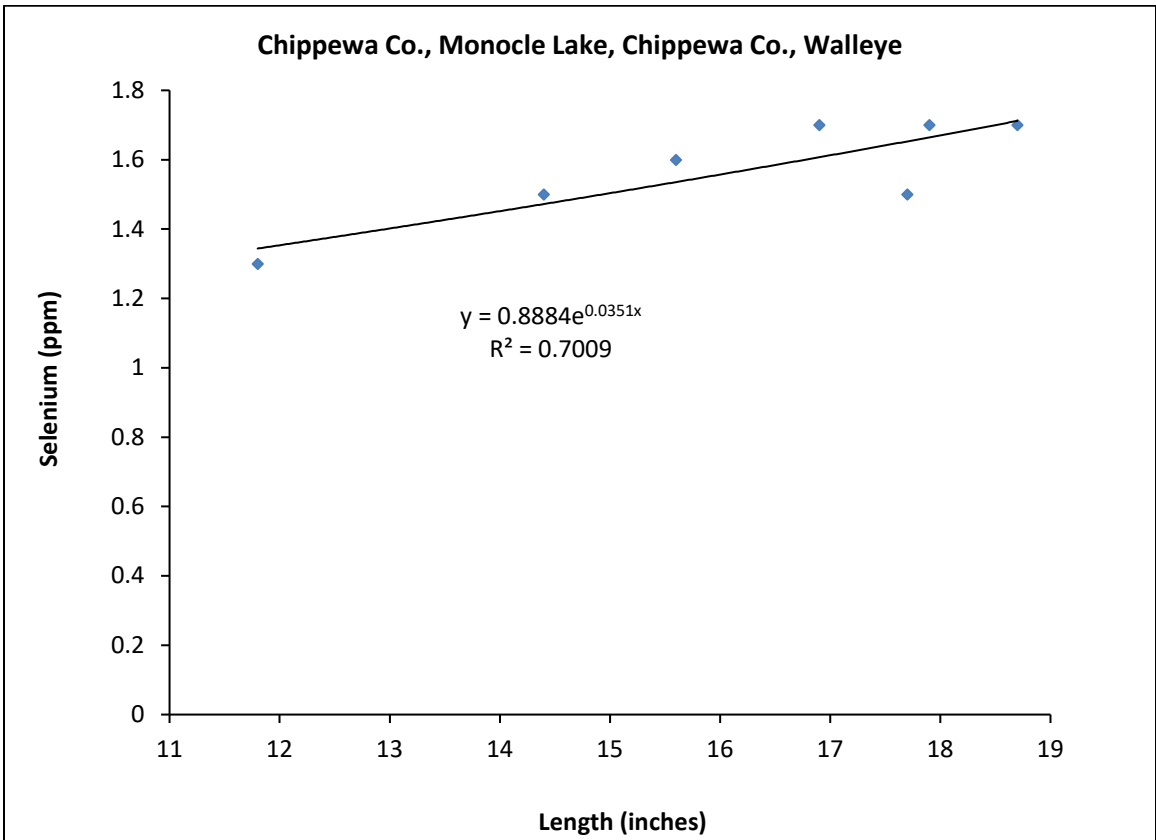
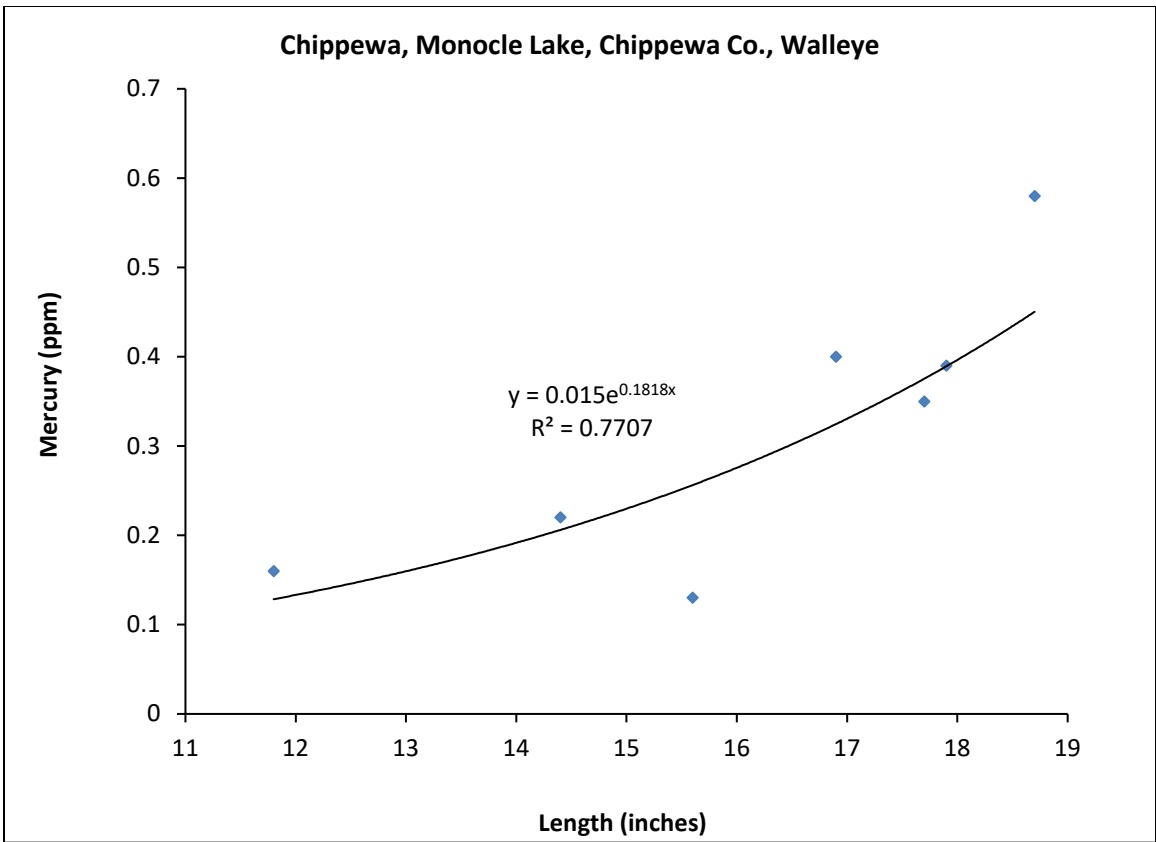
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95% (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Monocle Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of walleye larger than 20 inches or more than 2 meals per month of walleye smaller than 20 inches due to mercury. Statewide length break applied

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category	Se Regression Equation Estimate (ppm)	Meal Category
15	0.23	4	1.50	16
16	0.28	2	1.56	16
17	0.33	2	1.61	16
18	0.40	2	1.67	16
19	0.47	2	1.73	16
20	0.57	1	1.79	16
21	0.68	1	1.86	16
22	0.82	1	1.92	16
23	0.98	1	1.99	16

*Shaded area denotes extrapolated estimates*



**Carp**

**Tahquamenon River  
River Mouth**

**Chippewa County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

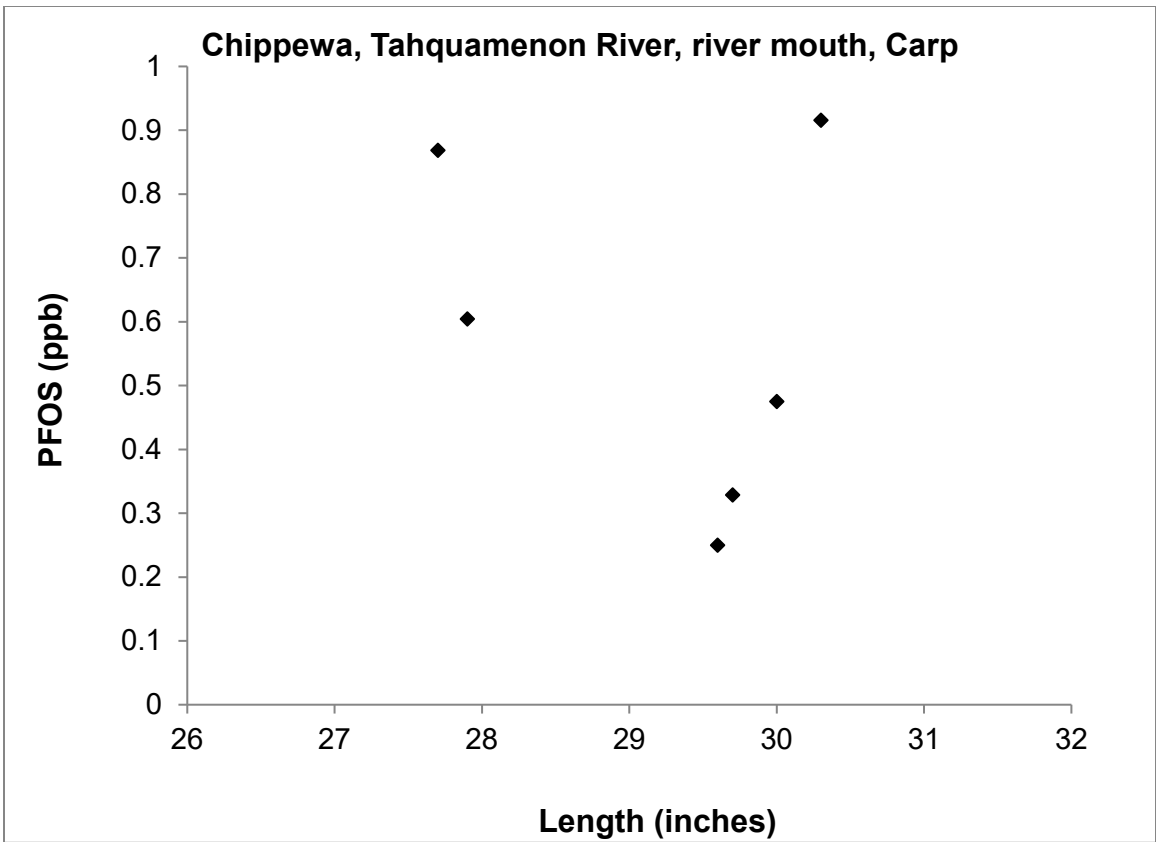
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2013	2014	6	27.7	na	27.7	30.3
Datasets available: 2013, 2014						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
PFOS	6	0.57 ppb	<0.25 ppb	0.9 ppb	0.9 ppb	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	0.081	0.104				
<b>Final meal category based on UCL:</b>						<b>16</b>

**Existing Advisory:** Tahquamenon River carp are covered by the statewide advisory: No one should eat more than 2 meals per month of carp due to PCBs.

**Recommendation:** No change is recommended. Waterbody-specific guidance for Tahquamenon River carp cannot be issued as these fish have not been tested for mercury or PCBs.





**Rock Bass**

**Tahquamenon River  
River Mouth**

**Chippewa County**

**Hg Analysis:**

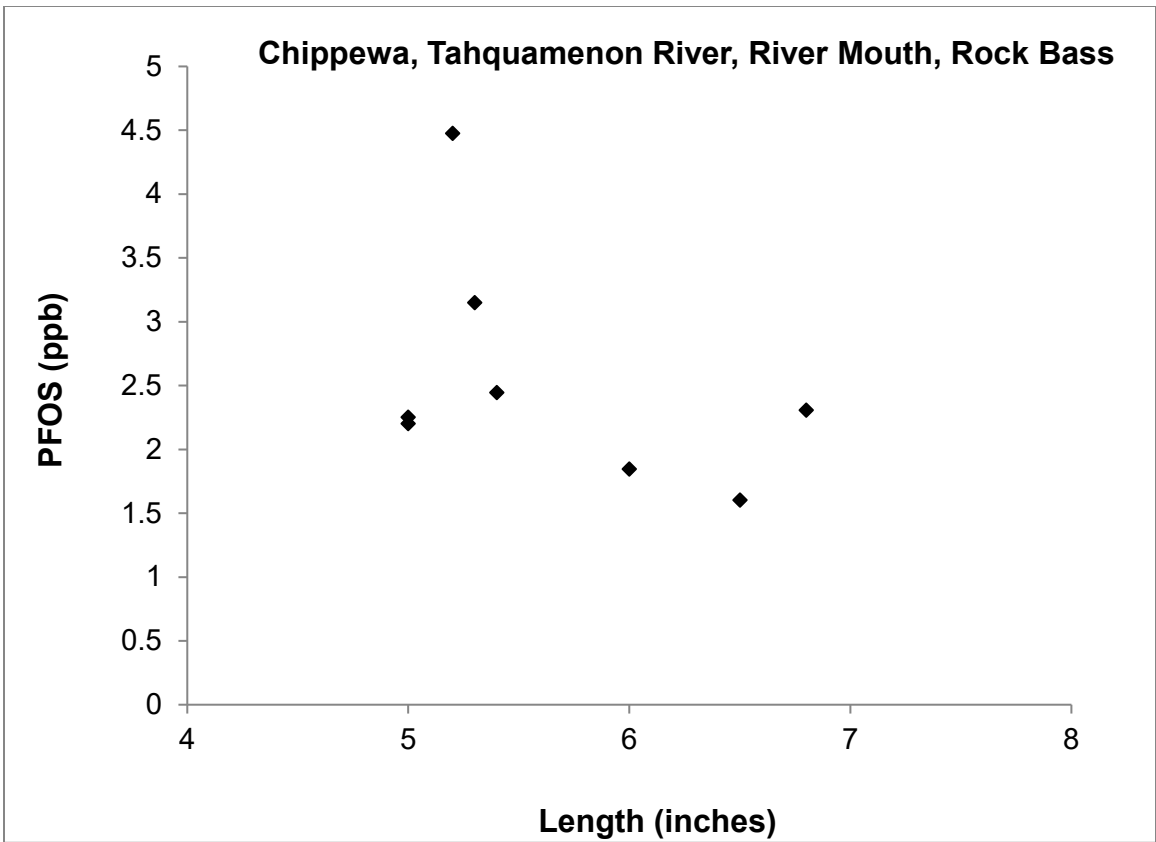
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2013	2014	8	5	na	5	6.8
Datasets available: 2013, 2014						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
PFOS	8	2.5 ppb	1.6 ppb	4.5 ppb	3.3 ppb	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	0.197	0.242				
<b>Final meal category based on UCL:</b>						<b>16</b>

**Existing Advisory:** Tahquamenon River rock bass are covered by the statewide advisory: No one should eat more than 4 meals per month of rock bass due to mercury.

**Recommendation:** No change is recommended. Waterbody-specific guidance for Tahquamenon River rock bass cannot be issued as these fish have not been tested for mercury.



**Smallmouth Bass**

**Tahquamenon River  
River Mouth**

**Chippewa County**

**Hg Analysis:**

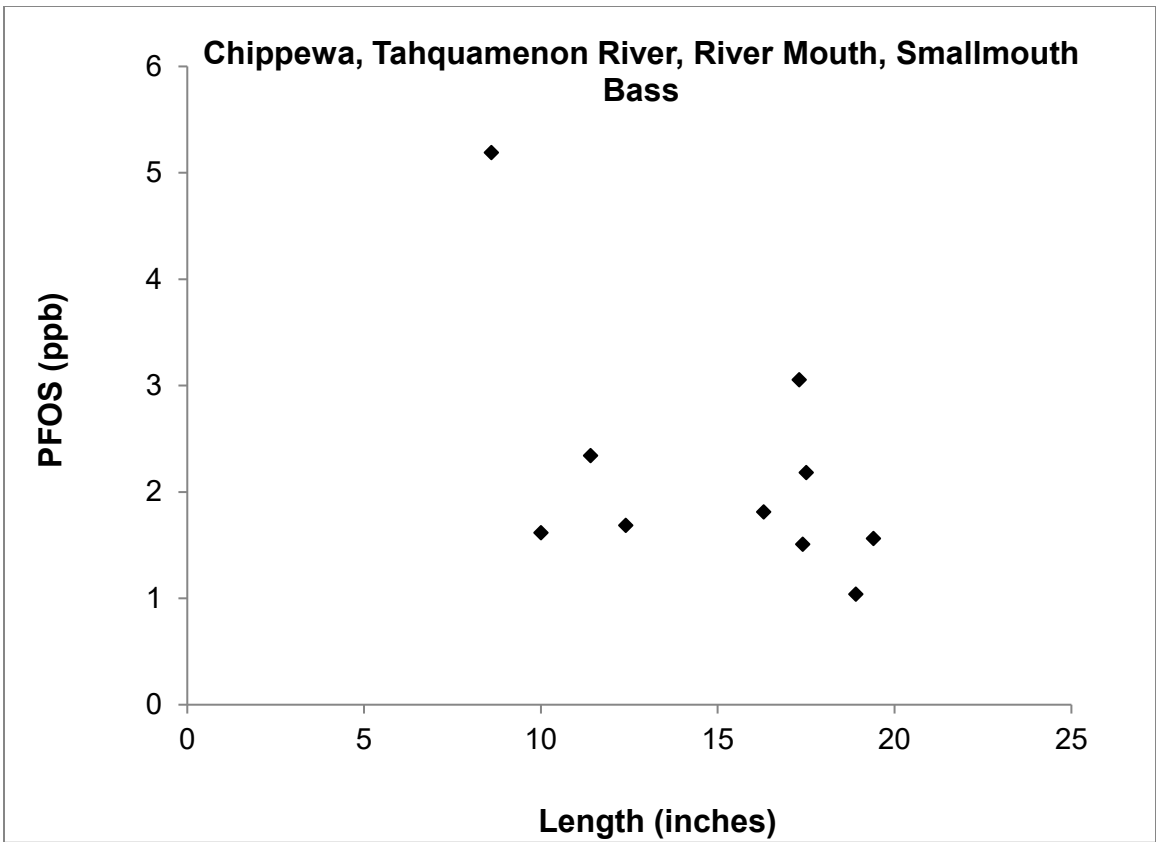
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2013	2013	10	8.6	14	16.3	19.4
Datasets available: 2013						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
PFOS	6	1.9 ppb	1.0 ppb	3.0 ppb	2.6 ppb	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	0.299	0.287				
<b>Final meal category based on UCL:</b>						<b>16</b>

**Existing Advisory:** Tahquamenon River smallmouth bass are covered by the statewide advisory: No one should eat more than 2 meals of per month of largemouth or smallmouth bass smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches due to mercury.

**Recommendation:** No change is recommended. Waterbody-specific guidance for Tahquamenon River largemouth and smallmouth bass cannot be issued as these fish have not been tested for mercury.



**Yellow Perch**

**Tahquamenon River  
River Mouth**

**Chippewa County**

**Hg Analysis:**

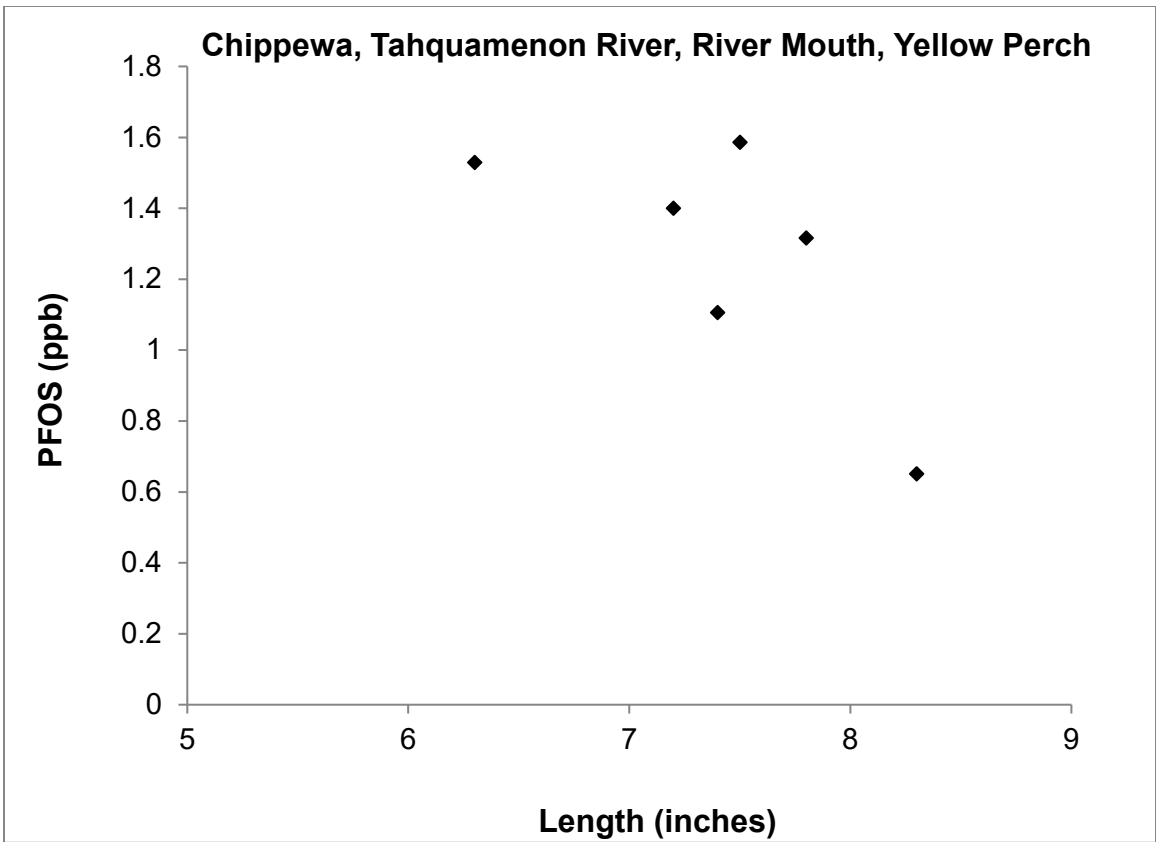
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2014	2014	6	6.3	na	6.3	8.3
Datasets available: 2014						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
PFOS	6	1.3 ppb	0.6 ppb	1.6 ppb	1.6 ppb	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	0.503	0.503				
<b>Final meal category based on UCL:</b>						<b>16</b>

**Existing Advisory:** Tahquamenon River yellow perch are covered by the statewide advisory: No one should eat more than 4 meals per month of yellow perch due to mercury.

**Recommendation:** No change is recommended. Waterbody-specific guidance for Tahquamenon River yellow perch cannot be issued as these fish have not been tested for mercury.



# Delta County



**Northern Pike**

**Round Lake**

**Delta County**

**Hg Analysis:**

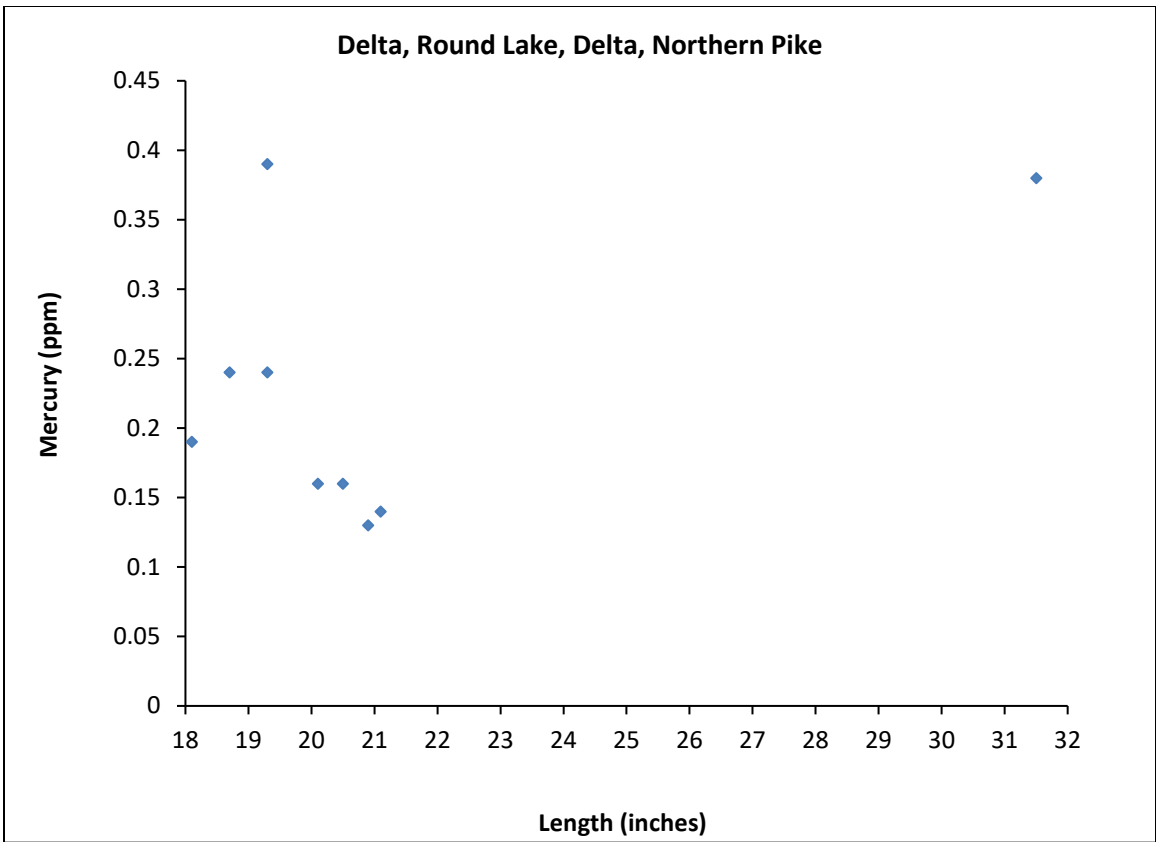
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
1987	1987	9	18.1	24	31.5	31.5
Datasets available: 1987						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	1	0.38	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.216	0.164				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Round Lake northern pike are covered under the statewide mercury consumption advisory.

**Recommendation:** The size range of fish in this sample set is limited and not used to set a guideline. The statewide guidelines apply: No one should eat more than 1 meal per month of northern pike larger than 30 inches or more than 2 meals per month of northern pike smaller than 30 inches in length.



**Walleye**

**Round Lake**

**Delta County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1987	1987	8	15	15	24.8	
Datasets available: 1987						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	8	0.47	0.10	1.17	0.80	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.875	0.766				

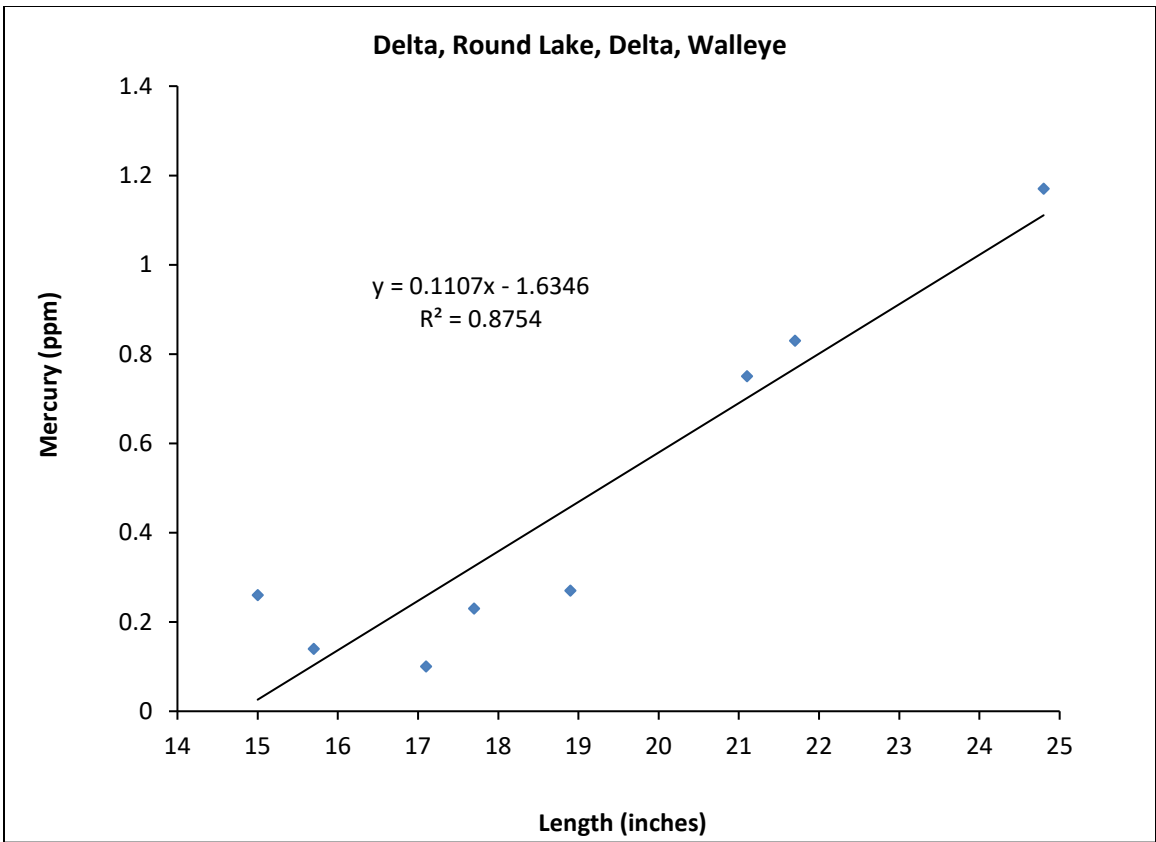
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Round Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 2 meals per month of Round Lake walleye smaller than 20 inches or more than 1 meal per month of those fish larger than 20 inches due to mercury.

Length (Inches)	Regression Equation Estimate (ppm)	Meal Category
15	0.026	16
16	0.137	4
17	0.247	4
18	0.358	2
19	0.469	2
20	0.579	1
21	0.690	1
22	0.801	1
24	1.022	1
<i>Shaded area denotes extrapolated estimates</i>		



# Dickinson County

**Northern Pike**

**Carney Lake**

**Dickinson County**

**Hg Analysis:**

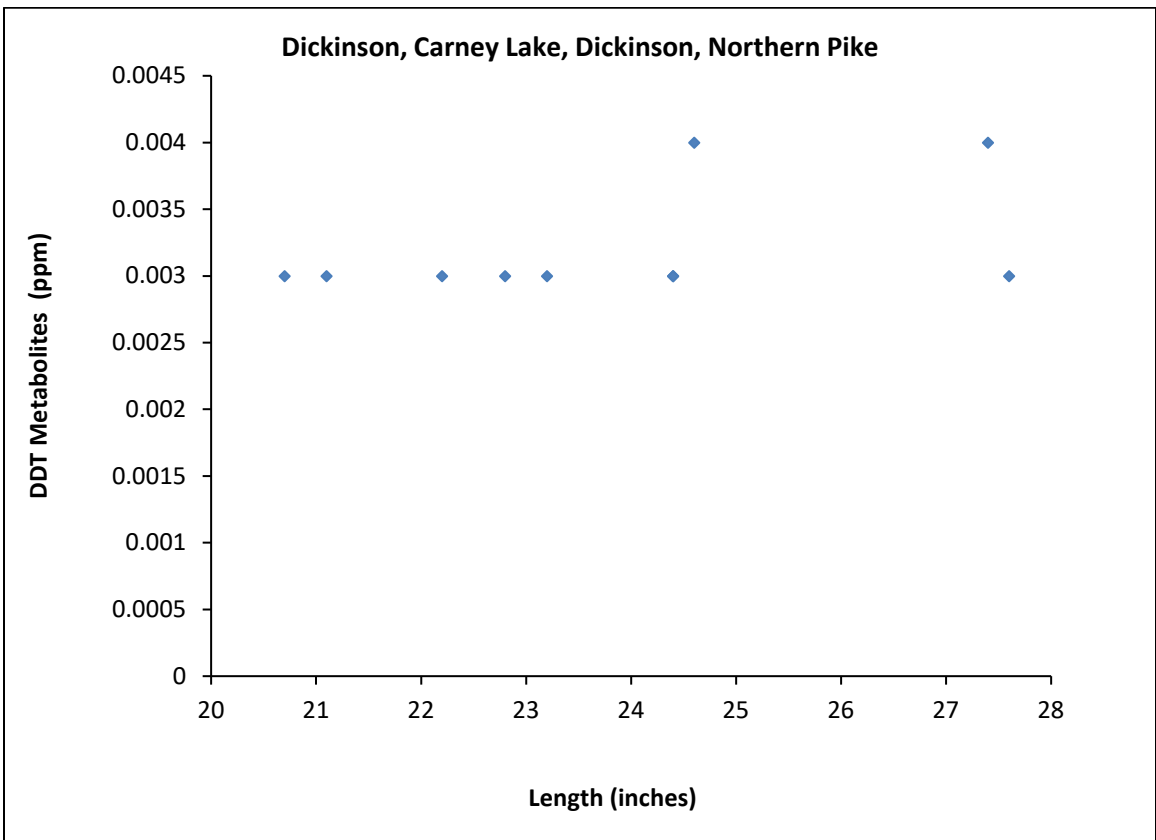
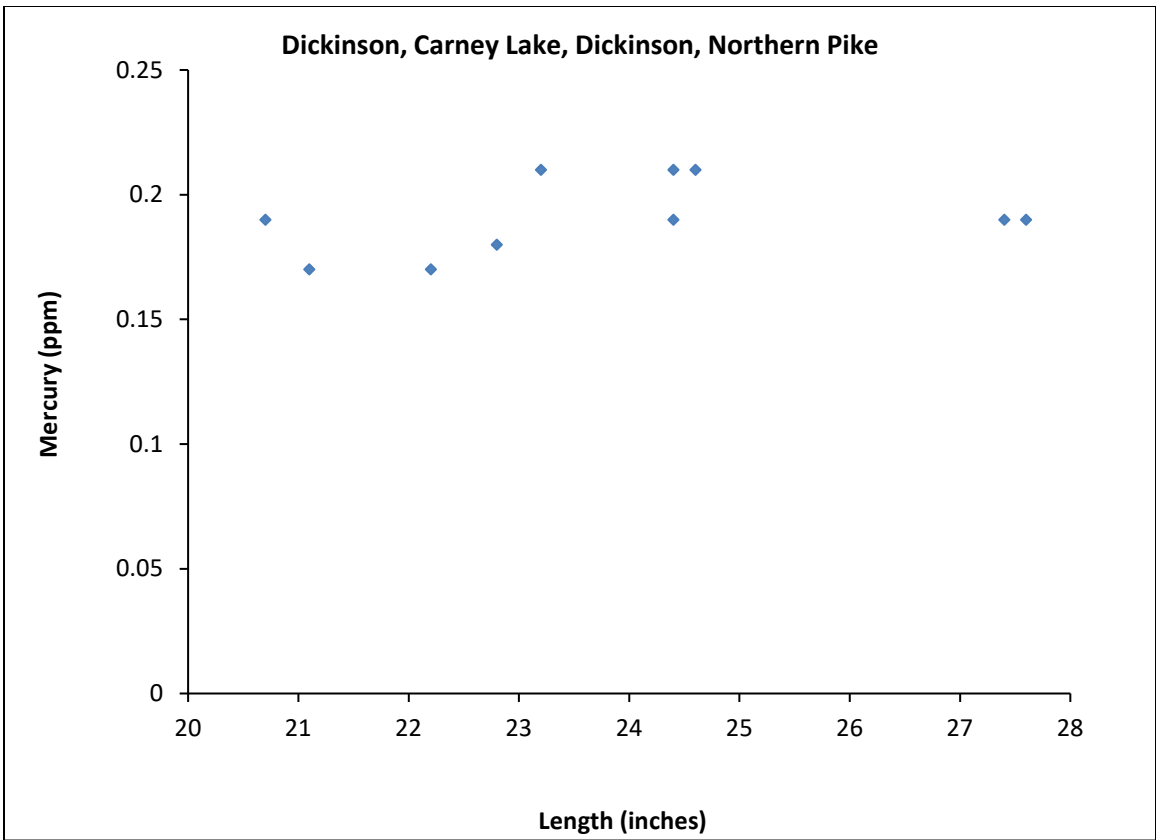
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1989	1989	10	20.7	24	24.6	27.4
Datasets available:		1989				
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	5	0.20	0.19	0.21	0.21	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.120	0.131				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1989	1989	10	20.7	24.6	24.6	27.4
Datasets available:		1989				
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	5	ND	--	--	--	--
DDT	5	0.003	0.003	0.004	0.004	16
Chlordane	5	ND	--	--	--	--
Toxaphene	5	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	0.235	0.235				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

**Existing Advisory:** Carney Lake northern pike are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 4 meals per month of Carney Lake northern pike smaller than 30 inches or more than 2 meals per month of those fish larger than 30 inches due to mercury. Statewide length break applied as the size of the fish was limited.



**Walleye**

**Carney Lake**

**Dickinson County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1989	1989	10	15.2	15	15.2	19.9
Datasets available: 1989						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.25	0.17	0.46	0.32	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.333	0.362				

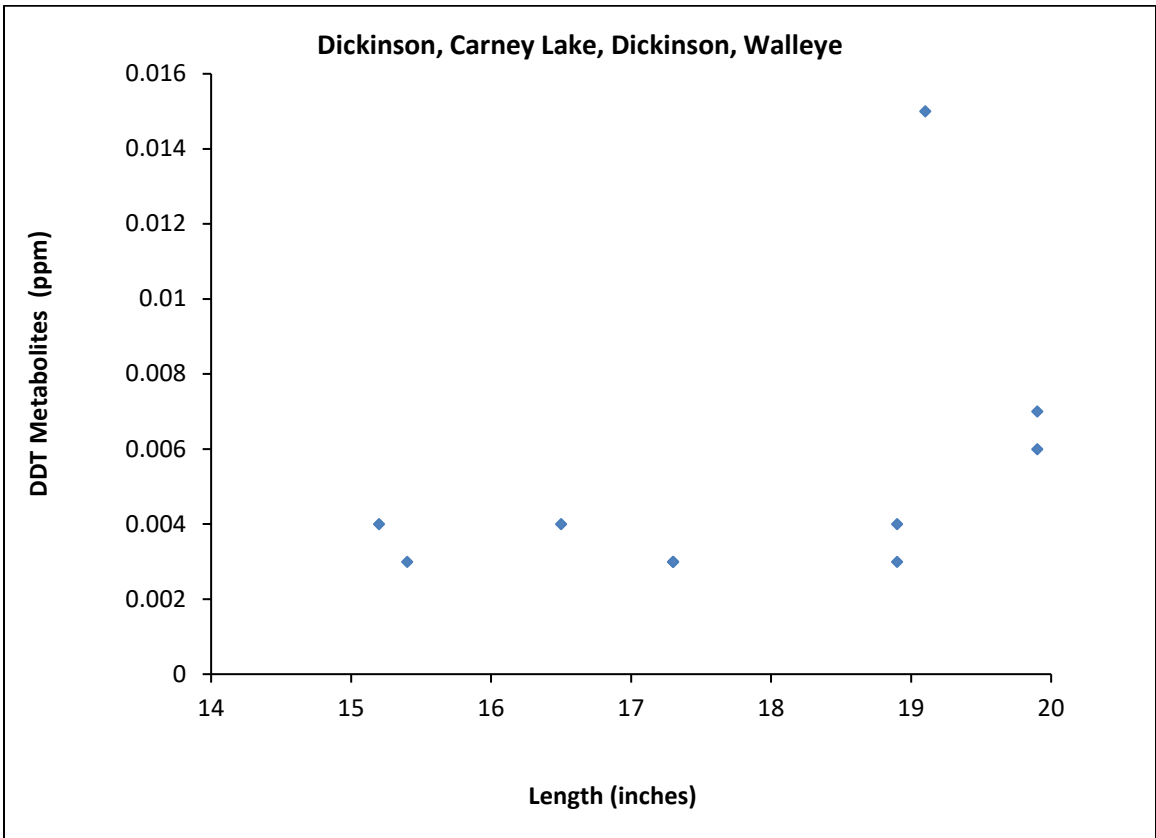
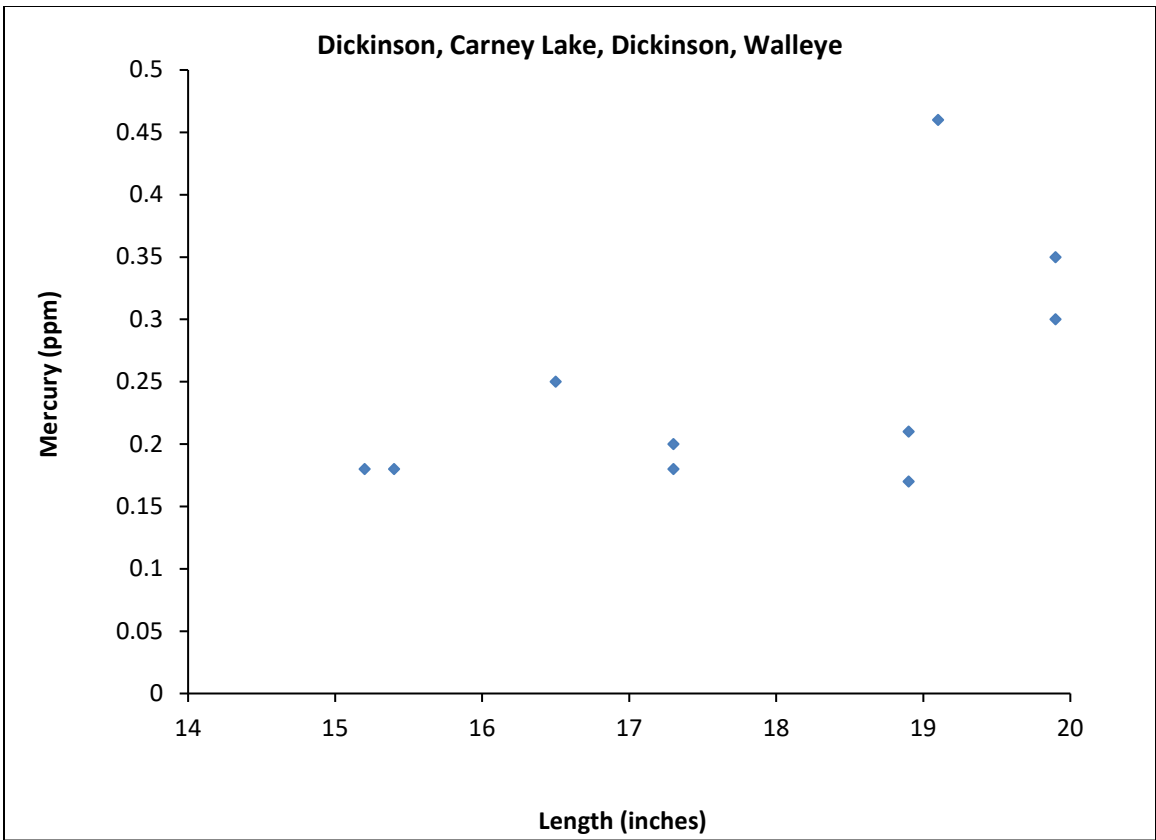
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1989	1989	10	15.2	15.2	15.2	19.9
Datasets available: 1989						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	ND	--	--	--	--
DDT	10	0.005	0.003	0.015	0.010	16
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	0.208	0.284				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Carney Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more 2 meals per month of Carney Lake walleye smaller than 20 inches or more than 1 meal per month of those fish larger than 20 inches due to mercury. Statewide length break applied as the size of the fish was limited.





**Smallmouth Bass**

**Fumee Lake**

**Dickinson County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1990	1990	10	11.2	14	13.8	17.3
Datasets available: 1990						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	7	0.53	0.37	0.81	0.67	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.788	0.863				

**Organics Analysis:**

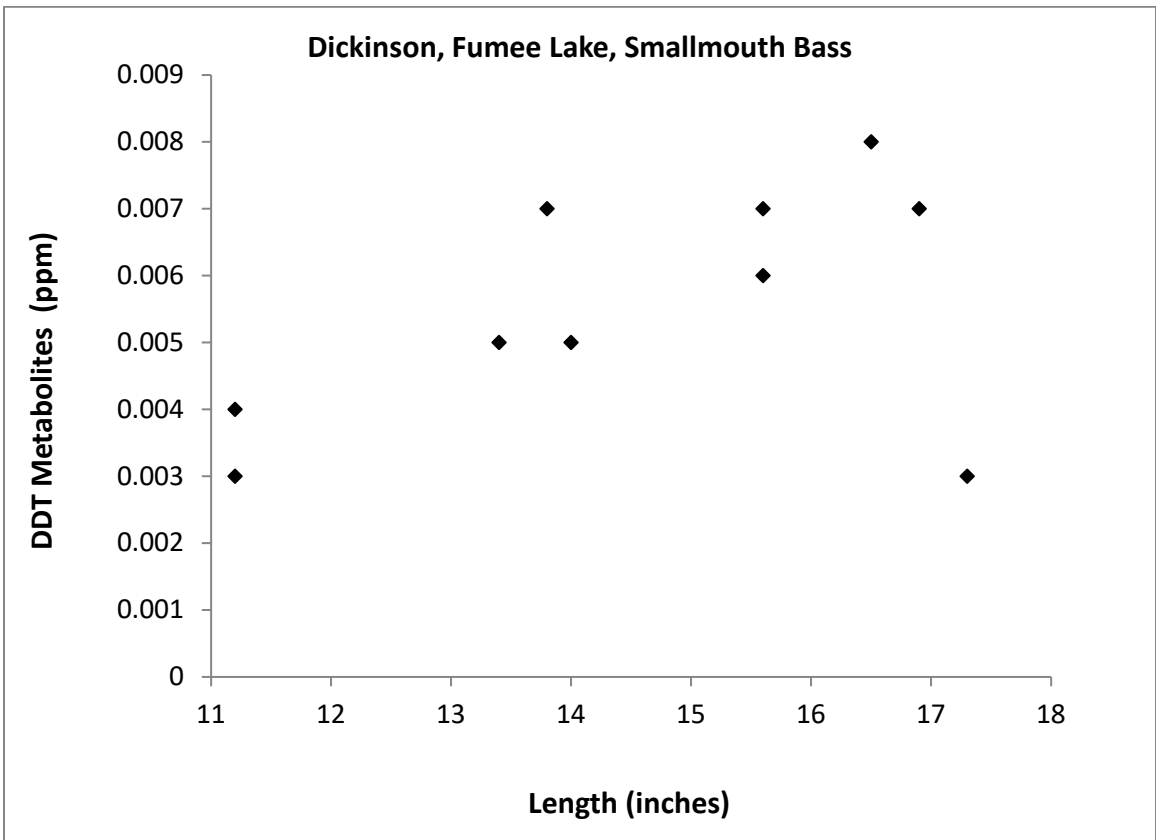
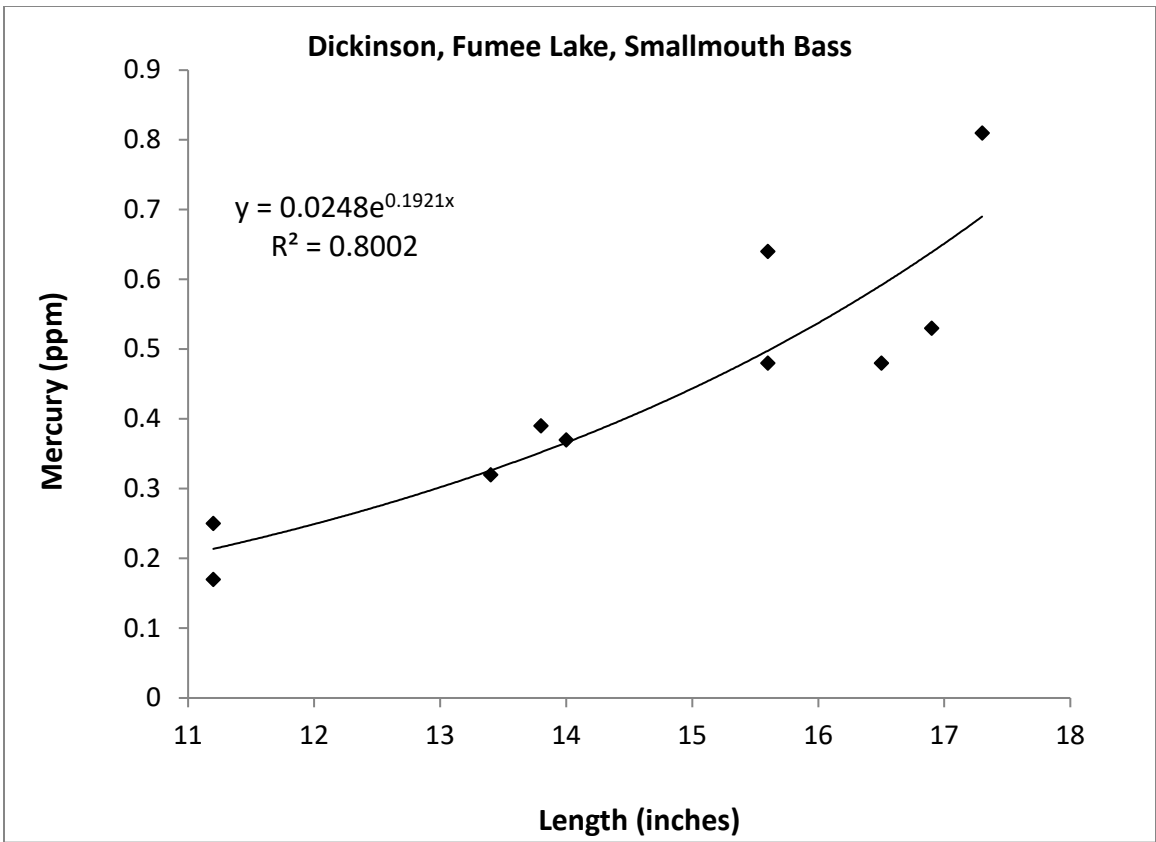
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1990	1990	10	11.2	14	13.8	17.3
Datasets available: 1990						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	7	ND	--	--	--	--
DDT	7	0.006	0.003	0.008	0.01	16
Chlordane	7	ND	--	--	--	--
Toxaphene	7	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	0.225	0.186				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Fumee Lake smallmouth bass are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of Fumee Lake largemouth or smallmouth bass smaller than 18 inches or more than 6 meals per year of those fish larger than 18 inches. Statewide length break applied as the size of the fish was limited.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
13	0.30	2
14	0.37	2
15	0.44	2
16	0.54	1
17	0.65	1
18	0.79	1
19	0.95	1
20	1.16	0.5
21	1.4	0.5

*Shaded area denotes extrapolated estimates*



**Northern Pike**

**Hamilton Lake**

**Dickinson County**

**Hg Analysis:**

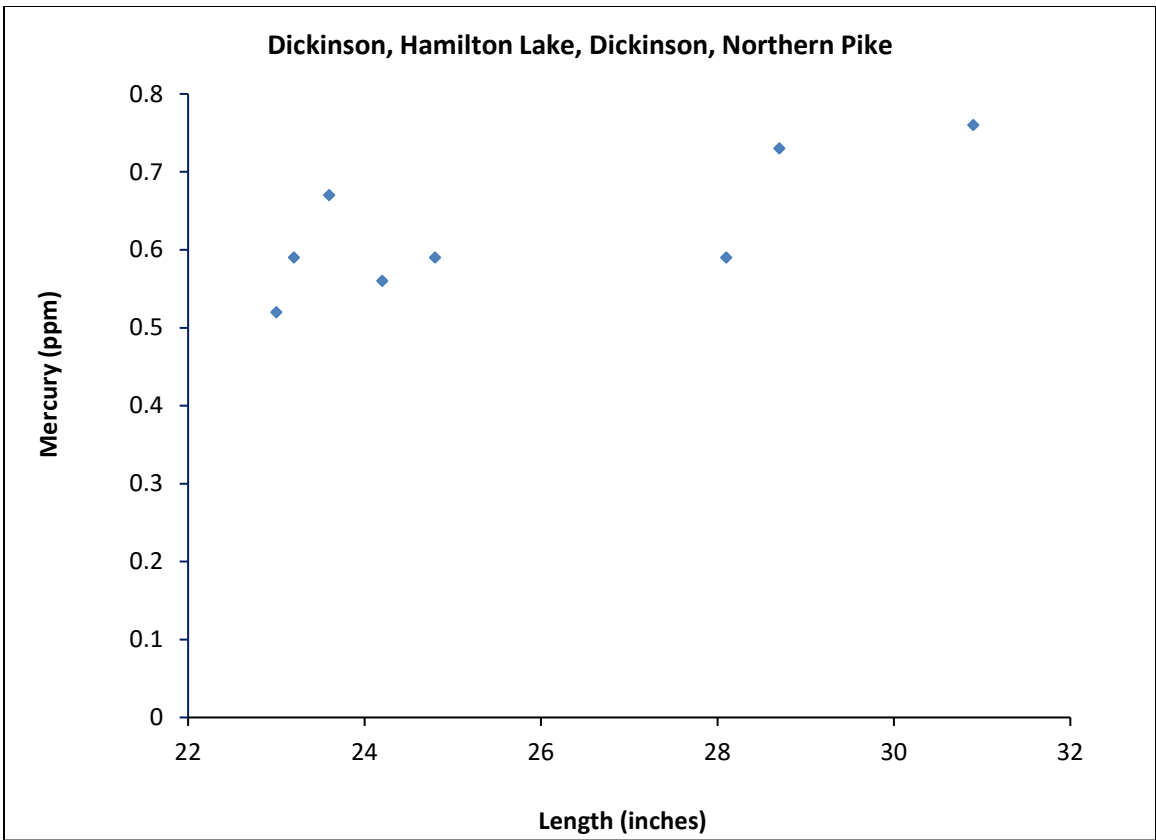
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1994	1994	8	23	24	24.2	30.9
Datasets available: 1994						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.65	0.56	0.76	0.74	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.568	0.552				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Hamilton Lake northern pike are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 1 meal per month of Hamilton Lake northern pike smaller than 30 inches or more than 6 meals per year of those fish larger than 30 inches due to mercury. Statewide length break applied as the size of the fish was limited.



**Walleye**

**Hamilton Lake**

**Dickinson County**

**Hg Analysis:**

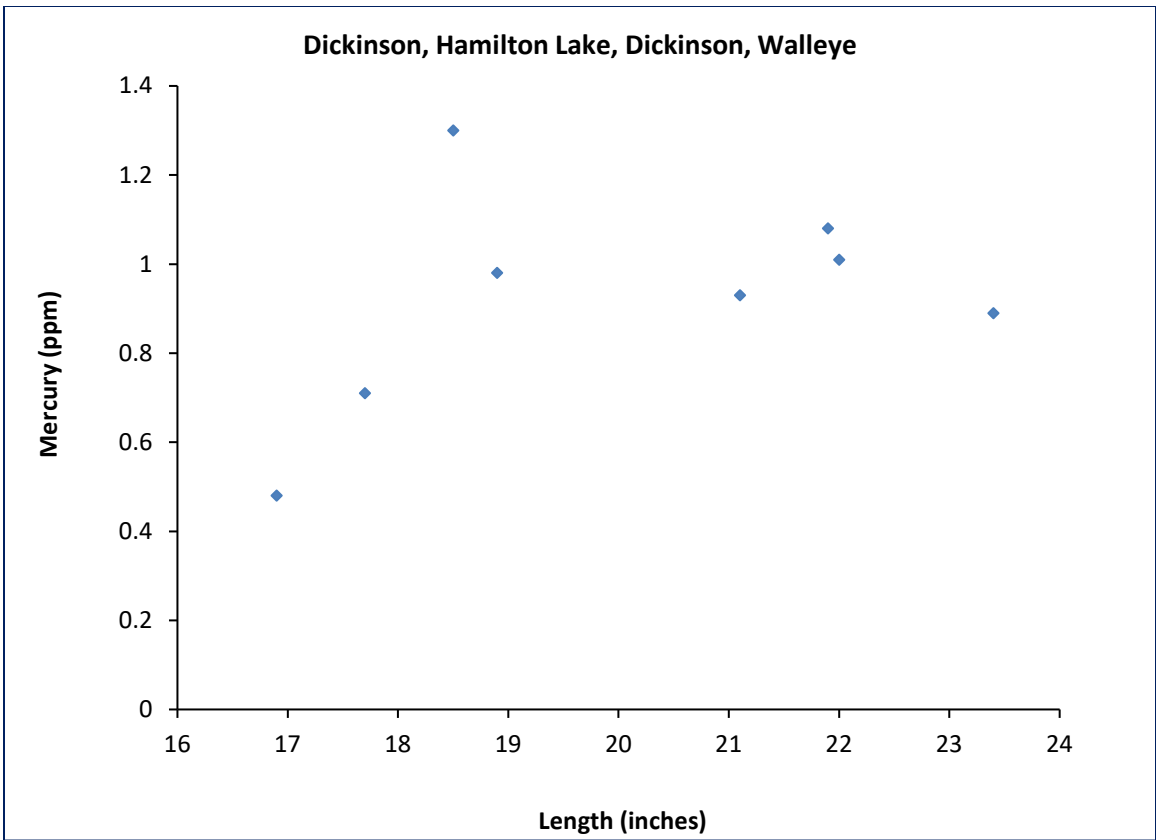
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1994	1994	8	16.9	15	16.9	23.4
Datasets available: 1994						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	8	0.92	0.48	1.3	1.13	0.5
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.158	0.238				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>0.5</b>

**Existing Advisory:** Hamilton Lake walleye are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 6 meals per year of Hamilton Lake walleye due to mercury.



**Largemouth Bass**

**Hanbury Lake**

**Dickinson County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2005	2005	10	14.6	14	14.6	17.6
Datasets available: 2005						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.94	0.48	1.24	1.11	0.5
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.338	0.300				

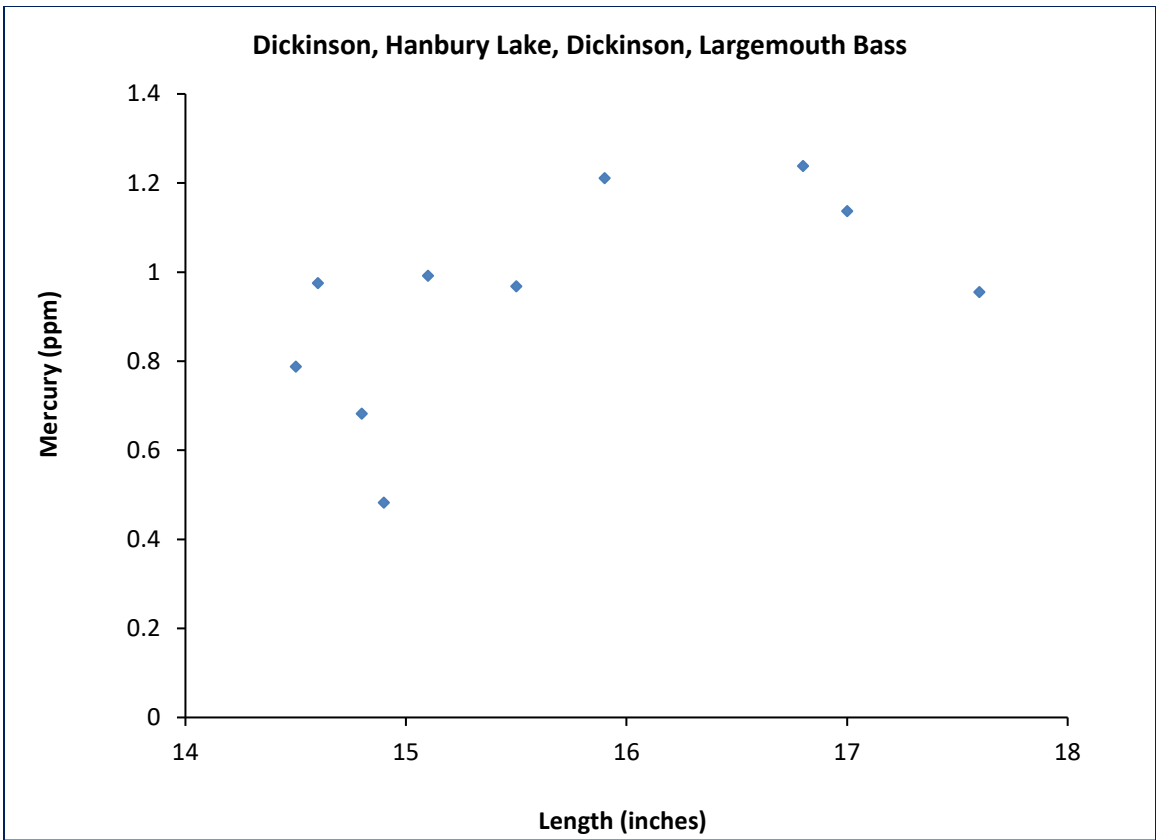
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>0.5</b>

**Existing Advisory:** Hanbury Lake largemouth bass are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat any Hanbury Lake largemouth or smallmouth bass larger than 18 inches or more than 6 meals per year of those fish smaller than 18 inches due to mercury. Statewide length break applied as the size of the fish was limited.





**Largemouth  
& Smallmouth Bass  
Hg Analysis:**

**Lake Antoine**

**Dickinson County**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	9	12.4	14	13.6	18.7
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	4	0.38	0.14	0.54	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.909	0.904				

**Organics Analysis:**

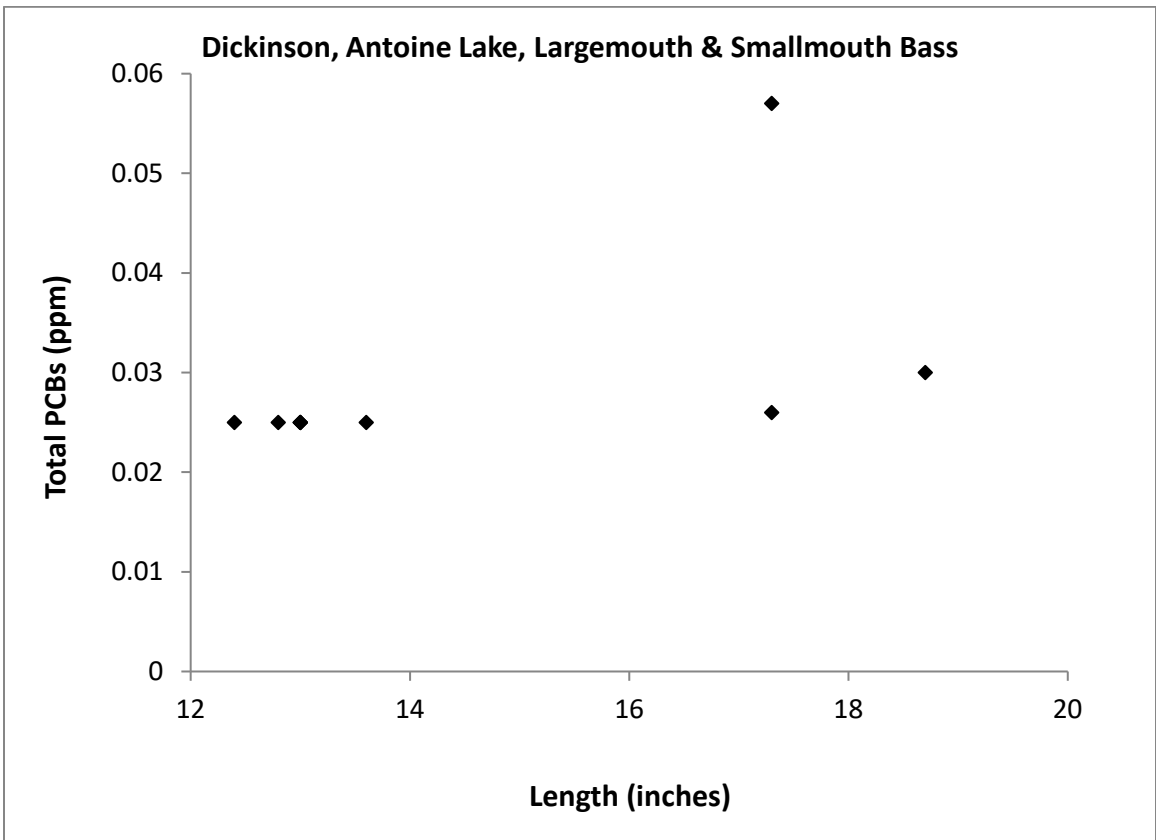
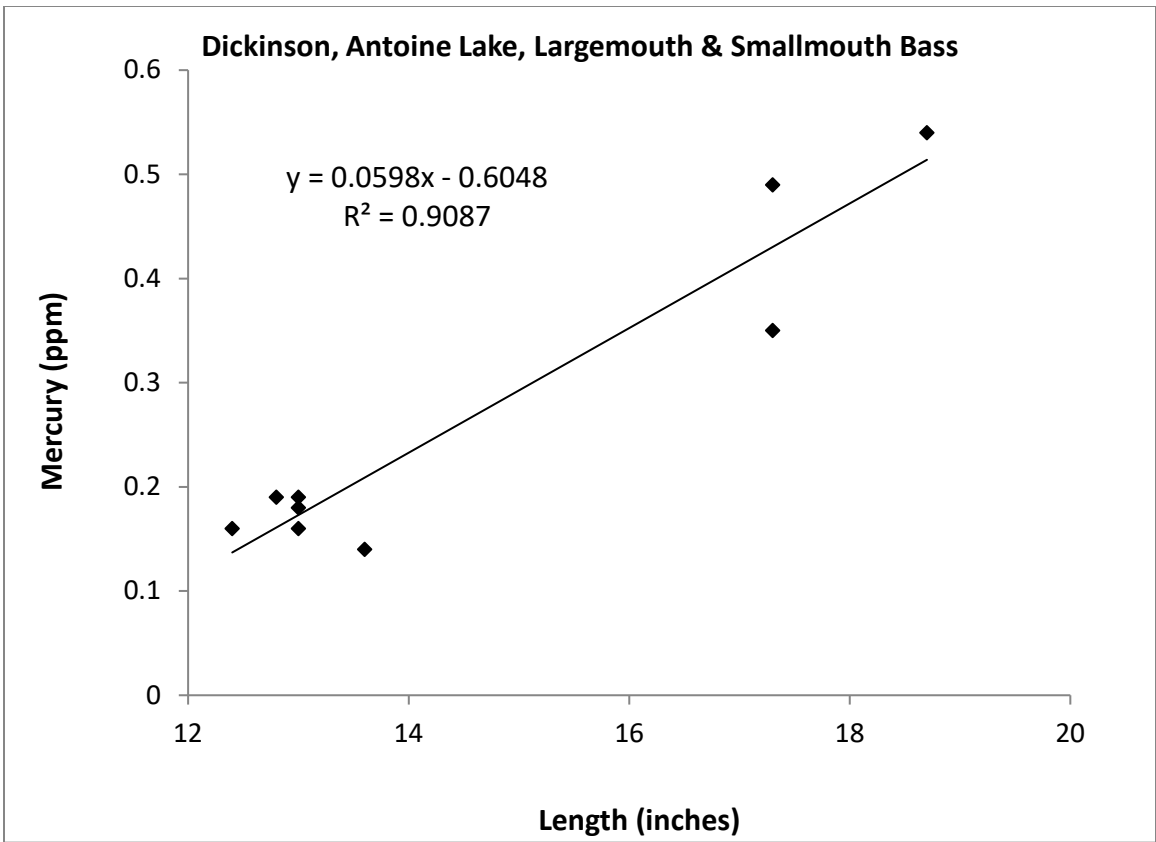
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	9	12.4	14	13.6	18.7
Datasets available: 1988						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	4	0.04	0.02	0.06	--	--
DDT	4	0.02	0.006	0.03	--	--
Chlordane	4	0.003	0.003	0.004	--	--
Toxaphene	0	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.287	0.340				
DDT	0.447	0.669				
Chlordane	0.175	0.175				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

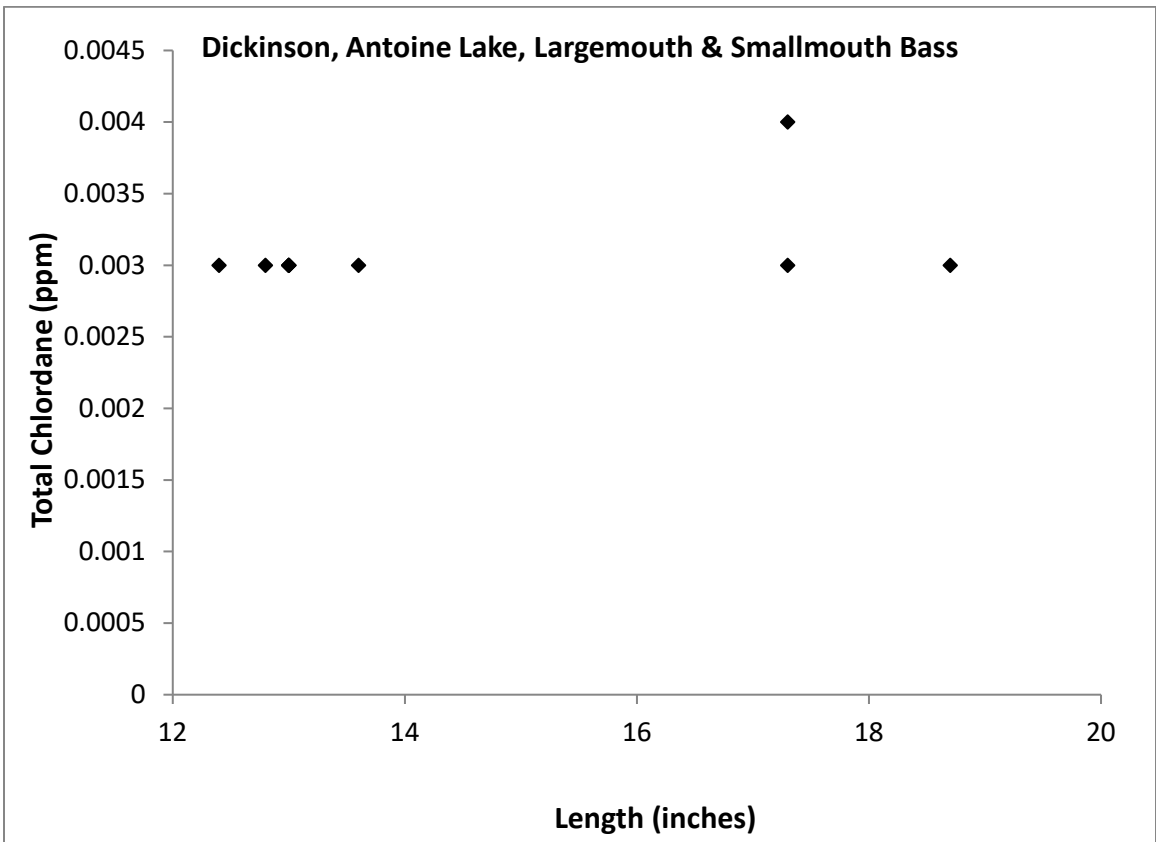
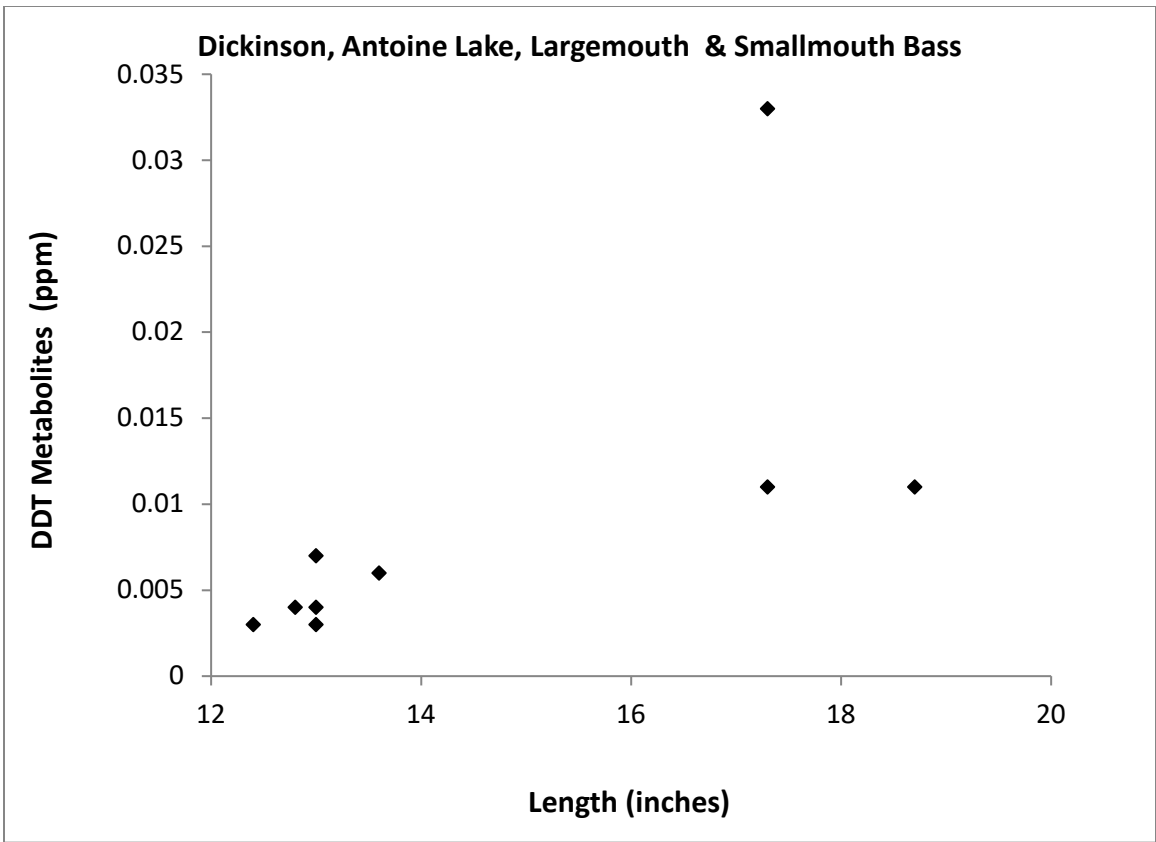
**Existing Advisory:** Antoine Lake largemouth bass are covered under the statewide mercury consumption advisory.

**Recommendation:** No one should eat more than 2 meals per month of Antoine Lake largemouth or smallmouth bass smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches due to mercury. PCBs would cause an advisory.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
13	0.17	4
14	0.23	4
15	0.29	2
16	0.35	2
17	0.41	2
18	0.47	2
19	0.53	2
20	0.59	1
21	0.65	1

*Shaded area denotes extrapolated estimates*





**Northern Pike**

**Lake Antoine**

**Dickinson County**

**Hg Analysis:**

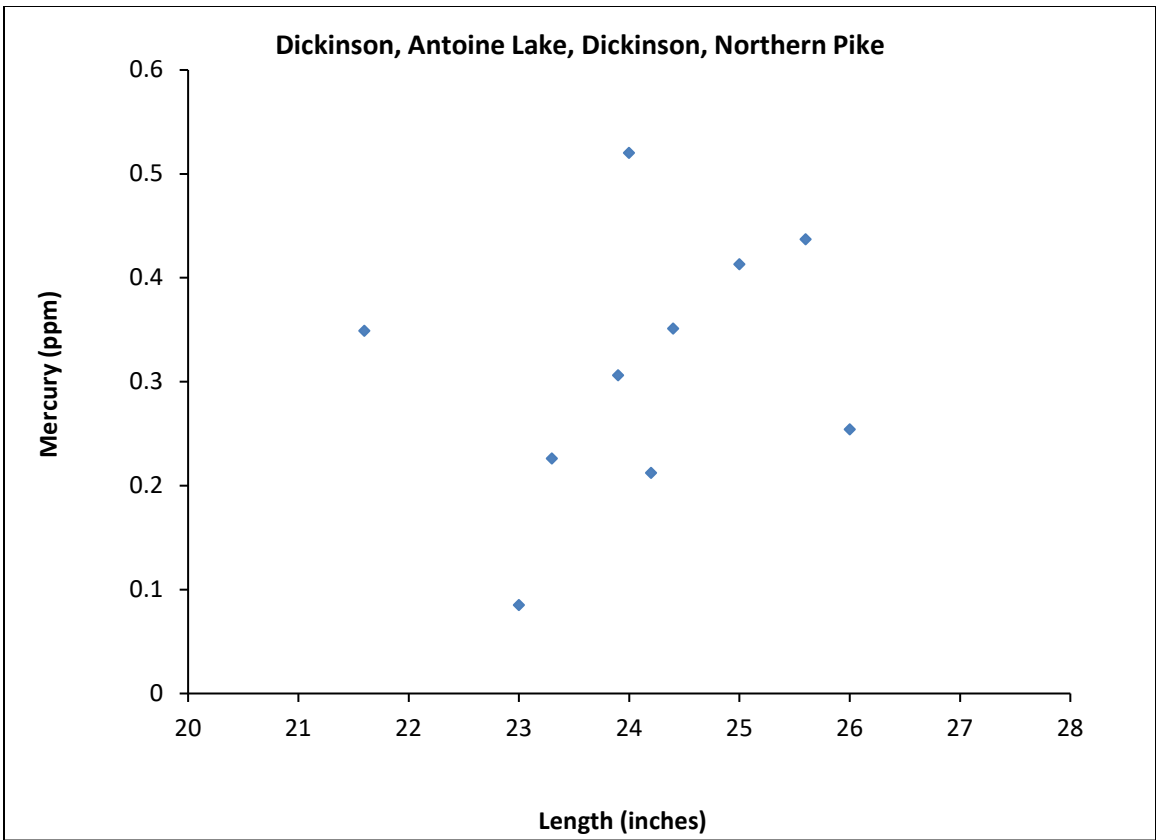
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
2005	2005	10	21.6	24	23.9	26	
Datasets available: 2005							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)		
Mercury	7	0.356	0.212	0.520	0.460	2	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	0.007	0.003					

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
--	--	--	--	--	--	--	
Datasets available: --							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)		
PCB	0	na	--	--	--	--	
DDT	0	na	--	--	--	--	
Chlordane	0	na	--	--	--	--	
Toxaphene	0	na	--	--	--	--	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
<b>Final meal category based on UCL:</b>							<b>2</b>

**Existing Advisory:** Women and children should not eat more than one meal per week of Antoine Lake northern pike smaller than 26 inches or more than one meal per month of Antoine Lake northern pike larger than 26 inches due to mercury.

**Recommendation:** No one should eat more than 1 meal per month of northern pike larger than 30 inches or more than 2 meals per month of northern pike smaller than 30 inches in length. The size range of fish in this sample set is limited. Statewide length break applied as the size of the fish was limited.



**Walleye**

**Lake Antoine**

**Dickinson County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	2005	13	14.2	15	14.6	22
Datasets available: 1988, 2005						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	12	0.22	0.10	0.40	0.27	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.553	0.614				

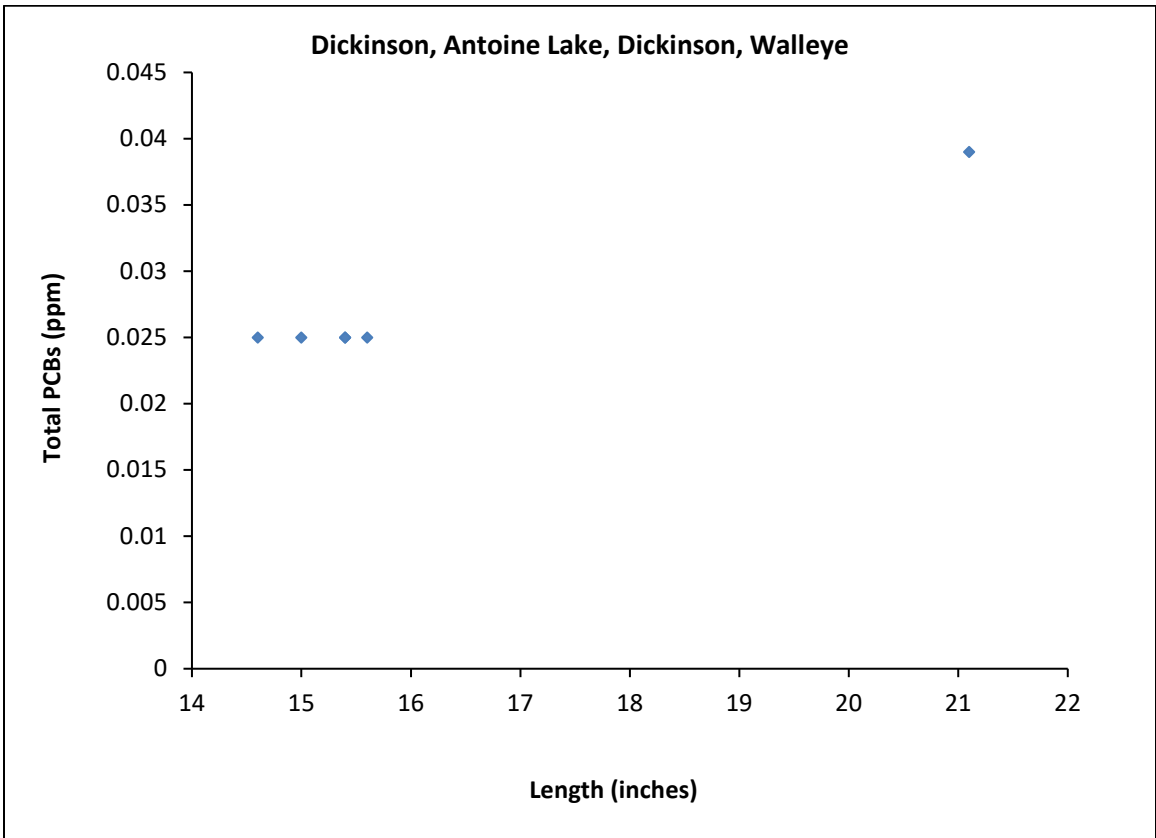
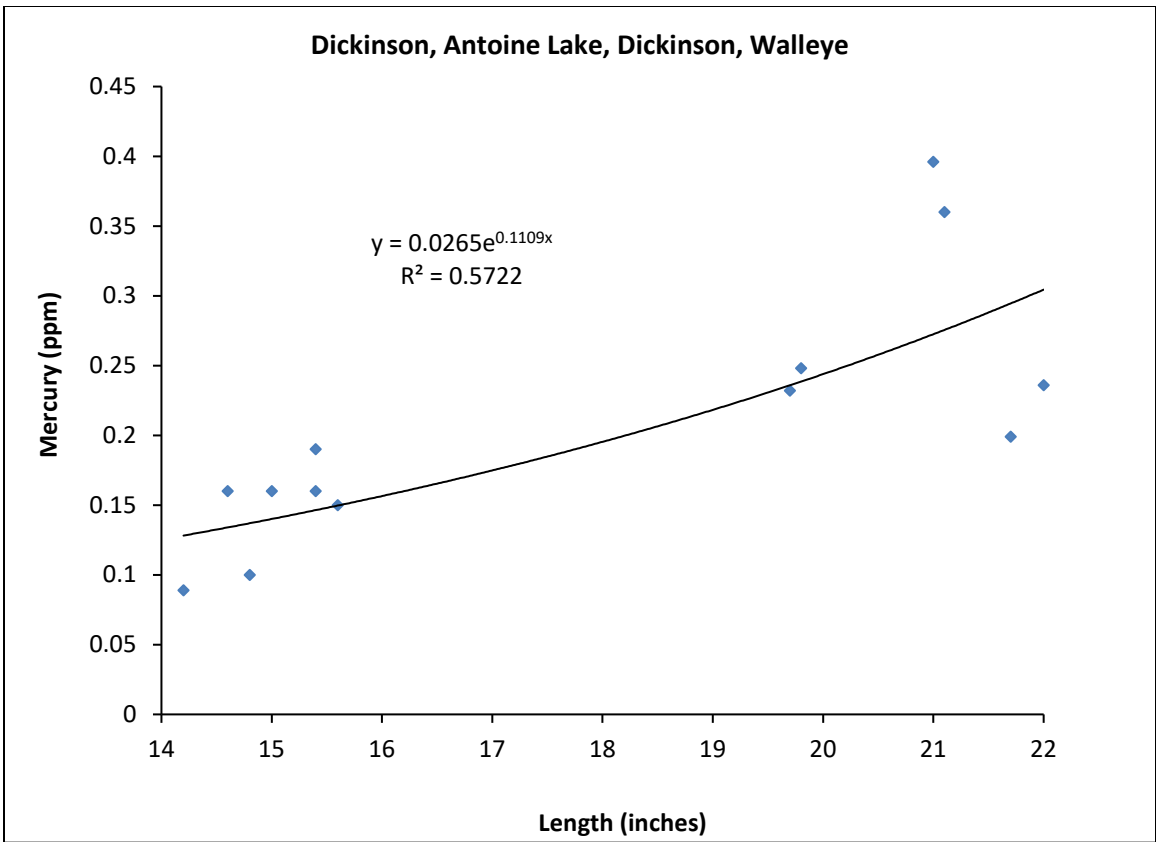
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	6	14.6	14.6	14.6	21.1
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	6	0.027	0.025	0.039	0.030	8
DDT	6	0.006	0.003	0.016	0.010	16
Chlordane	6	ND	--	--	--	--
Toxaphene	6	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.978	0.978				
DDT	0.988	0.975				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

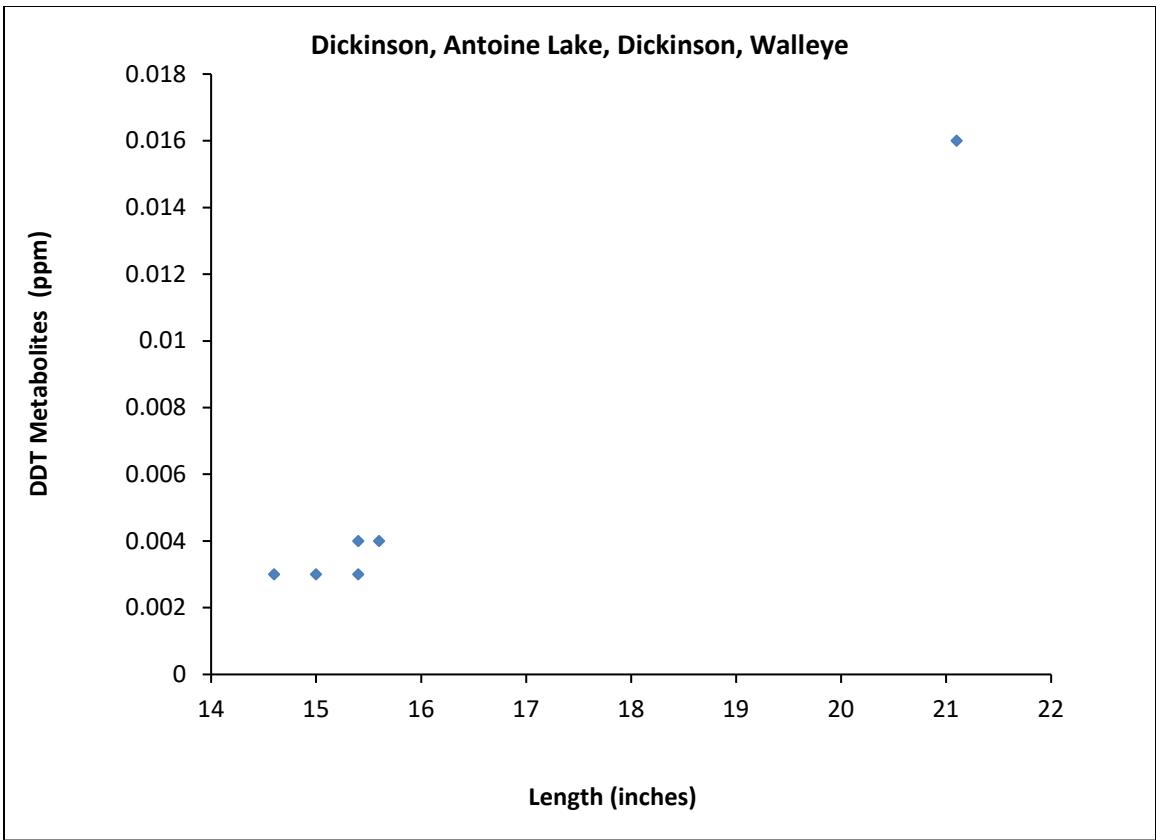
**Existing Advisory:** Women and children should eat no more than one meal per week of Antoine Lake walleye smaller than 22 inches and no more than one meal per month of Antoine Lake walleye larger than 22 inches due to mercury.

**Recommendation:** No one should eat more than 4 meals per month of Antoine Lake walleye smaller than 20 inches or more than 2 meals per month of those fish larger than 20 inches due to mercury. PCBs would cause an advisory.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
14	0.12	8
15	0.14	4
16	0.16	4
17	0.18	4
18	0.20	4
19	0.22	4
20	0.24	4
21	0.27	2
22	0.30	2
<i>Shaded area denotes extrapolated estimates</i>		







**Largemouth Bass**

**Mary Lake**

**Dickinson County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2008	2008	10	11.2	14	13.7	15.9
Datasets available: 2008						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.74	0.63	0.83	0.83	1
Selenium	6	0.63	0.52	0.69	0.69	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.777	0.797				
Selenium	0.537	0.521				

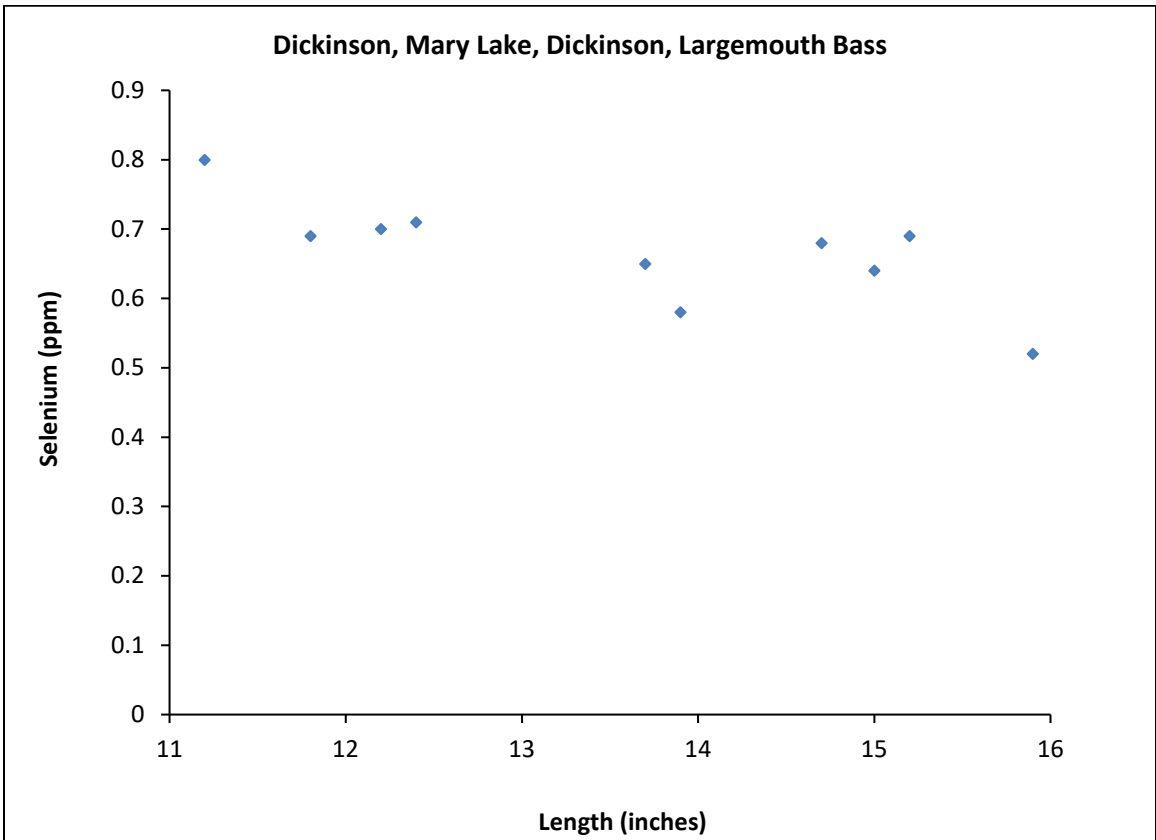
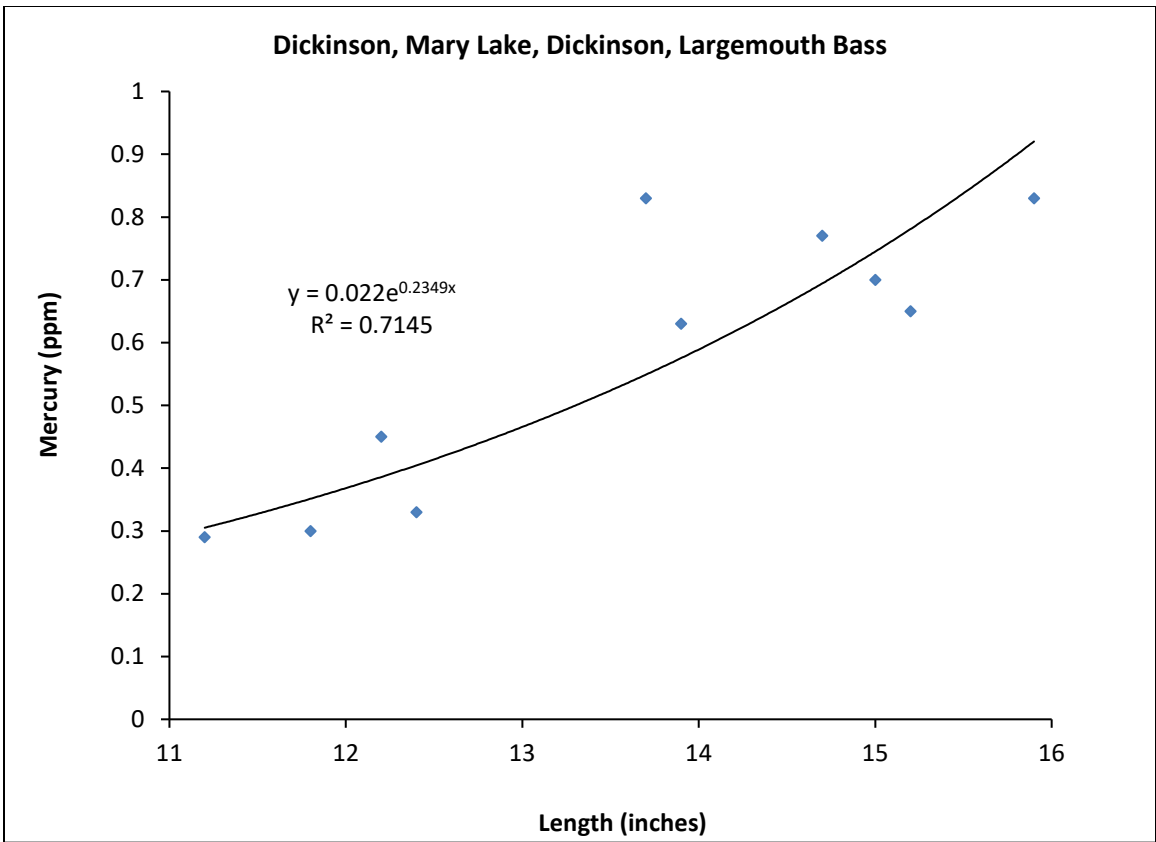
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Mary Lake largemouth bass are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Mary Lake largemouth or smallmouth bass smaller than 16 inches or more than 6 meals per year of those fish larger than 16 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
14	0.590	1
15	0.746	1
16	0.943	1
17	1.193	0.5
18	1.509	0.5
19	1.909	0.5
20	2.414	0
21	3.053	0
22	3.862	0
<i>Shaded area denotes extrapolated estimates</i>		



**Largemouth Bass**

**Pickereel Lake**

**Dickinson County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2018	2018	10	13.8	14.0	13.8	15.3
Datasets available: 2018						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.844	0.580	1.200	0.992	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.117	0.129				

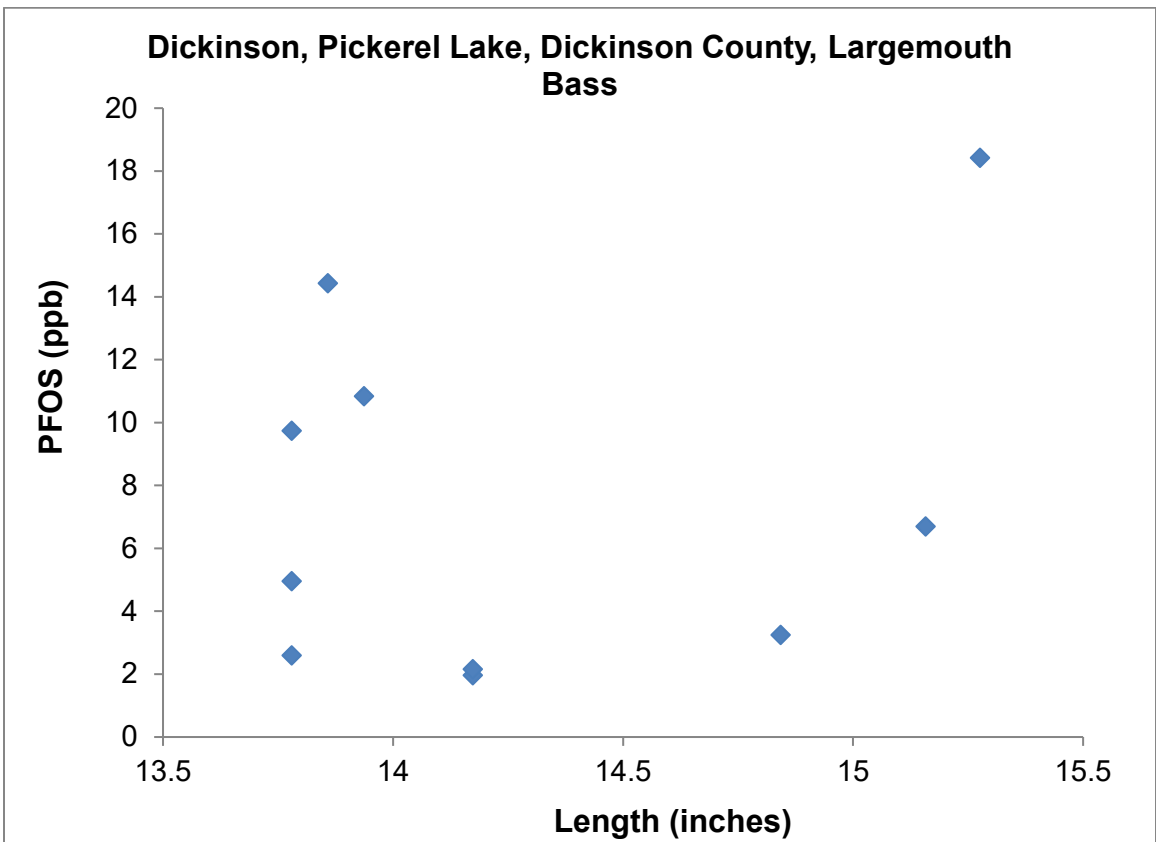
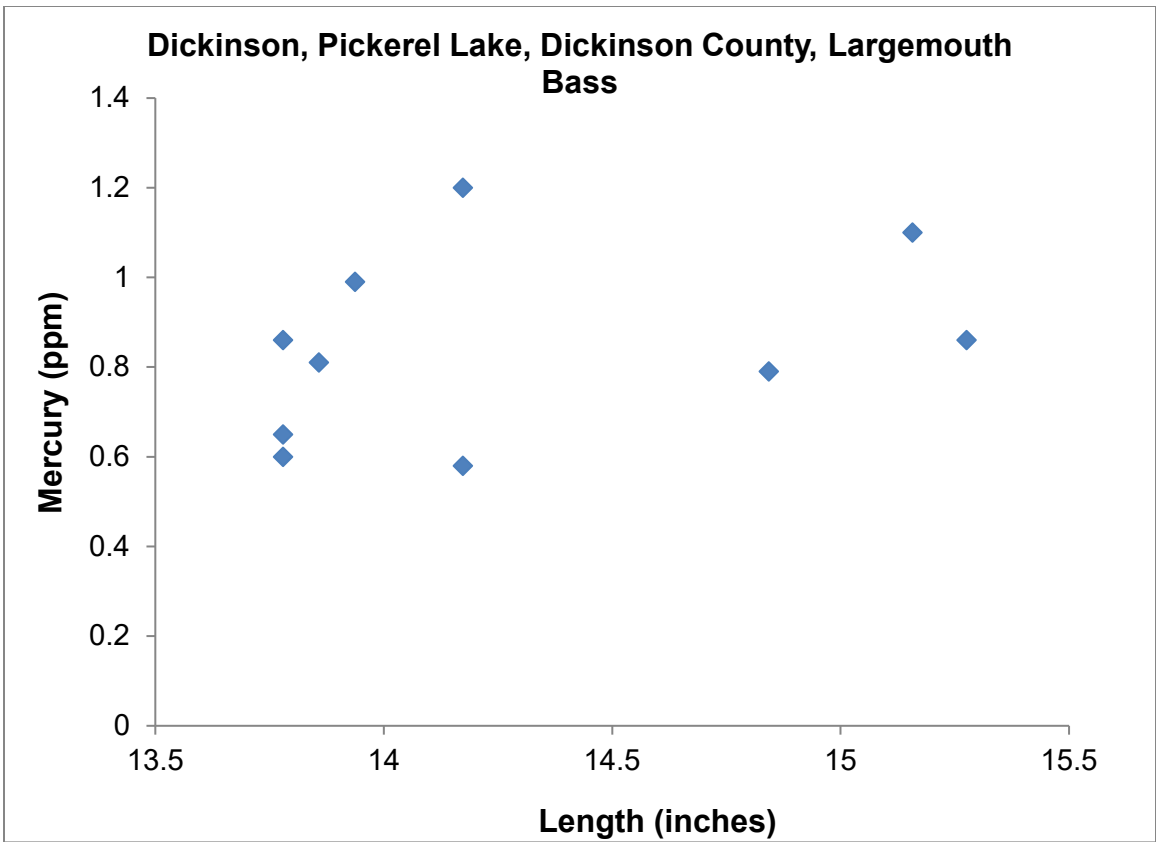
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2018	2018	10	13.8	14.0	13.8	15.3
Datasets available: 2018						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	ND	--	--	--	16
DDT	10	0.001	<0.001	0.001*	0.001	16
Chlordane	10	ND	--	--	--	16
Toxaphene	10	ND	--	--	--	--
PFOS	10	7.5 ppb	2.0 ppb	18.4 ppb	11.6 ppb	12
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	0.061	0.033	<b>Final meal category based on UCL:</b>			<b>1</b>

\* Only two fish had detectable levels of DDT at 0.001 ppb.

**Existing MDHHS Advisory:** Largemouth and smallmouth bass from Pickereel Lake in Dickinson County are currently covered under the statewide mercury guidance. No one should eat more than 2 meals per month of largemouth or smallmouth bass smaller than 18 inches or no more than 1 meal per month of these fish larger than 18 inches.

**Recommendation:** No one should eat more than 1 meal per month of largemouth or smallmouth bass smaller than 18 inches from Pickereel Lake in Dickinson County or no more than 6 meals per year of these fish larger than 18 inches due to mercury. Statewide length break applied due to limited size range of the fish used in the analysis.



**Northern Pike**

**Pickerel Lake**

**Dickinson County**

**Hg Analysis:**

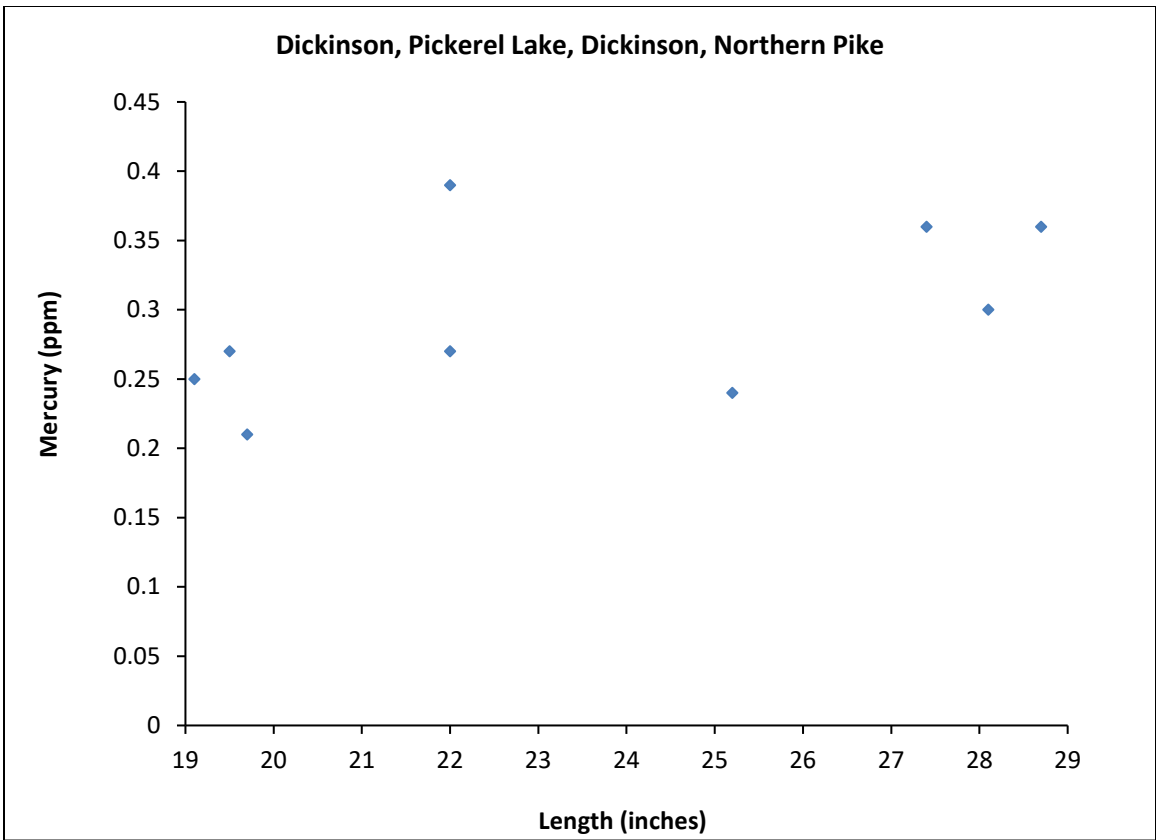
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1987	1987	9	19.1	24	25.2	28.7
Datasets available: 1987						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	4	0.32	0.24	0.36	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.288	0.308				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Northern pike from Pickerel Lake are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The statewide guidelines apply: No one should eat more than 2 meals per month of northern pike smaller than 30 inches or more than 1 meal per month of those fish larger than 30 inches.



**Northern Pike**

**Sawyer Lake**

**Dickinson County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		
Earliest	Most Recent						
2018	2018	10	18.7	NA*	18.7	26.0	
Datasets available: 2018							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
Mercury	10	0.274	0.120	0.410	0.342	2	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	0.084	0.166					

\*Sawyer Lake has a daily possession limit of 5 Northern Pike of any size. Only one fish may be greater than 24 inches.

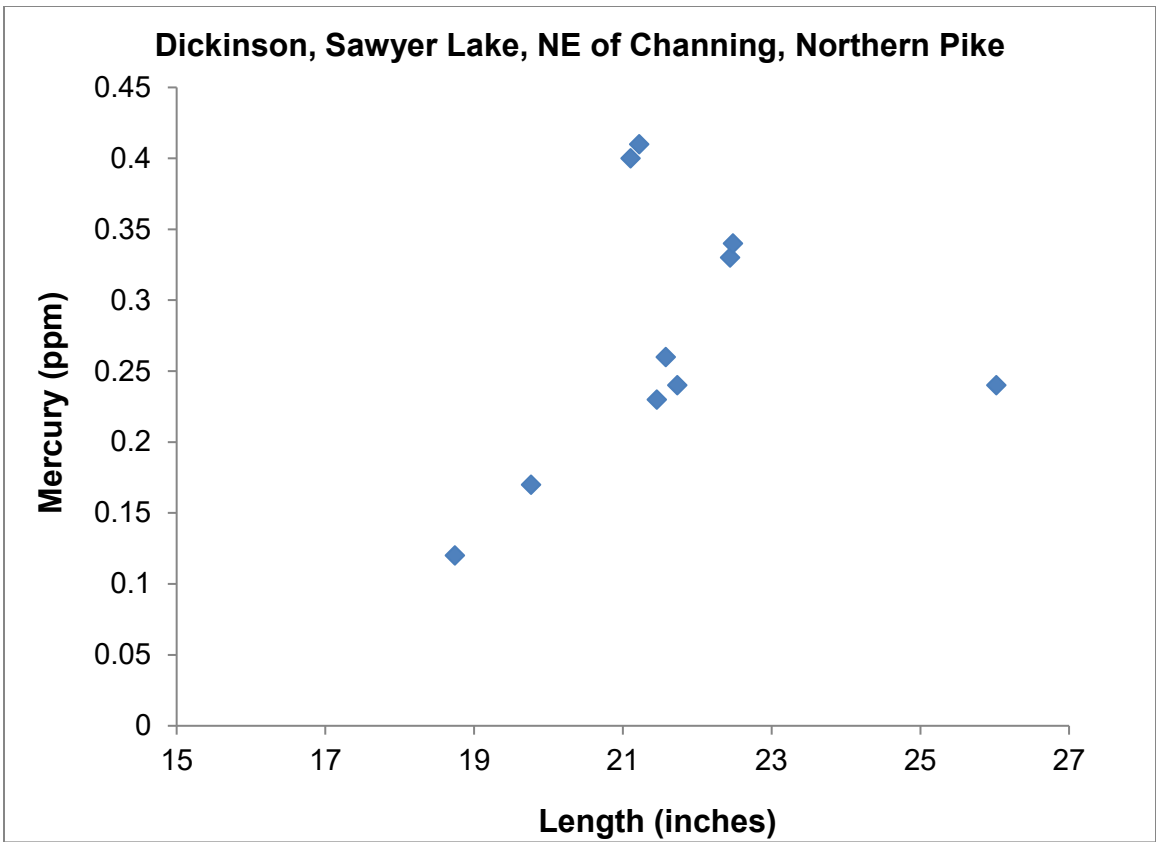
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		
Earliest	Most Recent						
Datasets available:							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
PCB	0	--	--	--	--	--	--
DDT	0	--	--	--	--	--	--
Chlordane	0	--	--	--	--	--	--
Toxaphene	0	--	--	--	--	--	--
PFOS	0	--	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
PFOS	--	--					
<b>Final meal category based on UCL:</b>							<b>2</b>

**Existing MDHHS Advisory:** Northern Pike from Sawyer Lake in Dickinson County are covered under the statewide mercury guidance. No one should eat more than 2 meals per month of northern pike smaller than 30 inches in length or no more than 1 meal per month of fish larger than 30 inches in length from due to mercury.

**Recommendation:** No one should eat more than 2 meals per month of northern pike less than 30 inches in length from Sawyer Lake in Dickinson County or no more than 1 meal per month of those fish larger than 30 inches due to mercury. The statewide length break was applied as the size range of the fish was limited.





**Walleye**

**Silver Lake**

**Dickinson County**

**Hg Analysis:**

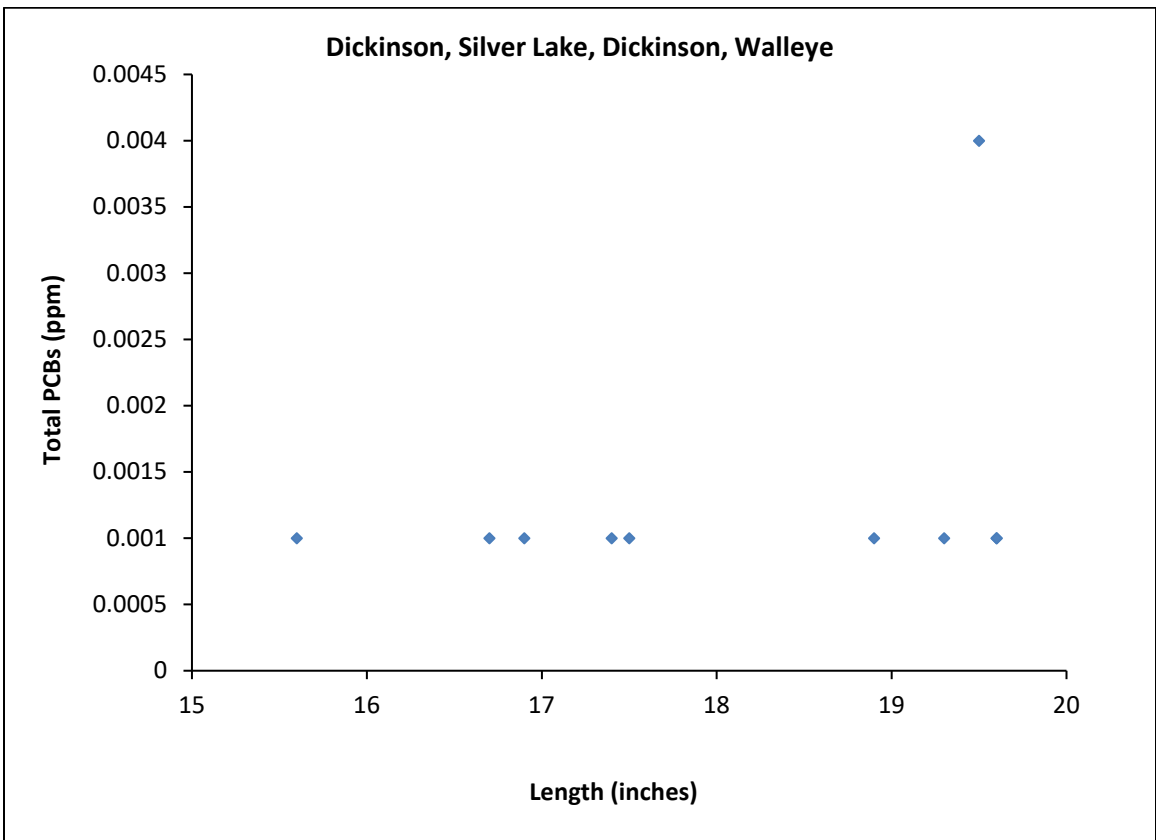
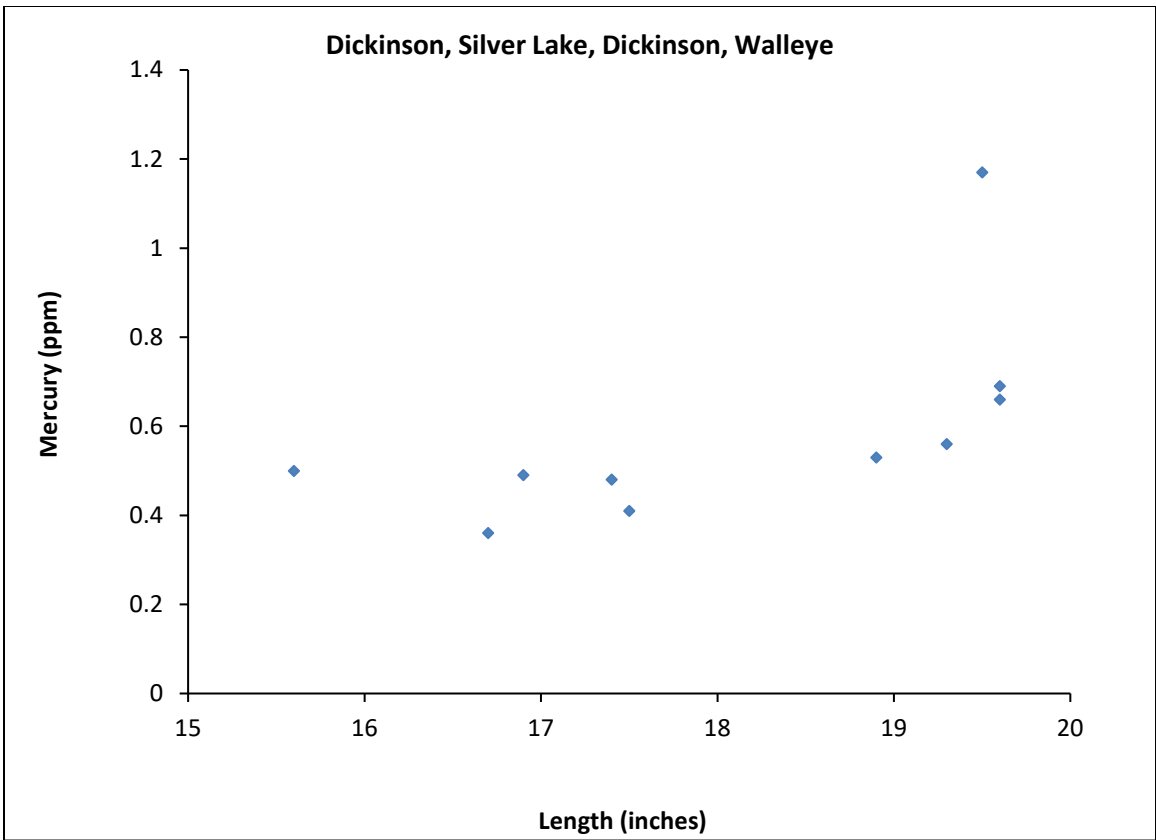
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2002	2002	10	15.6	15	15.6	19.6
Datasets available: 2002						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.58	0.36	1.17	0.75	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.375	0.460				

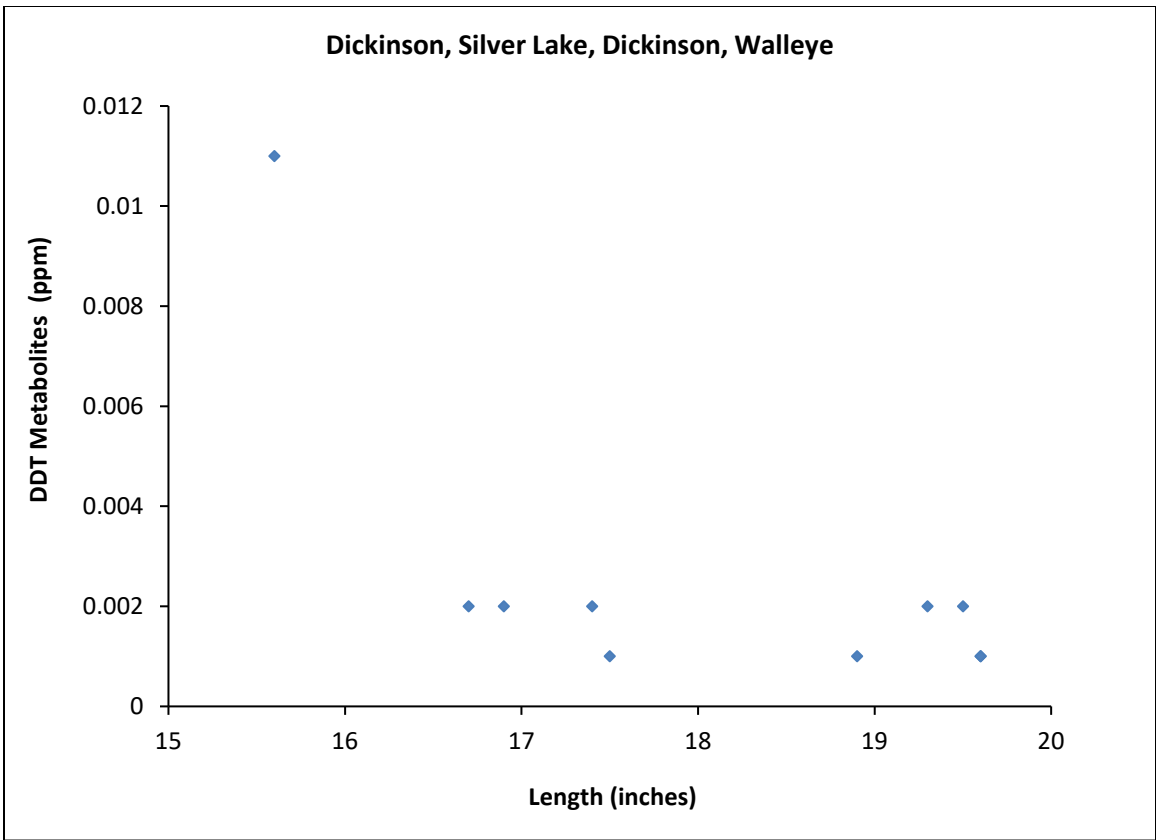
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2002	2002	10	15.6	15	15.6	19.6
Datasets available: 2002						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	0.001	0.001	0.004	0.002	16
DDT	10	0.003	0.001	0.011	0.004	16
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.114	0.114				
DDT	0.420	0.468				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Walleye from Silver Lake are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Silver Lake walleye less than 20 inches or more than 6 meals per year of those fish larger than 20 inches due to mercury. Statewide length break applied as the size of the fish was limited.





**Hg Analysis:**

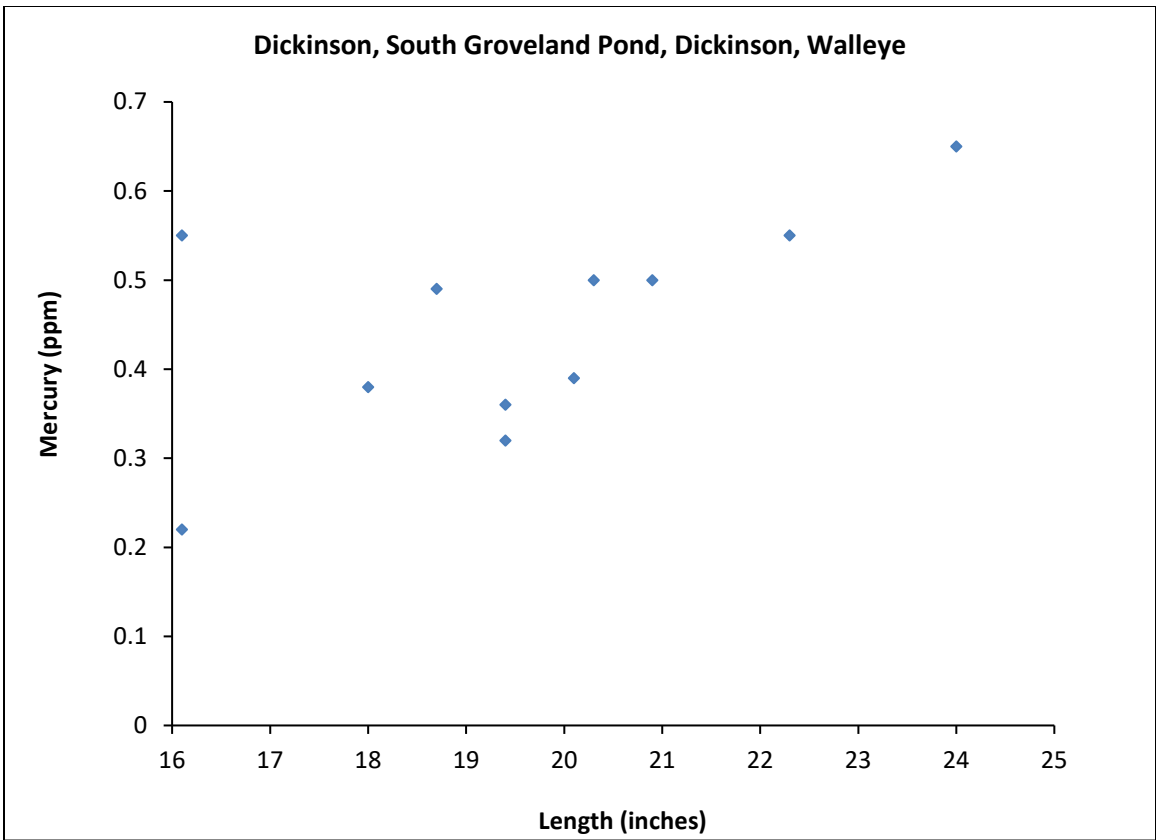
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2003	2003	11	16.1	15	16.1	24
Datasets available: 2003						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	11	0.45	0.22	0.65	0.53	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.369	0.357				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Walleye from South Groveland Pond are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of South Groveland Pond walleye smaller than 20 inches or more than 1 meal per month of those fish larger than 20 inches due to mercury. Statewide length break applied as the size of the fish was limited.



# Escanaba River Delta and Marquette Counties

**Rock Bass**

**Escanaba River  
Boney Falls Impoundment**

**Marquette & Delta  
Counties**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		
Earliest	Most Recent				Min	Max	
1985	2014	20	5	na	5	9.8	
Datasets available: 1985, 2014							
Chemical	Sample Size (Legal)	Mean		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	20	0.18		0.06	0.50	0.24	4
Selenium	10	4.4		2.4	6.0	5.3	4
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	0.405	0.503					
Selenium	0.202	0.220					

**Organics Analysis:**

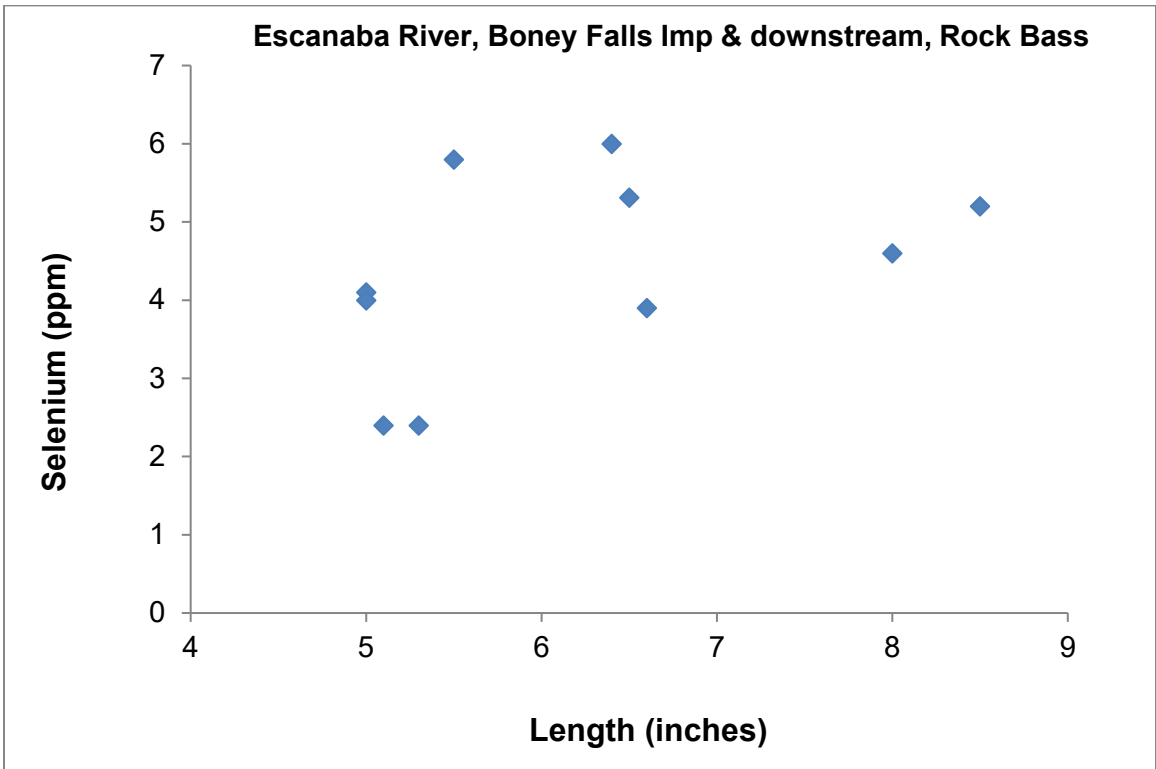
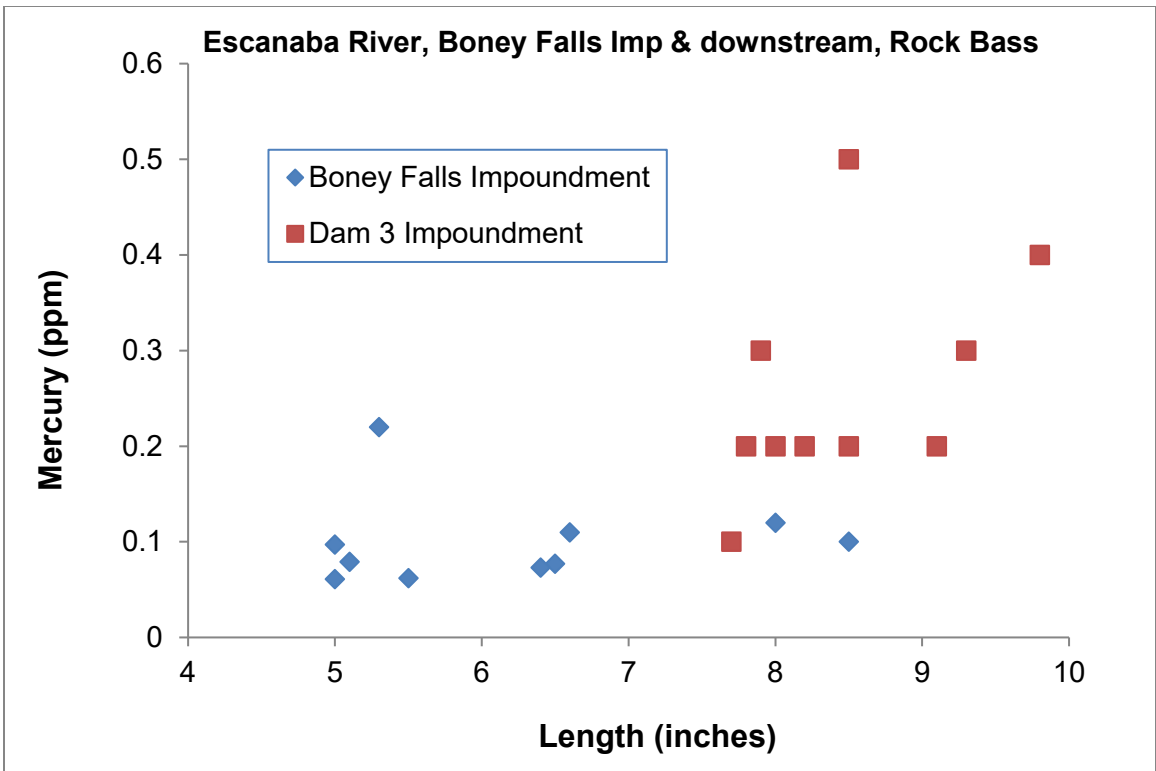
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		
Earliest	Most Recent				Min	Max	
2014	2014	10	5	na	5	8.5	
Datasets available: 2014							
Chemical	Sample Size (Legal)	Mean		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	ND		--	--	--	16
DDT	10	ND		--	--	--	16
Chlordane	10	ND		--	--	--	--
Toxaphene	10	ND		--	--	--	--
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
<b>Final meal category based on UCL:</b>							<b>4</b>

**Existing Advisory:** No one should eat more than 2 meals per month of rock bass from the Escanaba River between the Boney Falls Dam and Dam 3 due to mercury.

**Recommendation:** No change is recommended. Additional data is needed before relaxing the guideline. Selenium would cause an advisory.

Note: Selenium concentrations have not differed substantially between species tested to date from the Escanaba River. Consider recommending that no one eat more than 4 meals per month of any species from the river due to selenium. This is the same as the least restrictive current advice; PCBs and/or mercury drive guidance otherwise.





**Northern Pike**

**Escanaba River  
Between Dams 1 and 2**

**Delta County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1993	21	22.4	na*	23.6	30.3
Datasets available: 1988, 1993						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	19	0.35	0.08	0.82	0.44	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.219	0.155				

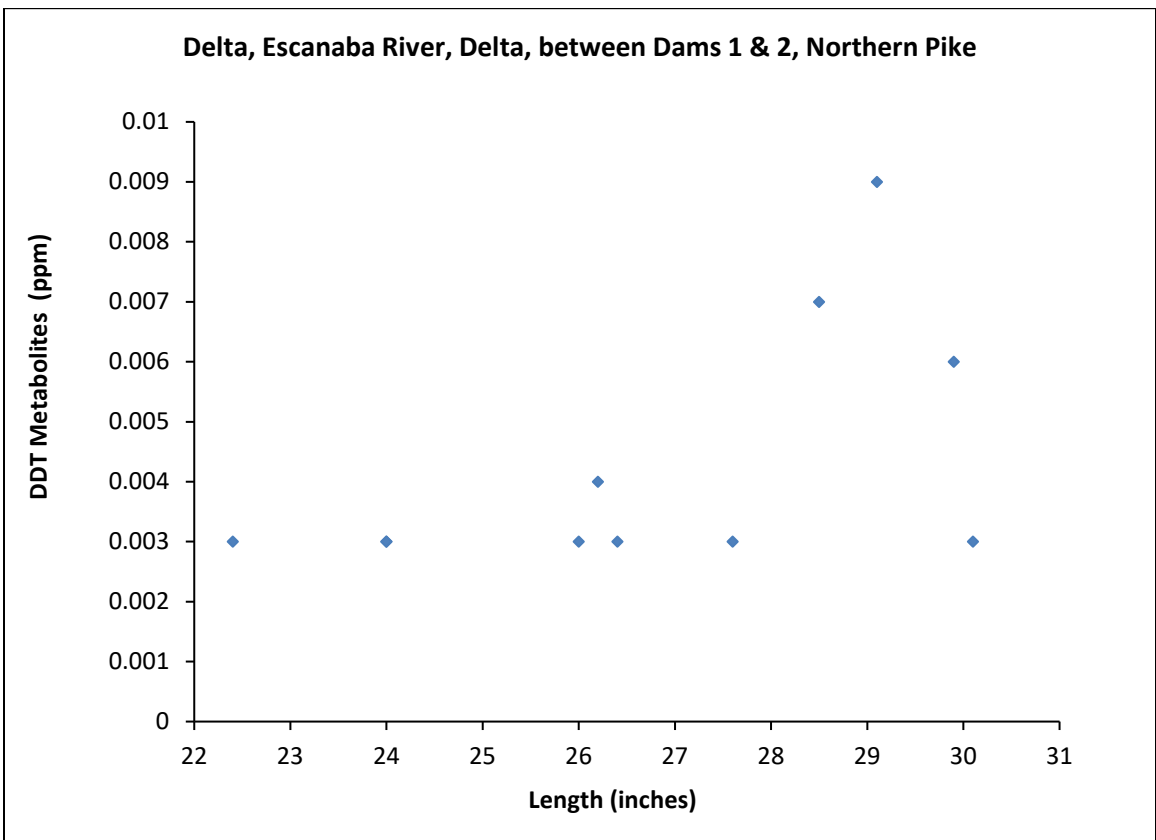
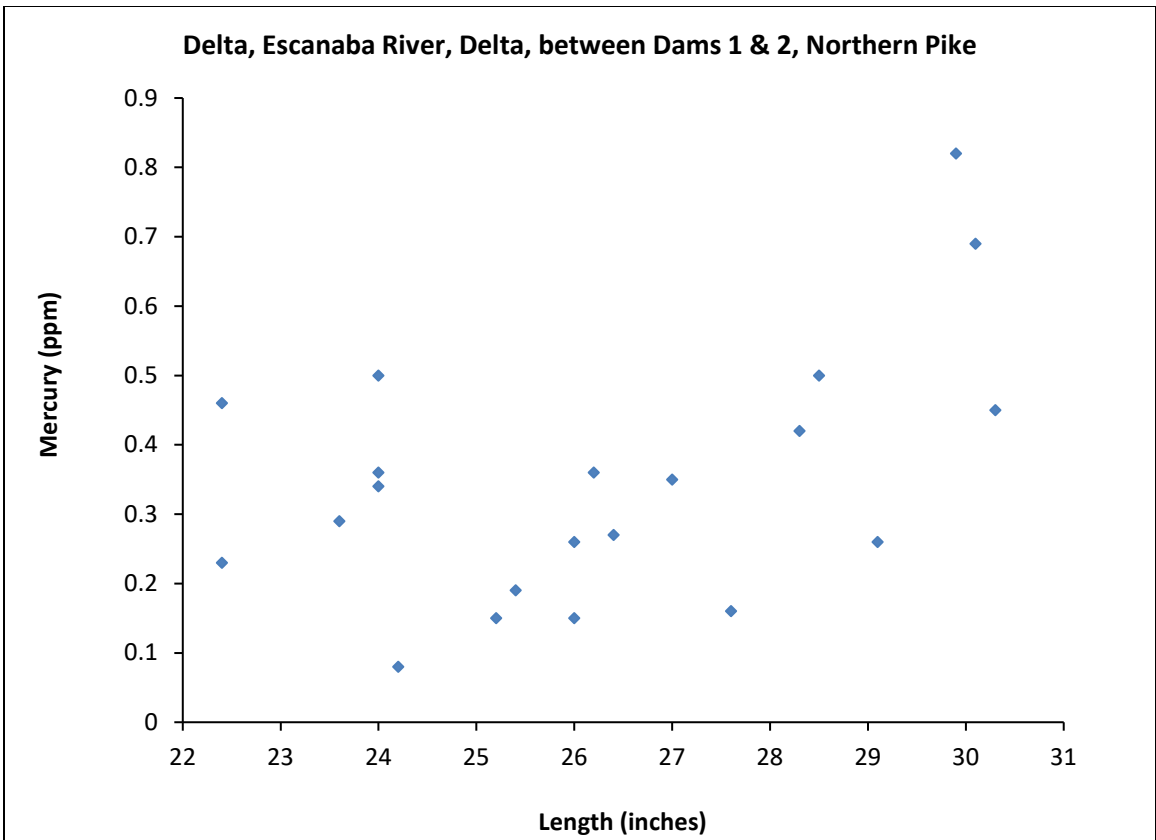
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	10	22.4	na*	23.6	30.3
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	ND	--	--	--	--
DDT	10	0.004	0.003	0.007	0.01	16
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	0.312	0.333				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

\* - there is no minimum size limit on northern pike from the Escanaba River upstream of the first dam

**Existing Advisory:** Northern pike from the Dam 1 impoundment of the Escanaba River are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of northern pike from the first Escanaba River Dam impoundment larger than 30 inches or more than 2 meals per month of those fish smaller 30 inches in length due to mercury. Statewide length break applied.



**White Sucker**

**Escanaba River  
Between Dams 1 and 2**

**Delta County**

**Hg Analysis:**

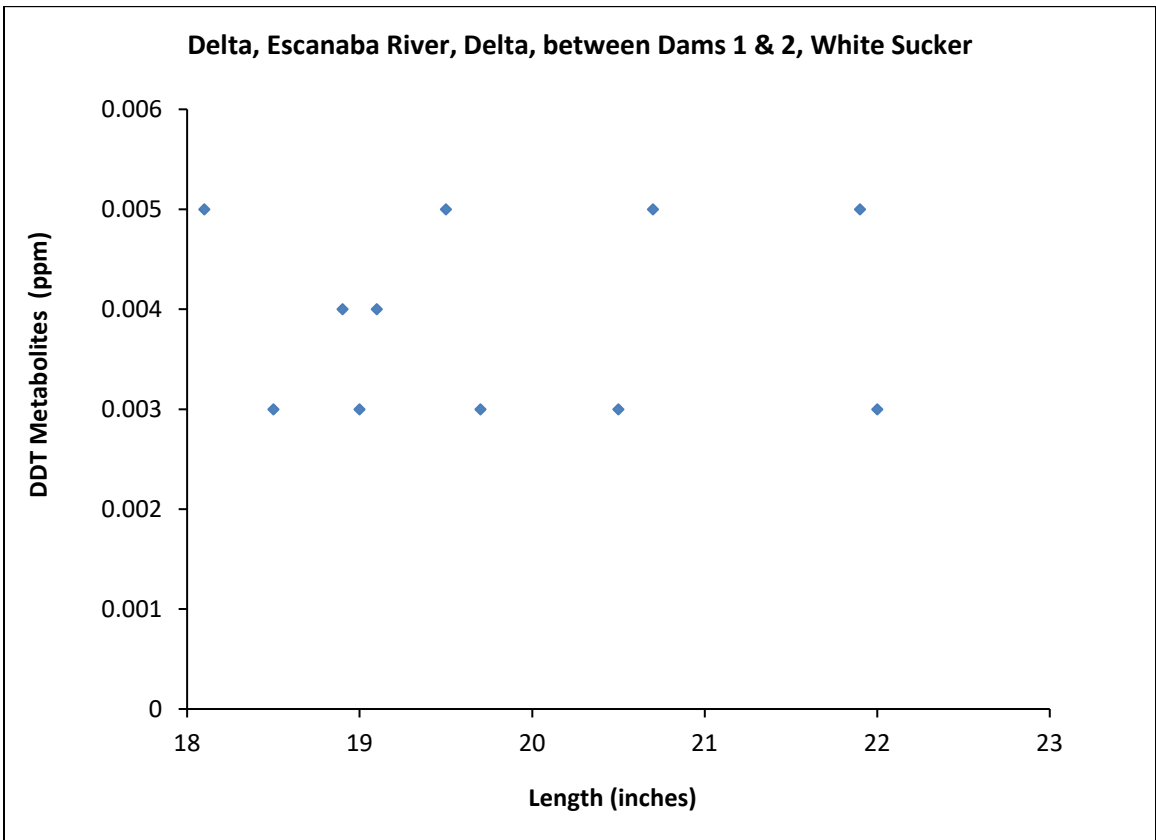
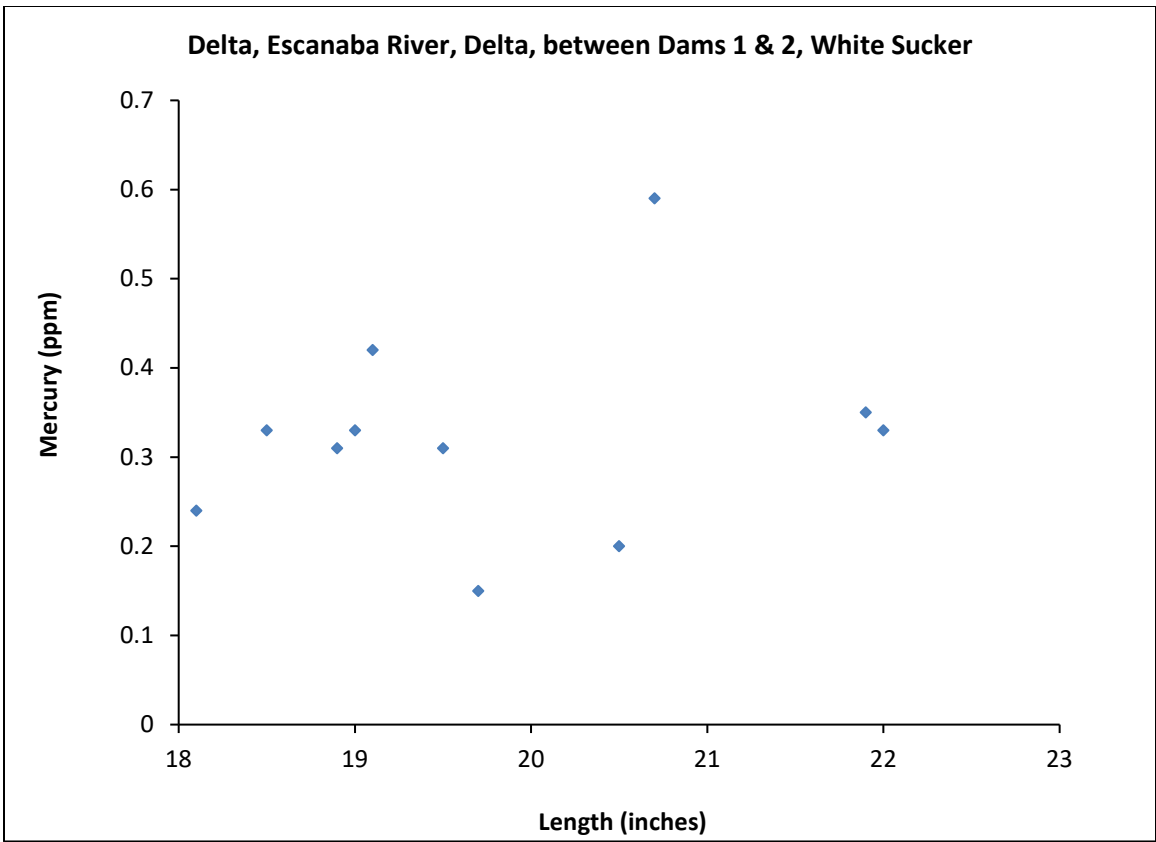
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1990	11	18.1	na	18.1	22
Datasets available: 1988, 1990						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	11	0.32	0.15	0.59	0.40	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.044	0.031				

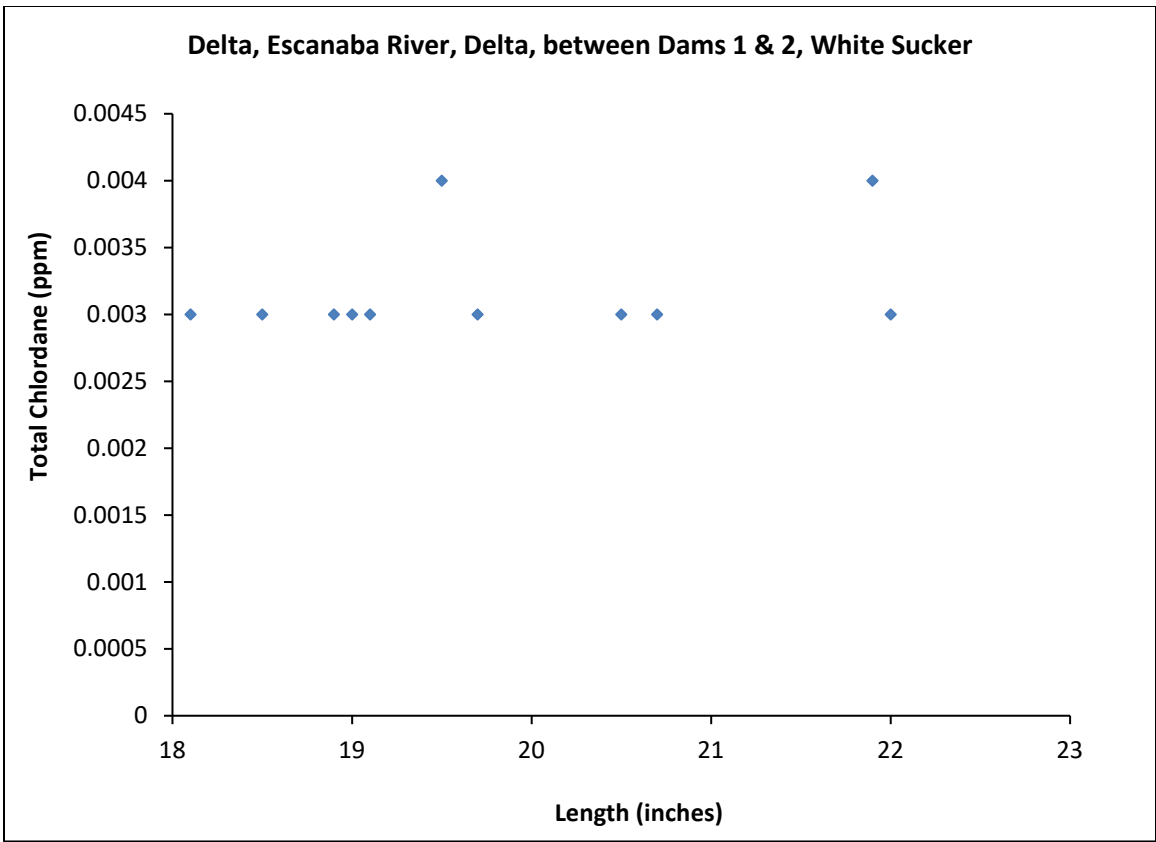
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1990	11	18.1	na	18.1	22
Datasets available: 1988, 1990						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	11	ND	--	--	--	--
DDT	11	0.004	0.003	0.005	0.005	16
Chlordane	11	0.003	0.003	0.004	0.004	--
Toxaphene	11	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	0.001	0.000				
Chlordane	0.113	0.113				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** There are no current consumption advisories for Escanaba River white sucker.

**Recommendation:** No one should eat more than 2 meals per month of sucker from the first Escanaba River Dam impoundment due to mercury.





**Yellow Perch**

**Escanaba River  
Between Dams 1 and 2**

**Delta County**

**Hg Analysis:**

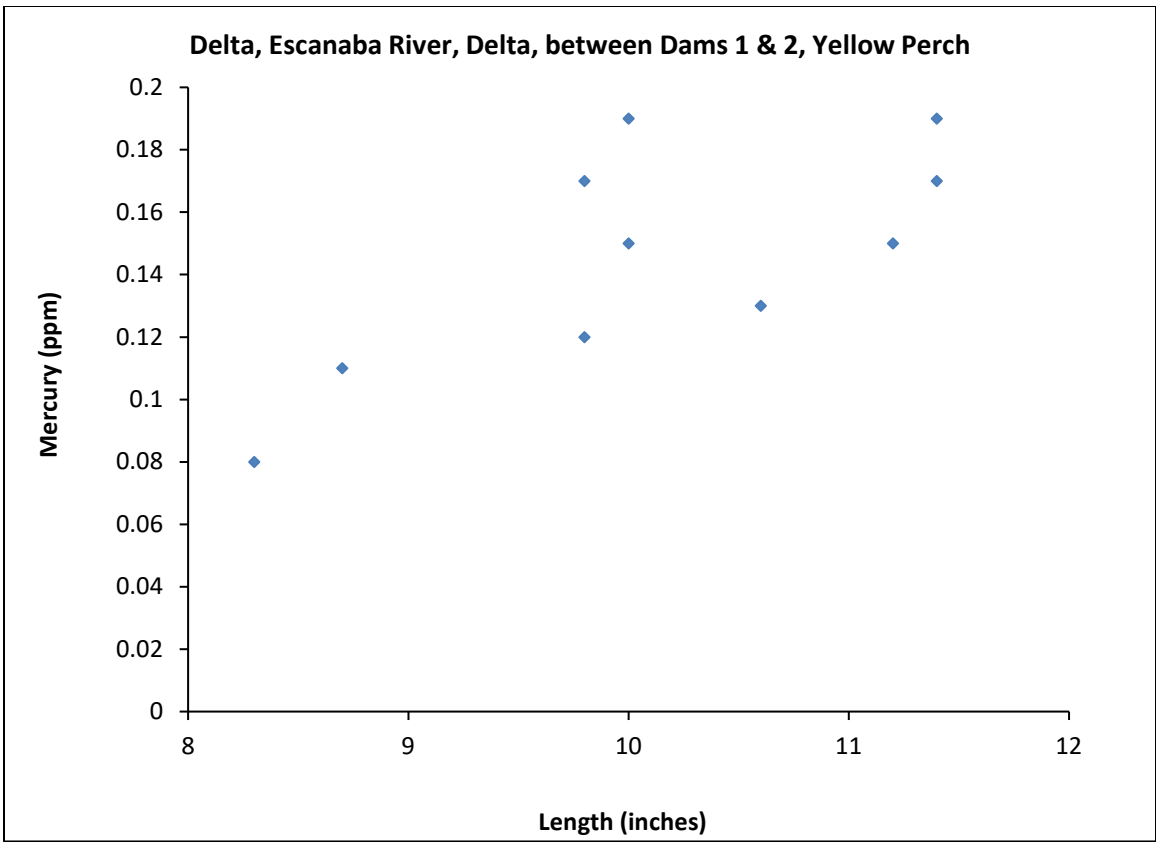
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1993	1993	10	8.3	na	8.3	11.4
Datasets available: 1988, 1990						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.15	0.08	0.19	0.17	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.524	0.572				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

**Existing Advisory:** Yellow perch from the Dam 1 impoundment of the Escanaba River are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 4 meals per month of yellow perch from the first Escanaba River Dam impoundment due to mercury.





**Carp**

**Escanaba River  
River Mouth**

**Delta County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
1993	1993	5	24.4	na	24.4	26.8		
Datasets available:		1993						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category		
Mercury	1*	0.29	--	--	--	--		
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
Mercury	--	--						

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
1993	1993	5	24.4	na	24.4	26.8		
Datasets available:		1993						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category		
PCB	1	2.840	--	--	--	--		
DDT	1	0.377	--	--	--	--		
Chlordane	1	0.050	--	--	--	--		
Toxaphene	1	ND	--	--	--	--		
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
PCB	--	--						
DDT	--	--						
Chlordane	--	--						
Toxaphene	--	--						
						<b>Final meal category based on UCL:</b>		--

\* - 1 composite sample of 5 individual fillets

**Existing Advisory:** There are no current consumption advisories for Escanaba River carp.

**Recommendation:** Composite samples are not suitable for the advisory evaluation. The advice for carp taken from the river mouth of the Escanaba River (downstream of the first dam) is the same as for Little Bay De Noc: No one should eat carp from Lake Michigan, Green Bay, or Little Bay De Noc, due to elevated concentrations of PCBs. Mercury and DDT would cause advisories.

**Walleye**

**Escanaba River  
River Mouth**

**Delta County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	1986	10	15.7	15	15.7	21.7
Datasets available: 1986						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.23	0.11	0.31	0.27	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.741	0.799				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	1986	10	15.7	15	15.7	21.7
Datasets available: 1986						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	0.35	0.13	0.85	0.49	Limited
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.552	0.745				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>Limited*</b>

**Existing Advisory:** There are no current consumption advisories for Escanaba River walleye.

**Recommendation:** The quality of this dataset is limited due to the age of the data and is not used to set a guideline. \*The advice for walleye taken from the Escanaba River downstream of the first dam is the same as for Little Bay De Noc: No one should eat more than 2 meals per month of Lake Michigan walleye smaller than 18 inches due to mercury and PCBs. Sensitive populations should not eat Lake Michigan walleye larger than 18 inches due to PCBs. Healthy adults should limit consumption to no more than 1 or 2 meals per year of walleye larger than 18 inches due to elevated concentrations of PCBs. Mercury and DDT would cause advisories.

*Note: See Lake Michigan Recommendations summary for details.*

# Gogebic County

**Rainbow Trout**

**Beatons Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1987	1987	6	10	12	13.8	15.2
Datasets available: 1987						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.128	0.100	0.210	0.180	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.947	0.962				

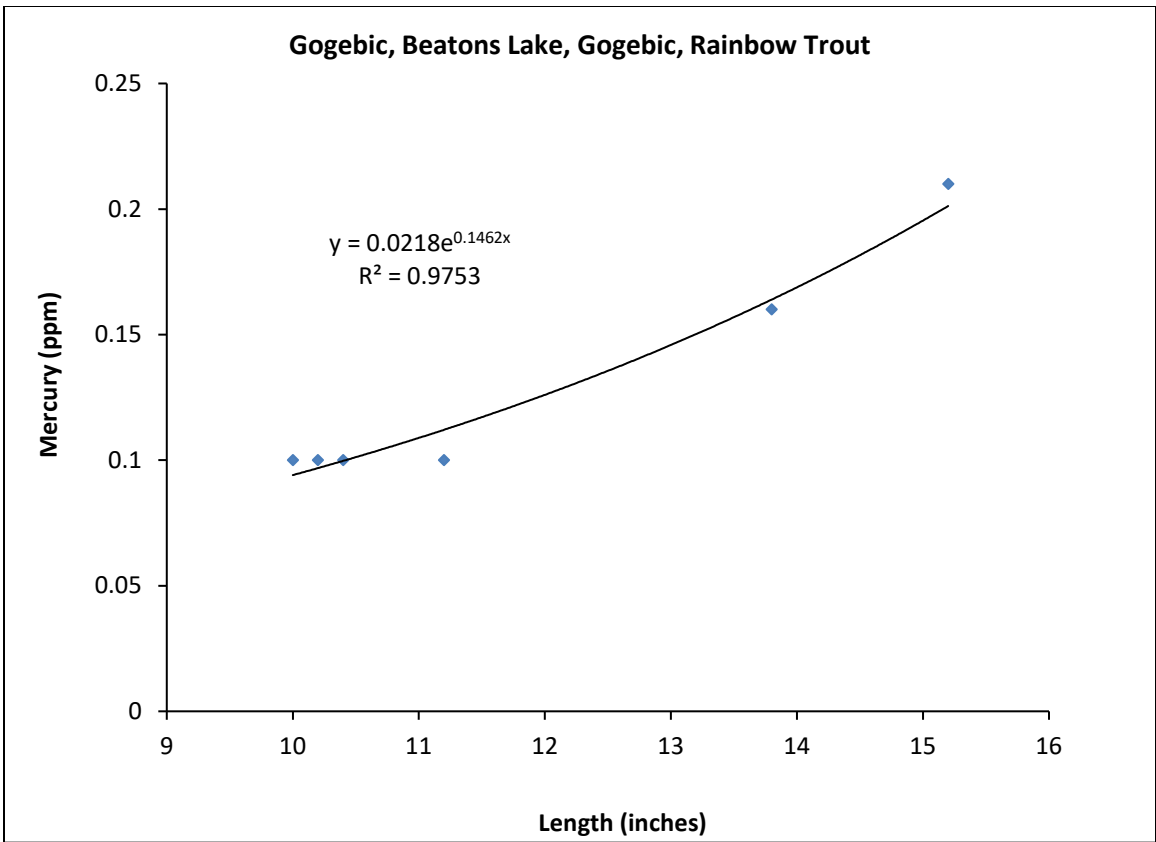
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

**Existing Advisory:** There is no existing advisory for rainbow trout in Beatons Lake.

**Recommendation:** No one should eat more than 4 meals per month of Beatons Lake rainbow trout due to mercury. Dataset is limited by the inclusion of sublegal samples and the age of the data. At that time, the detection limit for mercury was 0.10 ppm.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
10	0.094	8
11	0.109	8
12	0.126	8
13	0.146	4
14	0.169	4
15	0.195	4
16	0.226	4
17	0.262	4
18	0.303	2
<i>Shaded area denotes extrapolated estimates</i>		



**Largemouth Bass & Smallmouth Bass**

**Beatons Lake**

**Gogebic County**

**Hg & Se Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1987	2008	15	12.2	14	14.4	20.2
Datasets available: 1987, 2008						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.64	0.40	0.84	0.81	1
Selenium	6	0.245	0.220	0.280	0.270	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.602	0.578				
Selenium	0.002	0.002				

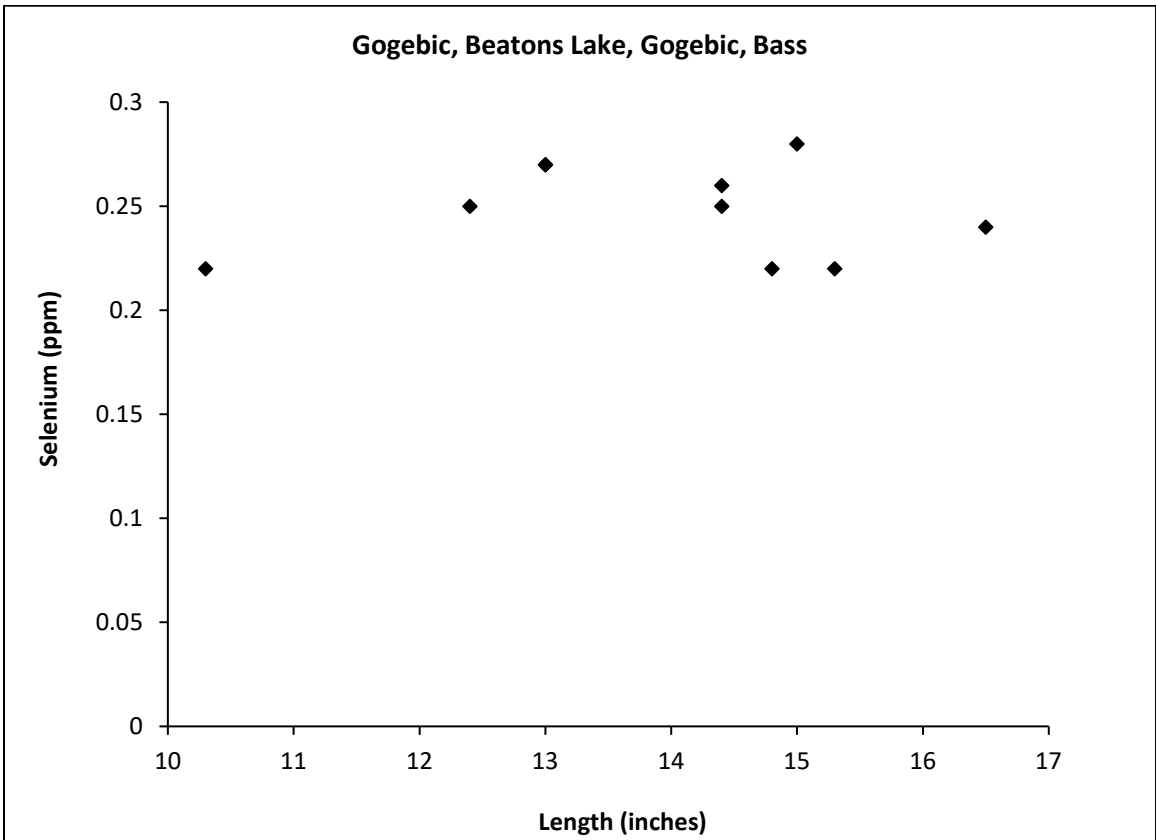
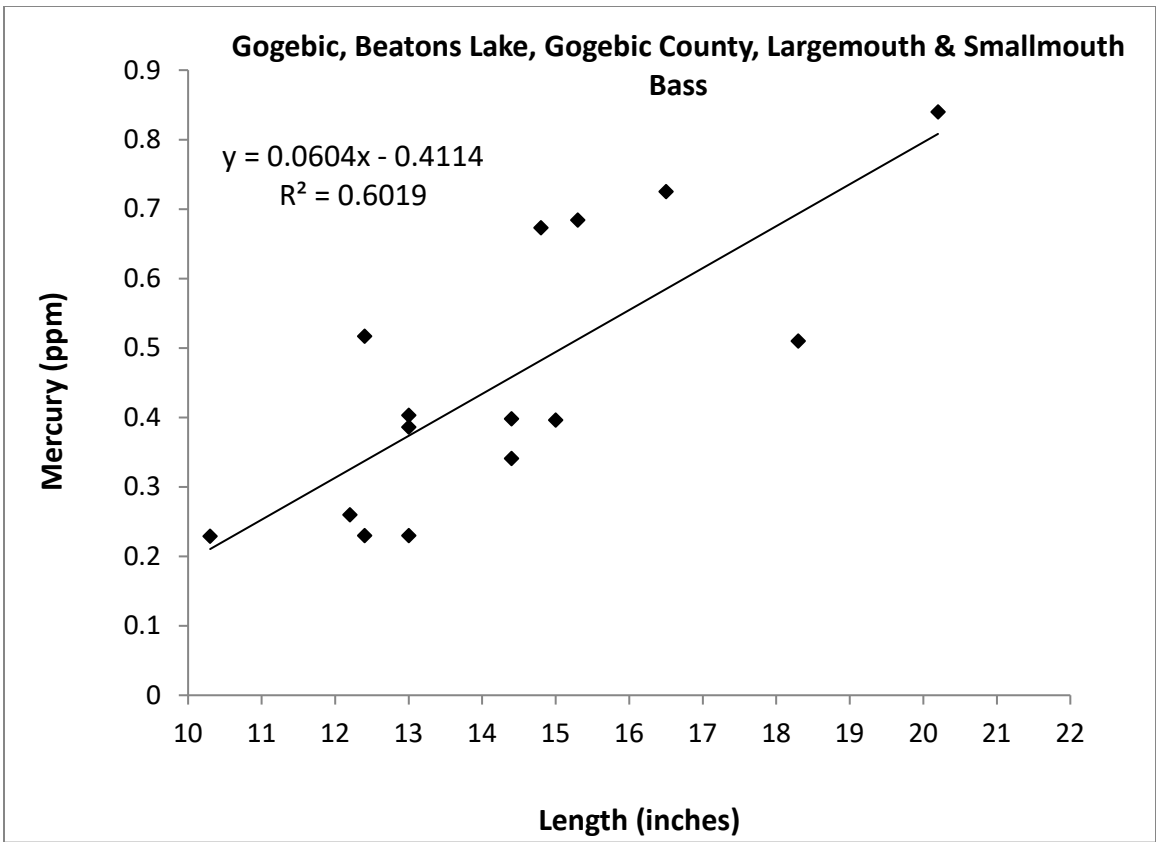
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Beatons Lake largemouth and smallmouth bass are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals a month of Beatons Lake largemouth or smallmouth bass less than 16 inches or 1 meal per month of largemouth or smallmouth bass greater than 16 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
12	0.31	2
13	0.37	2
14	0.43	2
15	0.49	2
16	0.56	1
18	0.68	1
20	0.8	1
22	0.92	1
24	1.04	1
<i>Shaded area denotes extrapolated estimates</i>		



**Northern Pike**

**Bobcat Lake**

**Gogebic County**

**Hg & Se Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
2009	2009	6	23	24	24.5	28
Datasets available: 2009						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.88	0.58	1.70	1.35	0.5
Selenium	6	0.77	0.70	0.85	0.83	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.230	0.318				
Selenium	0.410	0.400				

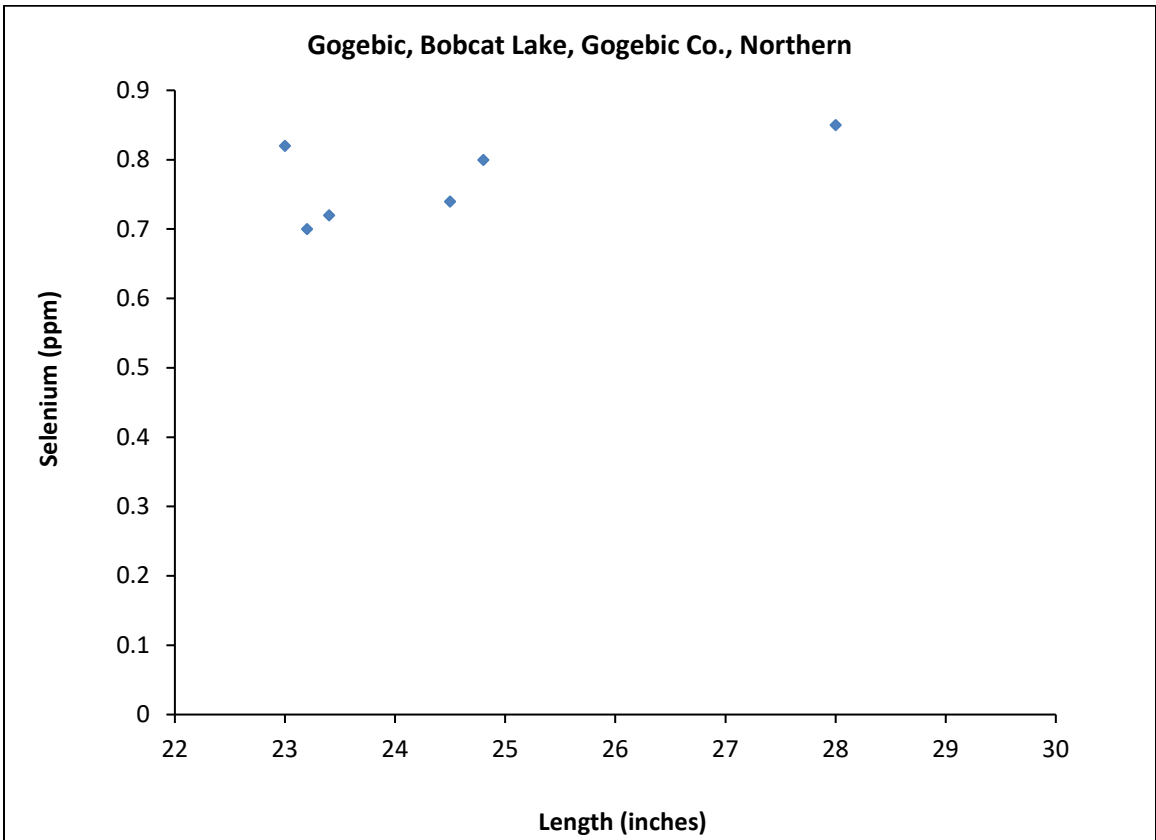
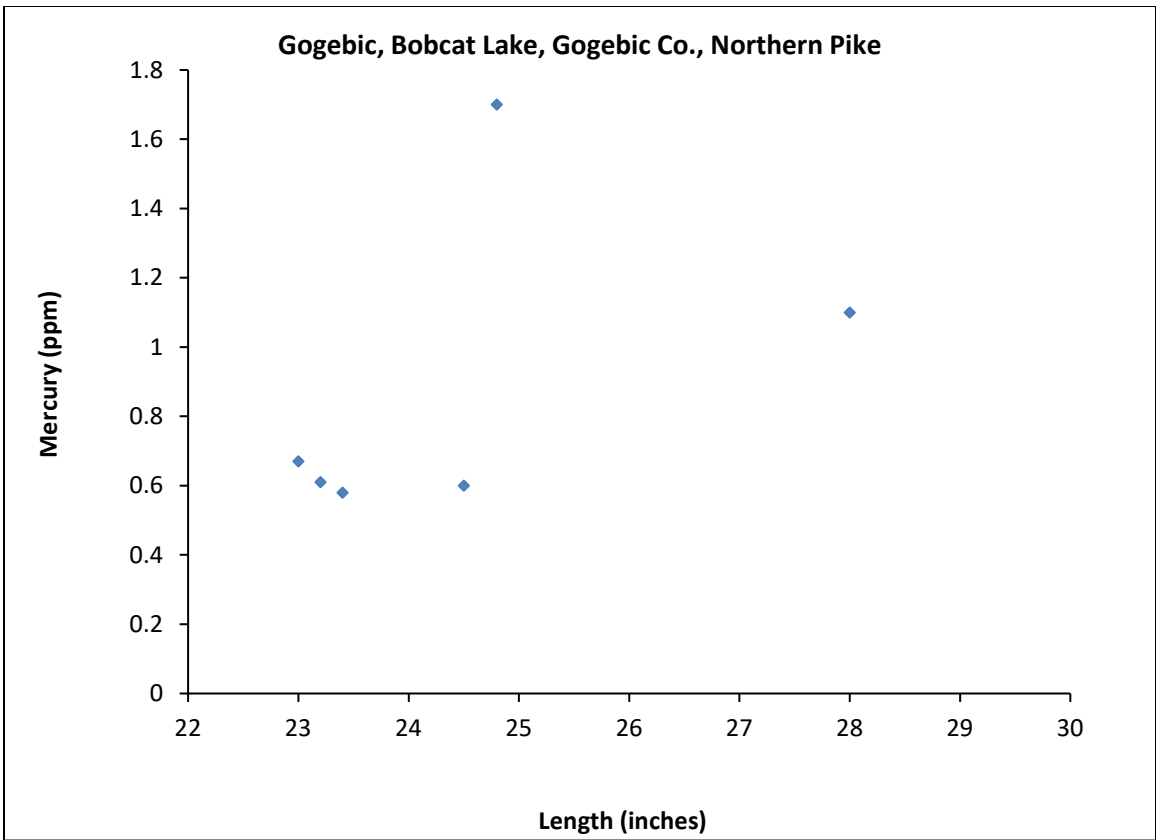
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>0.5</b>

**Existing Advisory:** Bobcat Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 6 meals per year of Bobcat Lake northern pike less than 30 inches or any of those over 30 inches due to mercury. Statewide size break was applied as the size lengths were limited.





**Black Crappie**

**Chaney Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1987	1987	9	5.3	na	5.3	12
Datasets available: 1987						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	9	0.55	0.10	1.30	0.93	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.910	0.974				

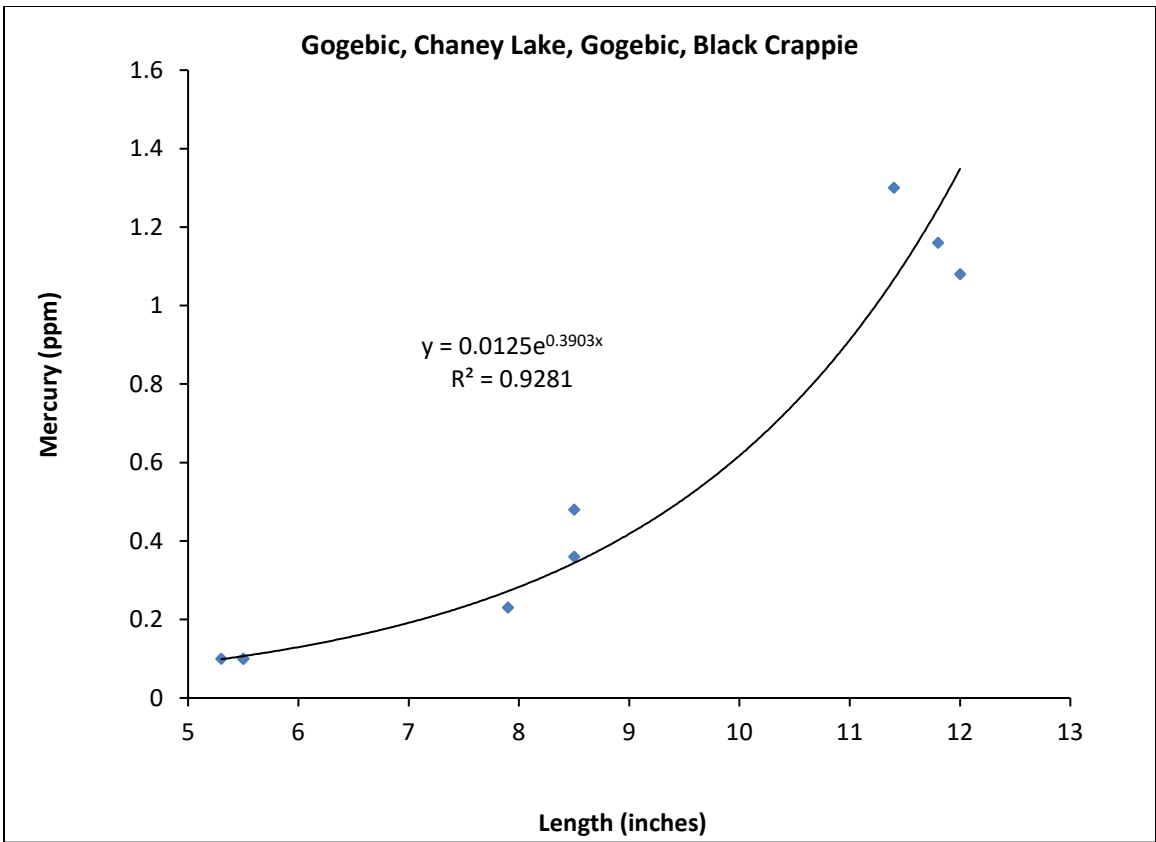
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Chaney Lake black crappie are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Chaney Lake crappie smaller than 10 inches or more than 6 meals per year of those fish larger than 10 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
5	0.09	12
6	0.13	8
7	0.19	4
8	0.28	2
9	0.42	2
10	0.62	1
11	0.92	1
12	1.35	0.5
<i>Shaded area denotes extrapolated estimates</i>		



**Northern Pike**

**Chaney Lake**

**Gogebic County**

**Hg & Se Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category	
Earliest	Most Recent				Min	Max		
1987	2009	34	12.6	na*	12.6	28.5		
Datasets available: 1987, 1993, 1998, '00, '09								
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category		
Mercury	34	1.201	0.340	1.940	1.320	0.5		
Selenium	10	0.199	0.140	0.320	0.240	16		
Chemical	Linear Regression R <sup>2</sup>	Exponential Regression R <sup>2</sup>	*There is no size limit on Chaney Lake (Gogebic) northern pike.					
Mercury	0.501	0.622						
Selenium	0.188	0.201						

**Organics Analysis:**

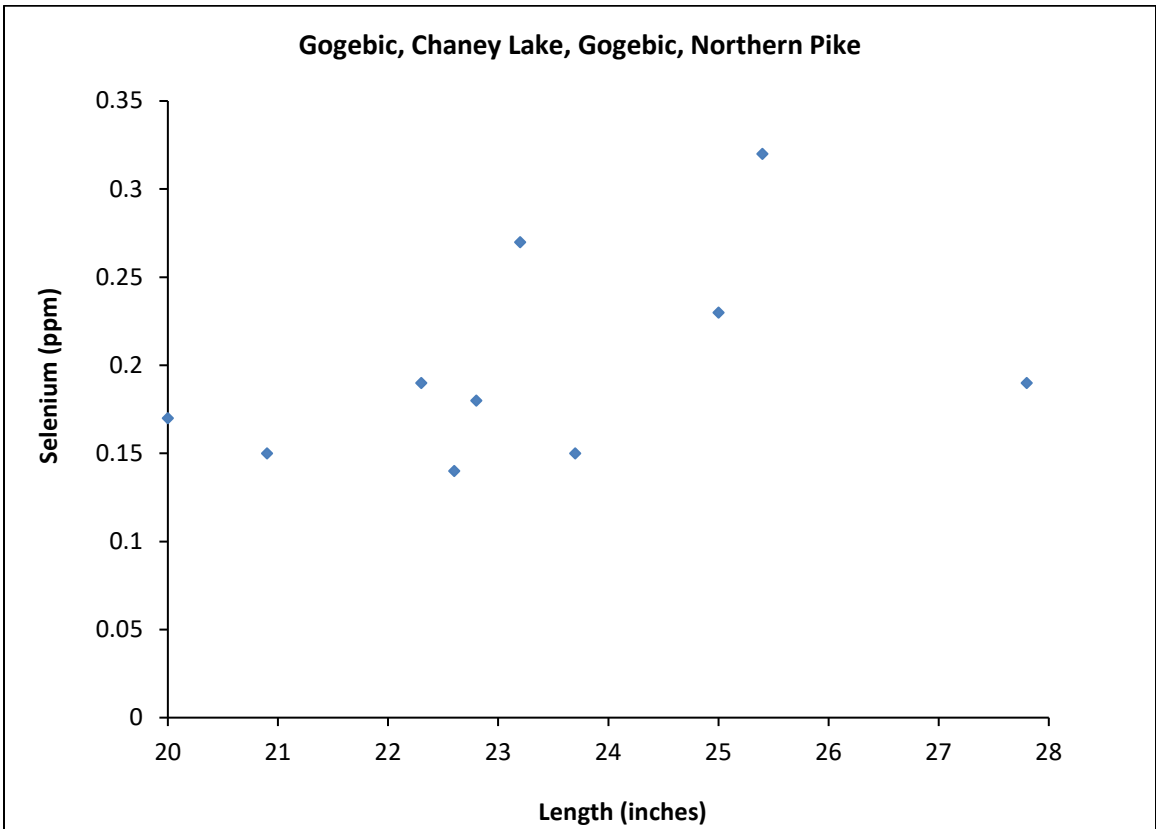
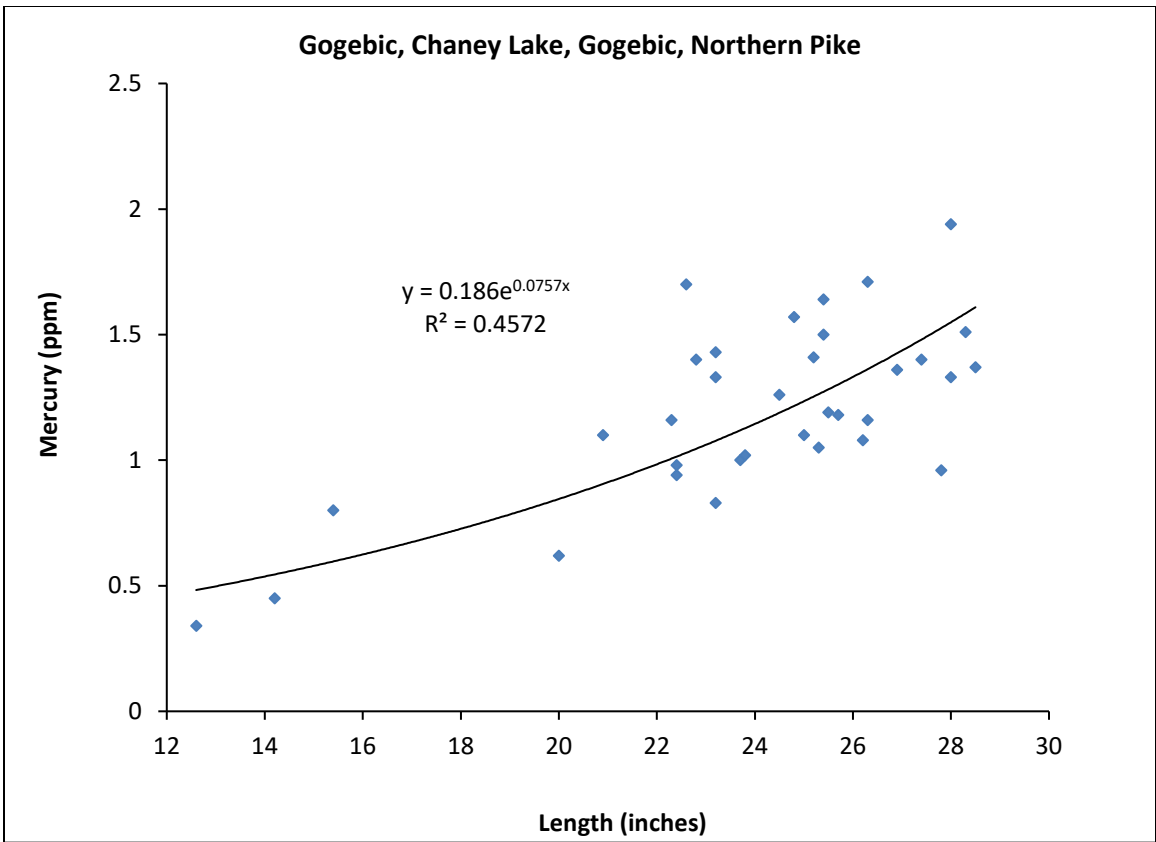
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Size Range of All Samples		Meal Category	
Earliest	Most Recent				Min	Max		
--	--	0						
Datasets available: --								
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category		
PCB	0	--	--	--	--	--		
DDT	0	--	--	--	--	--		
Chlordane	0	--	--	--	--	--		
Toxaphene	0	--	--	--	--	--		
Chemical	Linear Regression R <sup>2</sup>	Exponential Regression R <sup>2</sup>	*There is no size limit on Chaney Lake (Gogebic) northern pike.					
PCB	--	--						
DDT	--	--						
Chlordane	--	--						
Toxaphene	--	--						
<b>Final meal category based on UCL:</b>						<b>0.5</b>		

**Existing Advisory:** Women and children should not eat more than one meal per month of Chaney Lake northern pike smaller than 26 inches and should not eat any of those fish larger than 26 inches due to mercury.

**Recommendation:** No one should eat more than 6 meals per year of Chaney Lake northern pike less than 30 inches or any of those fish greater than 30 inches due to mercury. Statewide length break was applied as the length range was limited.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
24	1.14	0.5
25	1.23	0.5
26	1.33	0.5
27	1.44	0.5
28	1.55	0.5
29	1.67	0.5
30	1.80	0.5
31	1.94	0.5
32	2.10	0.5

*Shaded area denotes extrapolated estimates*



**Walleye**

**Chaney Lake**

**Gogebic County**

**Hg Analysis:**

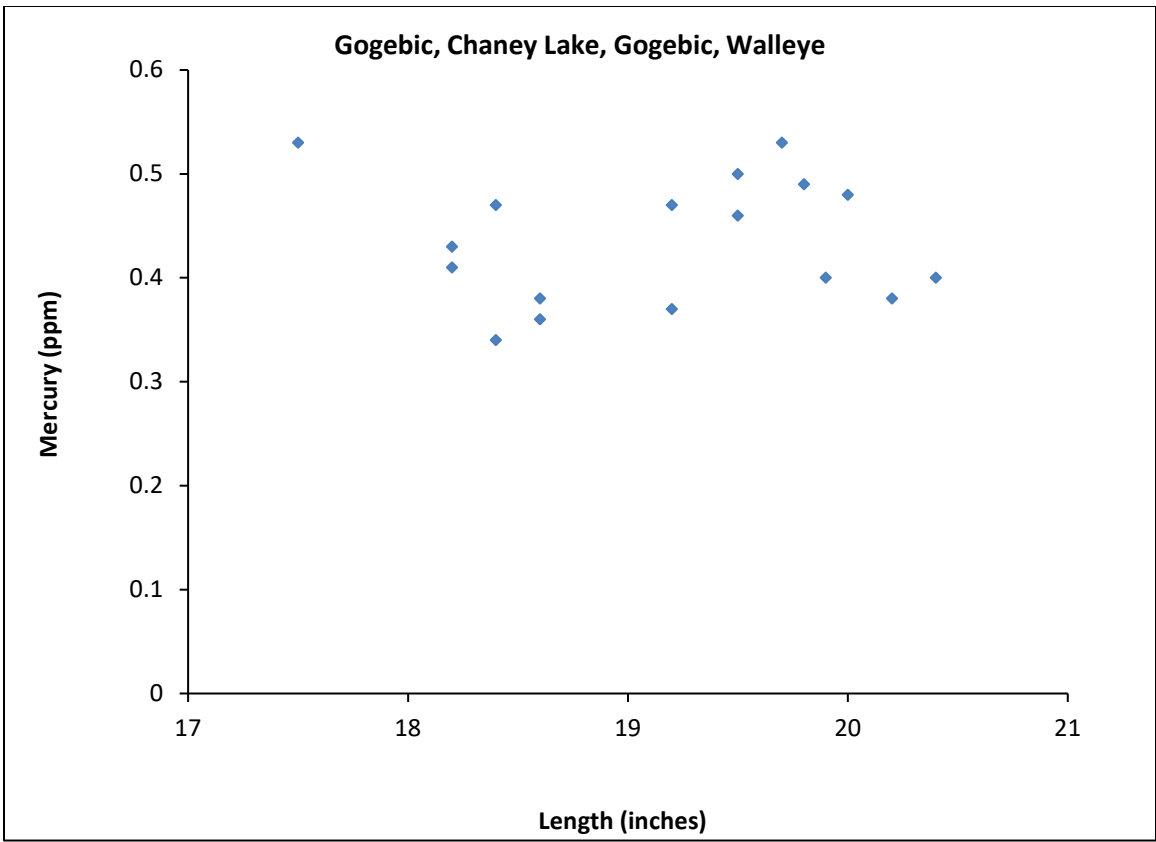
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1998	2000	17	17.5	15	17.5	20.4
Datasets available: 1998, 2000						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	17	0.44	0.34	0.53	0.47	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.000	0.001				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Chaney Lake walleye are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Chaney Lake walleye smaller than 20 inches or more than 1 meal per month of those fish larger than 20 inches due to mercury. Statewide length break was applied as the length range was limited.



**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of All Samples	
Earliest	Most Recent				Min	Max
1993	2000	20	8.1	na	8.1	12.2
Datasets available: 1993, 2000						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	20	0.33	0.19	0.43	0.36	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.219	0.218				

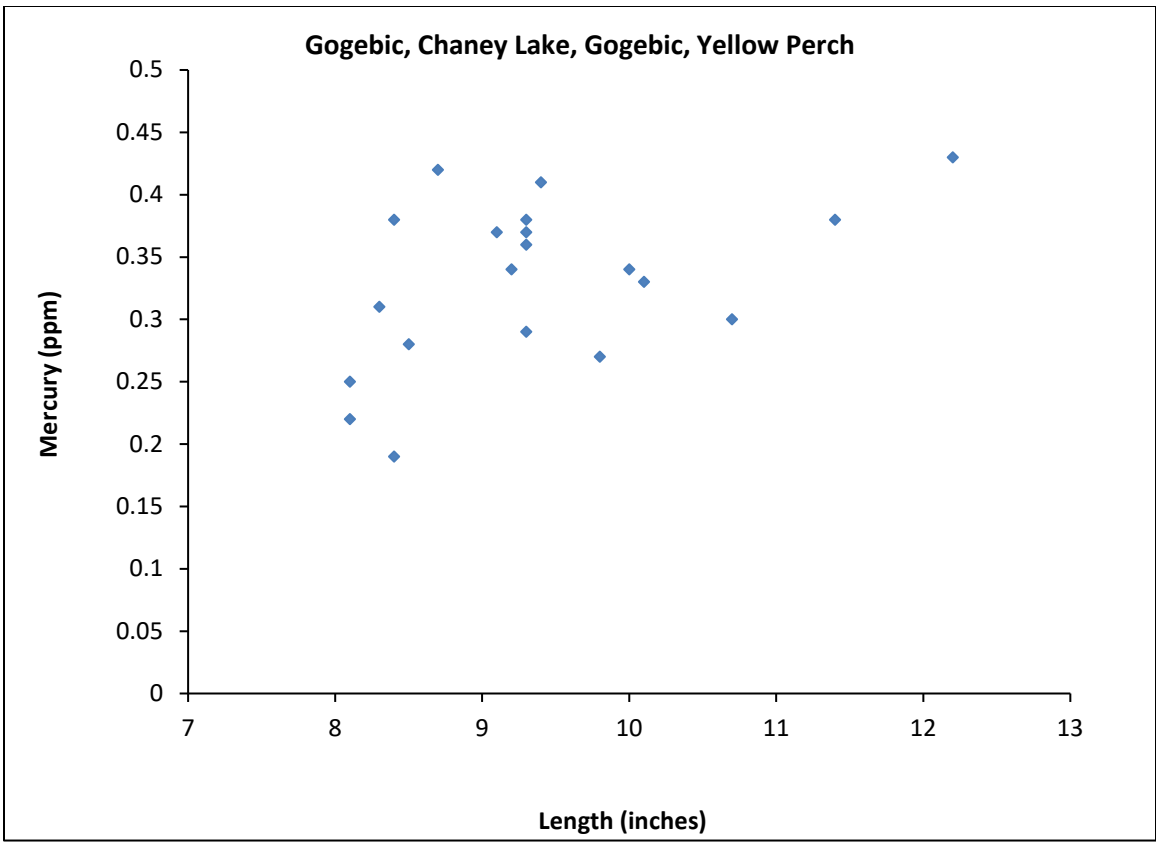
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Chaney Lake yellow perch are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Chaney Lake yellow perch due to mercury.





**Bluegill**

**Cisco Lake**

**Gogebic County**

**Hg Analysis:**

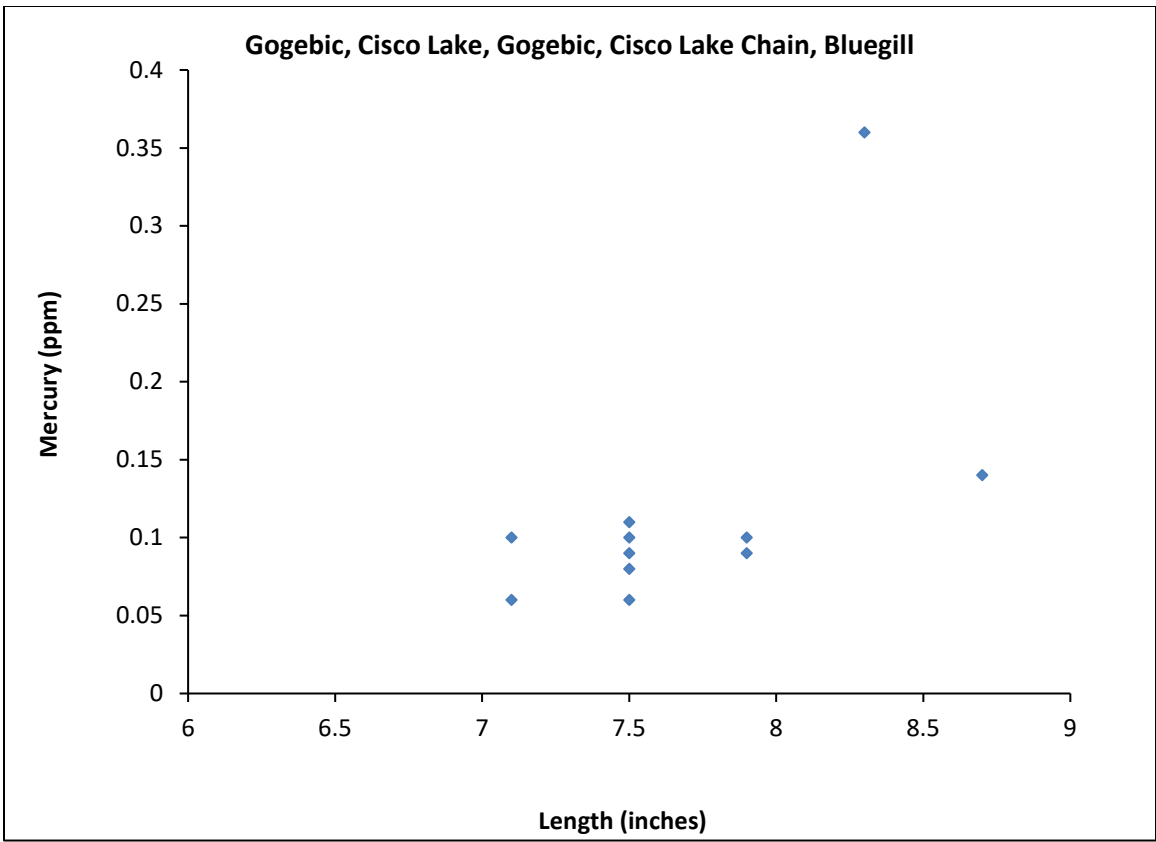
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of All Samples	
Earliest	Most Recent				Min	Max
1995	1995	11	7.1	na	7.1	8.7
Datasets available: 1995						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	11	0.12	0.06	0.36	0.17	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.331	0.430				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

**Existing Advisory:** There is no existing advisory for bluegill in Cisco Lake.

**Recommendation:** No one should eat more than 4 meals per month of Cisco Lake sunfish or bluegill due to mercury.



**Northern Pike**

**Cisco Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of All Samples	
Earliest	Most Recent				Min	Max
1988	1988	6	12.4	na*	12.4	23.2
Datasets available: 1988						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.18	0.11	0.24	0.25	4
Chemical	Linear Regression	Exponential Regression	*There is no size limit on Cisco Lake (Gogebic) northern pike.			
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.882	0.860				

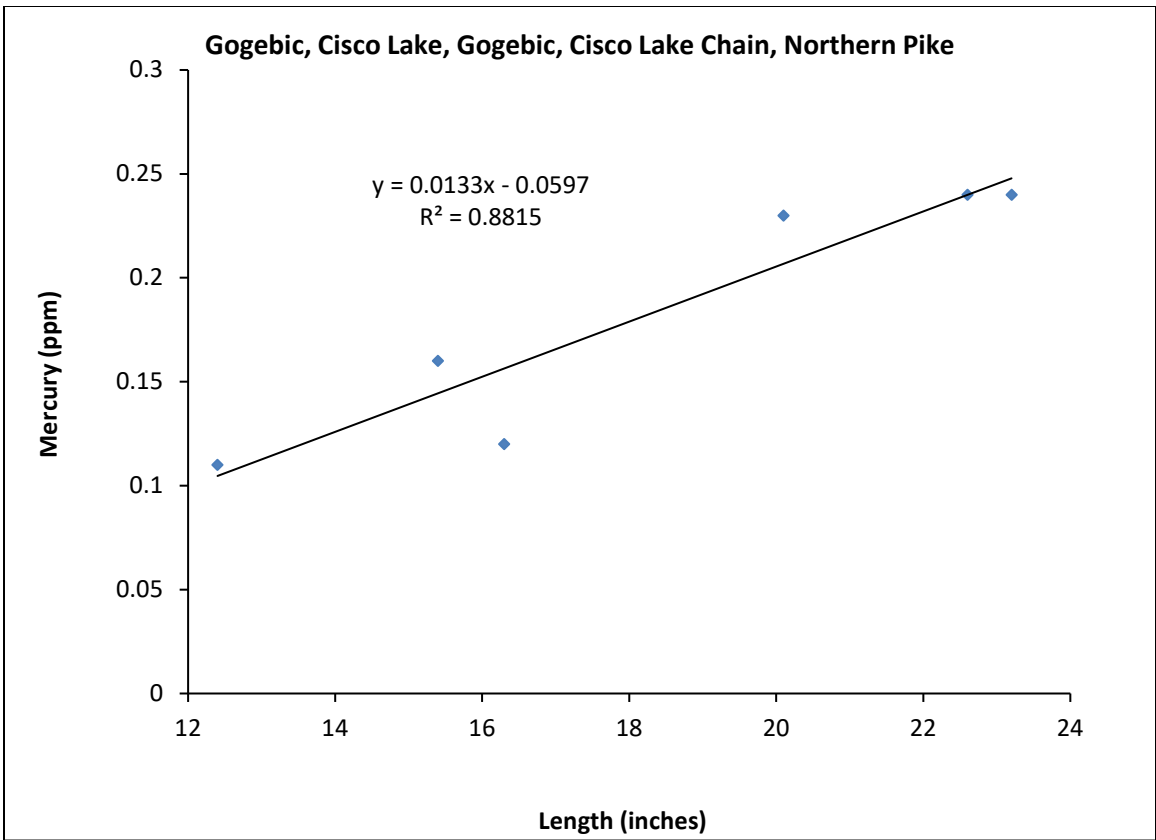
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

**Existing Advisory:** Cisco Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 4 meals per month of Cisco Lake northern pike smaller than 24 inches or more than 2 meals per month of those fish larger than 24 inches due to mercury. Length break is based on the regression analysis.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
12	0.100	8
14	0.127	8
15	0.140	4
18	0.180	4
20	0.206	4
22	0.233	4
23	0.246	4
<i>Shaded area denotes extrapolated estimates</i>		



**Walleye**

**Cisco Lake**

**Gogebic County**

**Hg Analysis:**

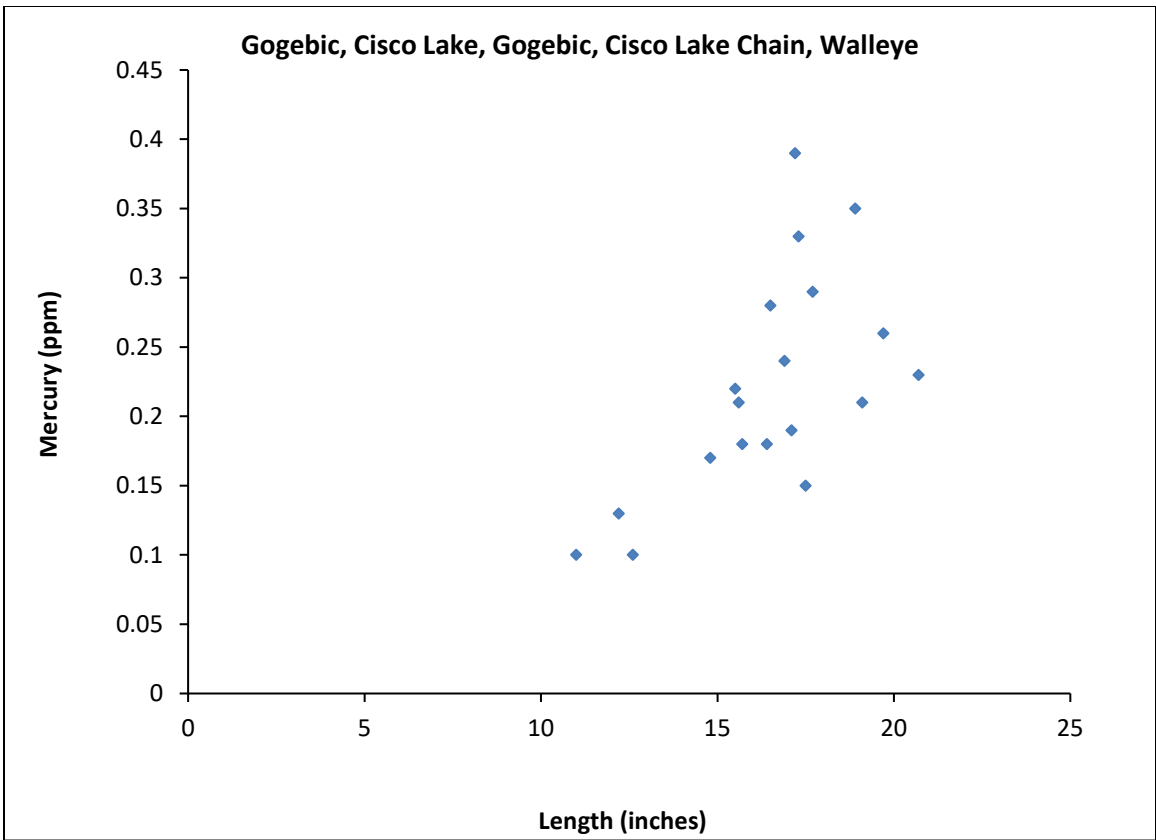
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1999	19	11	15	14.8	20.7
Datasets available: 1988, 1995, 1999						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	16	0.24	0.15	0.39	0.28	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.402	0.527				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** There are no eating restrictions for walleye in Cisco Lake for women and children.

**Recommendation:** No one should eat more than 2 meals per month of Cisco Lake walleye smaller than 20 inches or more than 1 meal per month of those fish larger than 20 inches due to mercury. Statewide length break was applied as the length range was limited.



**Northern Pike**

**Clearwater Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
2009	2009	4	20.3	na*	20.3	28.3	
Datasets available: 2009							
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
Mercury	4	0.488	0.32	0.62	--	--	
Chemical	Linear Regression	Exponential Regression	*There is no size limit on Clearwater Lake (Gogebic) northern pike.				
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	--	--					

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
--	--	--	--	--	--	--	
Datasets available: --							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
PCB	0	--	--	--	--	--	
DDT	0	--	--	--	--	--	
Chlordane	0	--	--	--	--	--	
Toxaphene	0	--	--	--	--	--	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
<b>Final meal category based on UCL:</b>							--

**Existing Advisory:** Clearwater Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The statewide guidelines apply. No one should eat more than 1 meal per month of northern pike larger than 30 inches or more than 2 meals per month of northern pike smaller than 30 inches in length.



**Black Crappie**

**Dinner Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of All Samples	
Earliest	Most Recent				Min	Max
2004	2004	2	11.7	na	11.7	12
Datasets available: 2004						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	2	0.40	0.35	0.44	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Dinner Lake black crappie are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The statewide guidelines apply. No one should eat more than 4 meals per month of crappie from inland waters.

**Largemouth  
& Smallmouth Bass  
Hg Analysis:**

**Dinner Lake**

**Gogebic County**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
2004	2004	4	13.1	14	14.0	17.1	
Datasets available: 2004							
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
Mercury	2	0.62	0.52	0.75	--	--	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	--	--					

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
--	--	--	--	--	--	--	
Datasets available: --							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
PCB	0	--	--	--	--	--	
DDT	0	--	--	--	--	--	
Chlordane	0	--	--	--	--	--	
Toxaphene	0	--	--	--	--	--	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
<b>Final meal category based on UCL:</b>							--

**Existing Advisory:** Dinner Lake largemouth bass are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The statewide guidelines apply. No one should eat more than 2 meals per month of largemouth or smallmouth bass smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches.

**Northern Pike**

**Dinner Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2004	2004	3	29.2	24	29.2	31.7
Datasets available: 2004						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	3	1.01	0.91	1.08	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Dinner Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The statewide guidelines apply. No one should eat more than 1 meal per month of northern pike larger than 30 inches or more than 2 meals per month of northern pike smaller than 30 inches in length.

**Walleye**

**Dinner Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples				
Earliest	Most Recent				Min	Max			
2004	2004	1	9	15	--	--			
Datasets available:		2004							
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category			
Mercury	1	1.09	--	--	--	--			
Chemical	Linear Regression	Exponential Regression							
	R <sup>2</sup>	R <sup>2</sup>							
Mercury	--	--							

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples				
Earliest	Most Recent				Min	Max			
--	--	--	--	--	--	--			
Datasets available:		--							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category			
PCB	0	--	--	--	--	--			
DDT	0	--	--	--	--	--			
Chlordane	0	--	--	--	--	--			
Toxaphene	0	--	--	--	--	--			
Chemical	Linear Regression	Exponential Regression							
	R <sup>2</sup>	R <sup>2</sup>							
PCB	--	--							
DDT	--	--							
Chlordane	--	--							
Toxaphene	--	--							
<b>Final meal category based on UCL:</b>						--			

**Existing Advisory:** Dinner Lake walleye are covered by the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The statewide guidelines apply. No one should eat more than 2 meals per month of walleye smaller than 20 inches or more than 1 meal per month of walleye larger than 20 inches.

**Brook Trout**

**Duck Creek**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1998	1998	12	7.5	10	9.6	10.6
Datasets available: 1998						
Chemical	Sample Size (All)*	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	2	0.14	0.09	0.20		
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury						

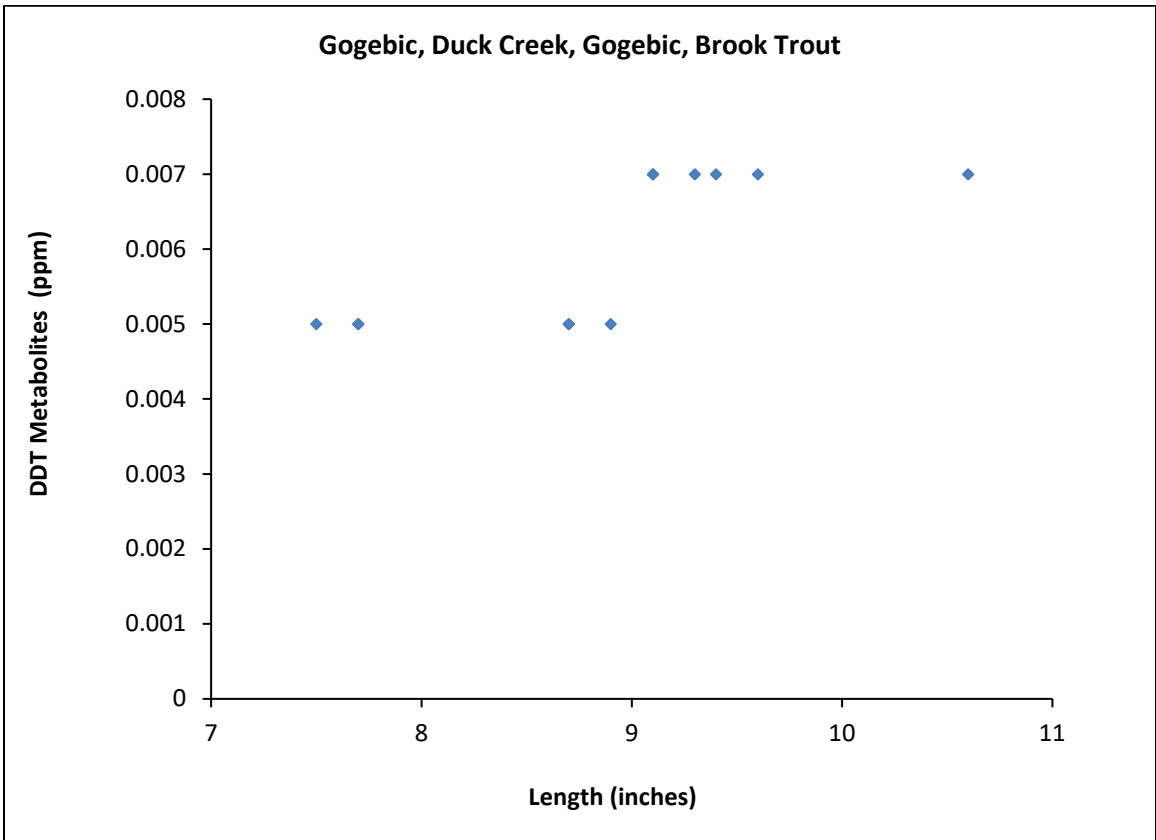
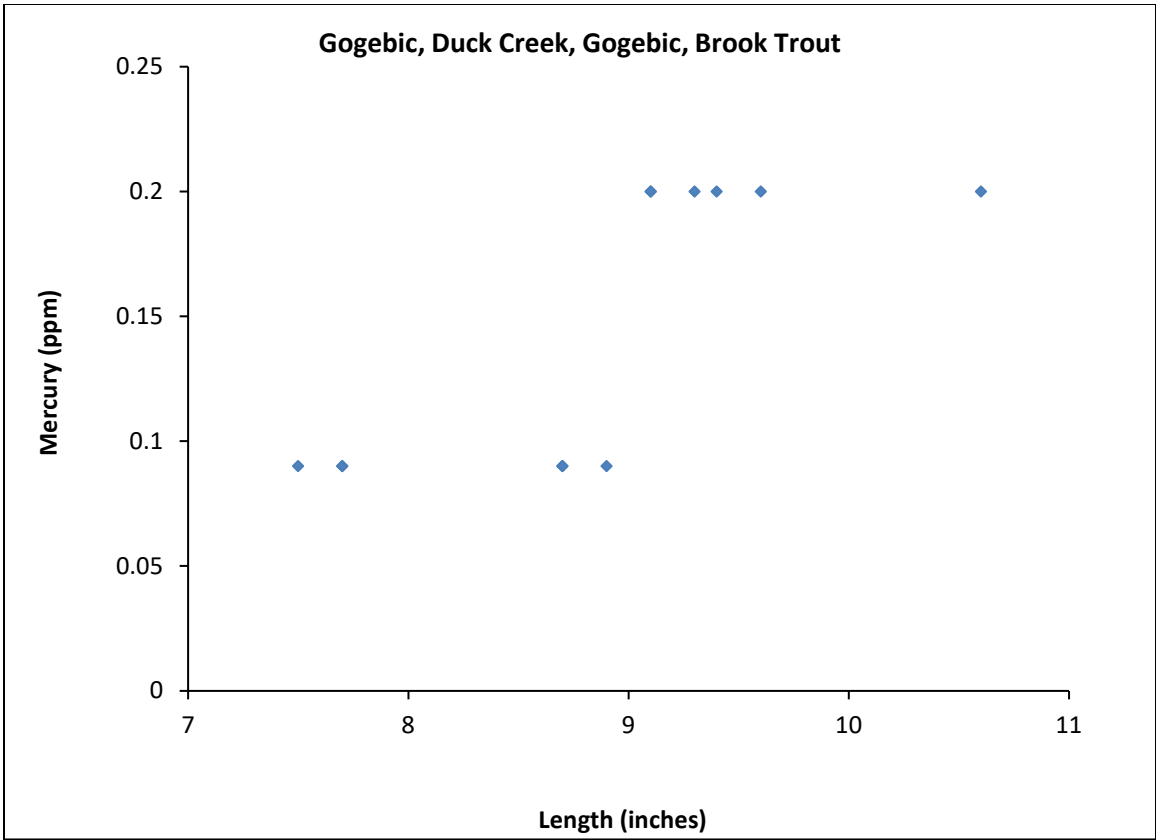
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1998	1998	12	7.5	10	9.6	10.6
Datasets available: 1998						
Chemical	Sample Size (Legal)*	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	2	ND	--	--	--	--
DDT	2	0.006	0.005	0.007	--	--
Chlordane	2	ND	--	--	--	--
Toxaphene	2	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	0.593	0.593				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>--</b>

\* - 2 composites of 6 fillets each

**Existing Advisory:** There are no existing consumption advisories for brook trout from Duck Creek.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. There are insufficient data for this species to develop waterbody-specific or statewide advice.



**White Sucker**

**Duck Creek**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1998	1998	4	11.4	na	11.4	14.2
Datasets available:		1998				
Chemical	Sample Size (Legal)*	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	1	0.23	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1998	1998	4	11.4	na	11.4	14.2
Datasets available:		1998				
Chemical	Sample Size (Legal)*	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	1	ND	--	--	--	--
DDT	1	ND	--	--	--	--
Chlordane	1	ND	--	--	--	--
Toxaphene	1	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

\* - 1 composite sample comprised of 4 fillets

**Existing Advisory:** There are no existing advisories for white sucker from Duck Creek.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The statewide advice due to mercury applies to Duck Creek sucker: No one should eat more than 8 meals per month of sucker from inland waters.

**Northern Pike**

**Duck Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
1986	1986	1	21.5	24	--	--		
Datasets available:		1986						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category		
Mercury	1	0.2	--	--	--	--		
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
Mercury	--	--						

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
--	--	--	--	--	--	--		
Datasets available:		--						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category		
PCB	0	--	--	--	--	--		
DDT	0	--	--	--	--	--		
Chlordane	0	--	--	--	--	--		
Toxaphene	0	--	--	--	--	--		
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
PCB	--	--						
DDT	--	--						
Chlordane	--	--						
Toxaphene	--	--						
						<b>Final meal category based on UCL:</b>		--

**Existing Advisory:** Duck Lake northern pike are covered by the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The statewide guidelines apply. No one should eat more than 1 meal per month of northern pike larger than 30 inches or more than 2 meals per month of northern pike smaller than 30 inches in length.



**Rock Bass**

**Duck Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	1986	10	7.7	na	7.7	9.4
Datasets available: 1986						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.22	0.10	0.40	0.30	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.638	0.674				

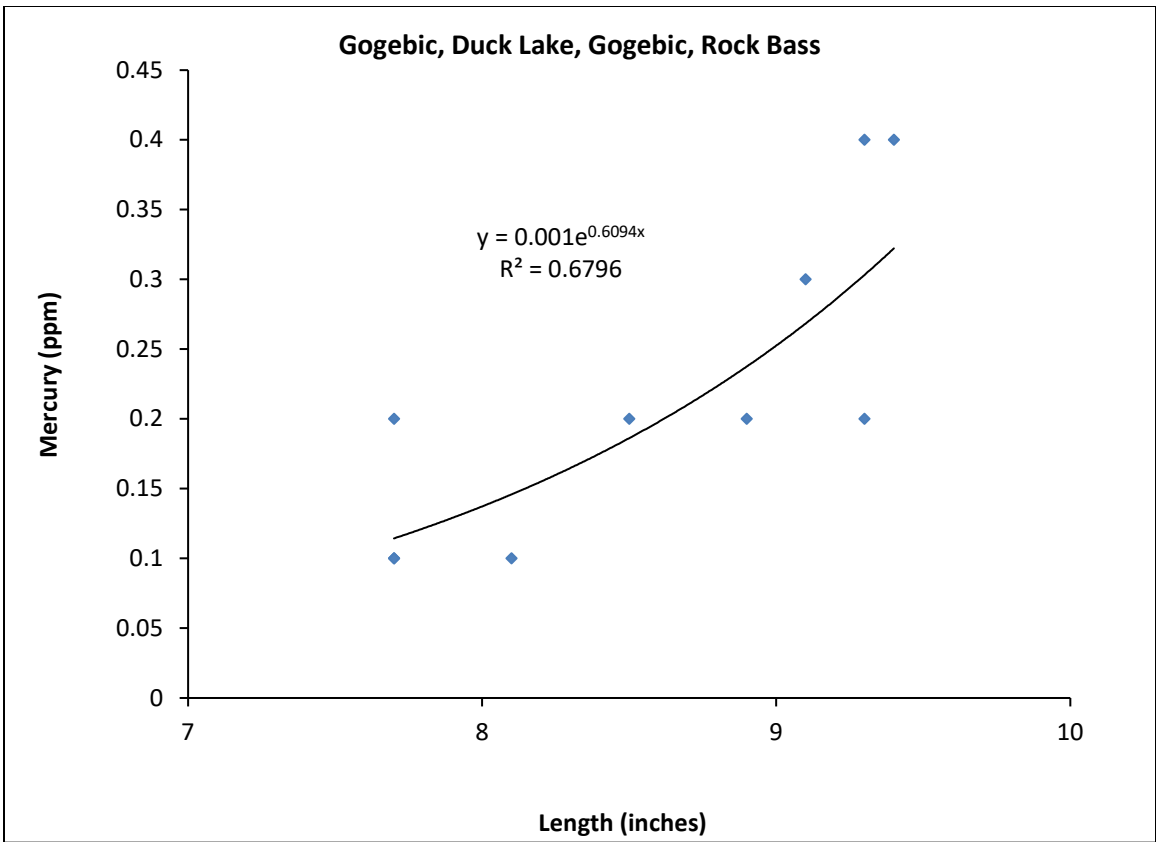
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Duck Lake rock bass are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 4 meals per month of Duck Lake rock bass smaller than 9 inches or more than 2 meals per month of those fish larger than 9 inches due to mercury. Dataset is limited by the length range and age. Length break based on the regression.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
6	0.039	16
7	0.071	12
8	0.131	4
9	0.241	4
10	0.443	2
11	0.815	1
12	1.499	0.5
13	2.758	0
14	5.073	0
<i>Shaded area denotes extrapolated estimates</i>		



**Walleye**

**Duck Lake**

**Gogebic County**

**Hg Analysis:**

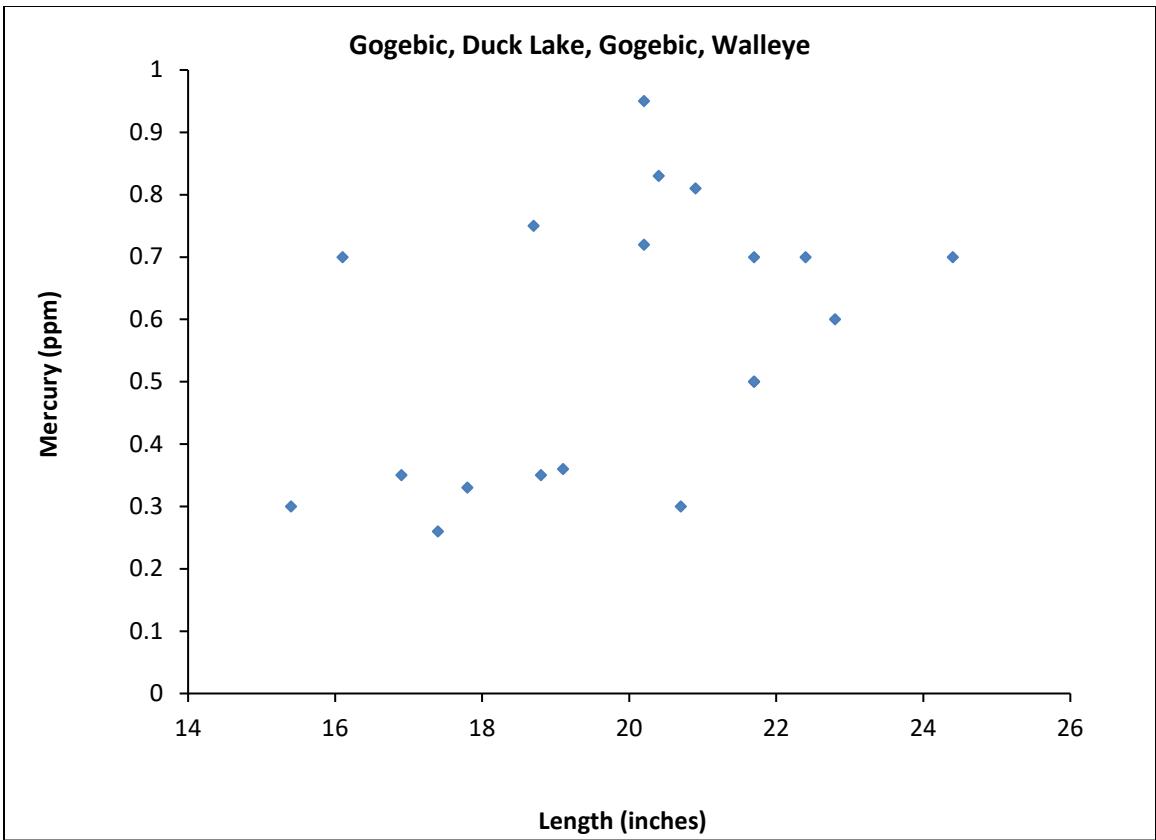
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	1999	19	15.1	15	15.4	24.4
Datasets available: 1986, 1999						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	19	0.56	0.26	0.95	0.97	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.195	0.243				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Women and children should not eat more than one meal per month of Duck Lake walleye larger than 18 inches.

**Recommendation:** No one should eat more than 1 meal per month of Duck Lake walleye due to mercury.



**Black Crappie**

**Eel Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2009	2009	10	8.1	na	8.1	12.8
Datasets available: 2009						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.19	0.09	0.42	0.28	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.683	0.603				

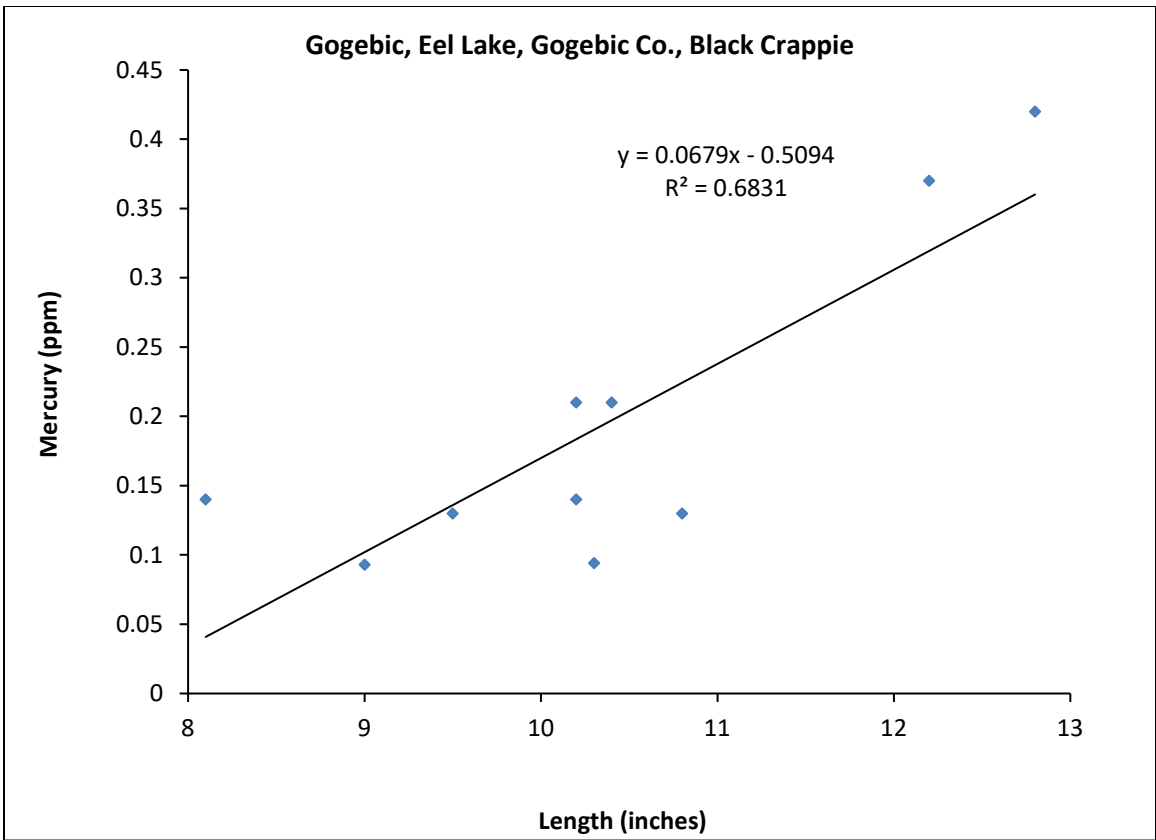
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Eel Lake black crappie are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 4 meals per month of Eel Lake crappie smaller than 12 inches or more than 2 meals per month of those fish larger than 12 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
8	0.034	16
9	0.102	8
10	0.170	4
11	0.238	4
12	0.305	2
13	0.373	2
<i>Shaded area denotes extrapolated estimates</i>		



**Rock Bass**

**Lake Gogebic**

**Gogebic & Ontonagon  
Counties**

**Hg Analysis:**

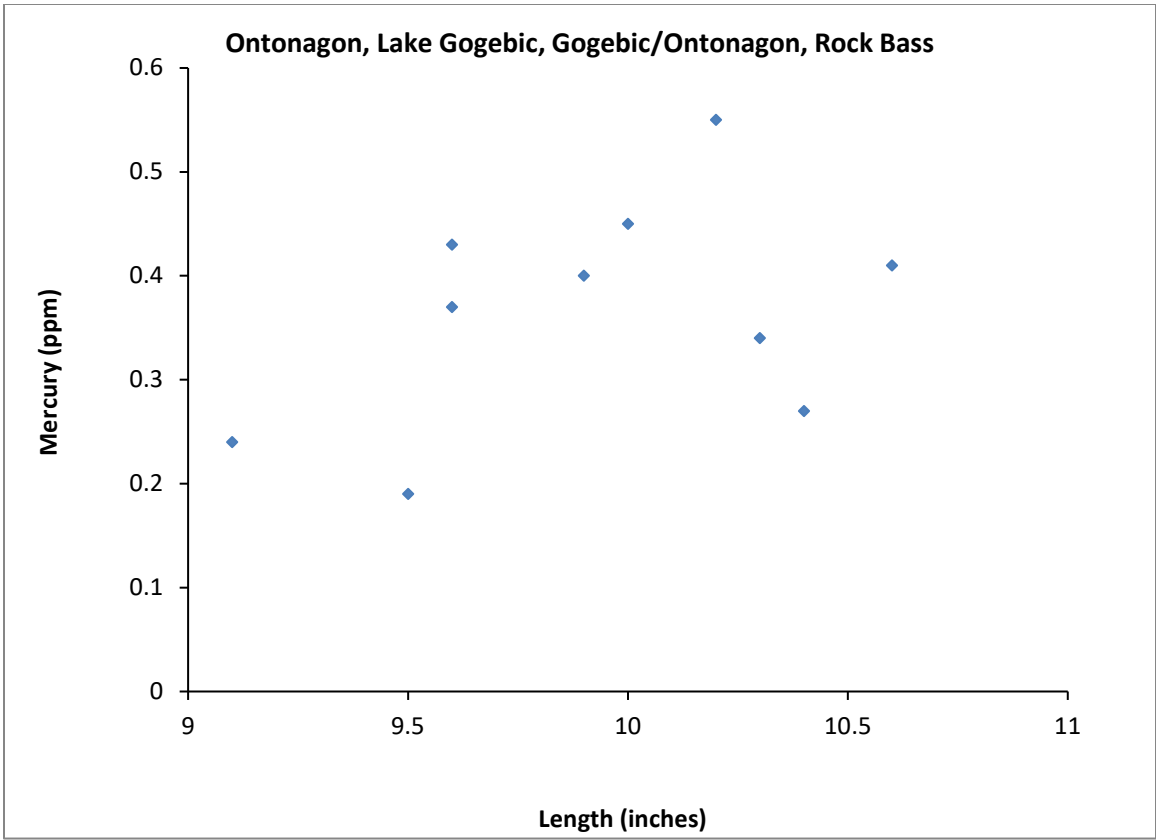
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2003	2003	10	9.1	na	9.1	10.6
Datasets available: 2003						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.37	0.19	0.55	0.44	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.169	0.193				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Lake Gogebic rock bass are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Lake Gogebic rock bass due to mercury.





**Walleye**

**Lake Gogebic**

**Gogebic & Ontonagon  
Counties**

**Hg Analysis:**

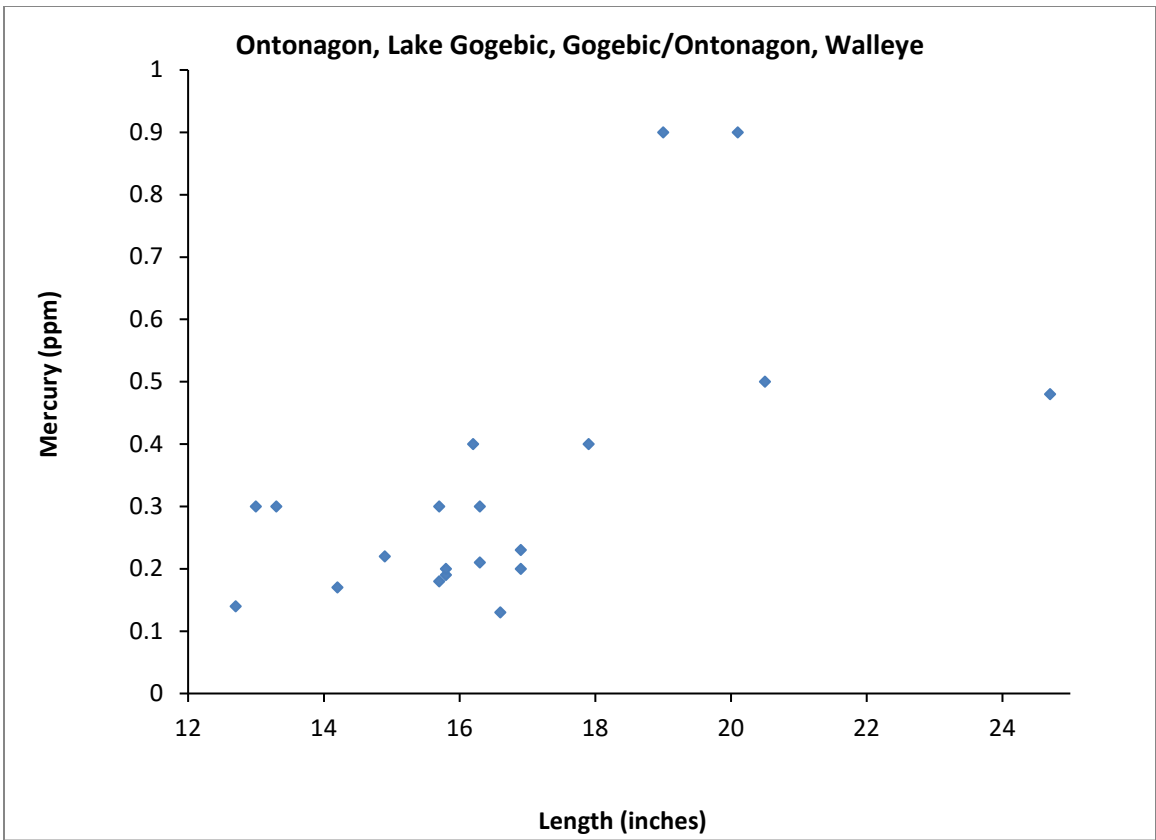
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1985	2002	20	12.7	15	14.9	24.7
Datasets available: 1985, 2002						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	16	0.36	0.13	0.9	0.49	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.366	0.396				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Women and children should not eat more than one meal per month of Lake Gogebic walleye over 18 inches due to mercury.

**Recommendation:** No one should eat more than 2 meals per month of Lake Gogebic walleye less than 20 inches or 1 meal per month of those fish greater than 20 inches due to mercury. Statewide length break applied due to limited sample size above 20 inches.



**White Sucker**

**Lake Gogebic**

**Gogebic & Ontonagon  
Counties**

**Hg Analysis:**

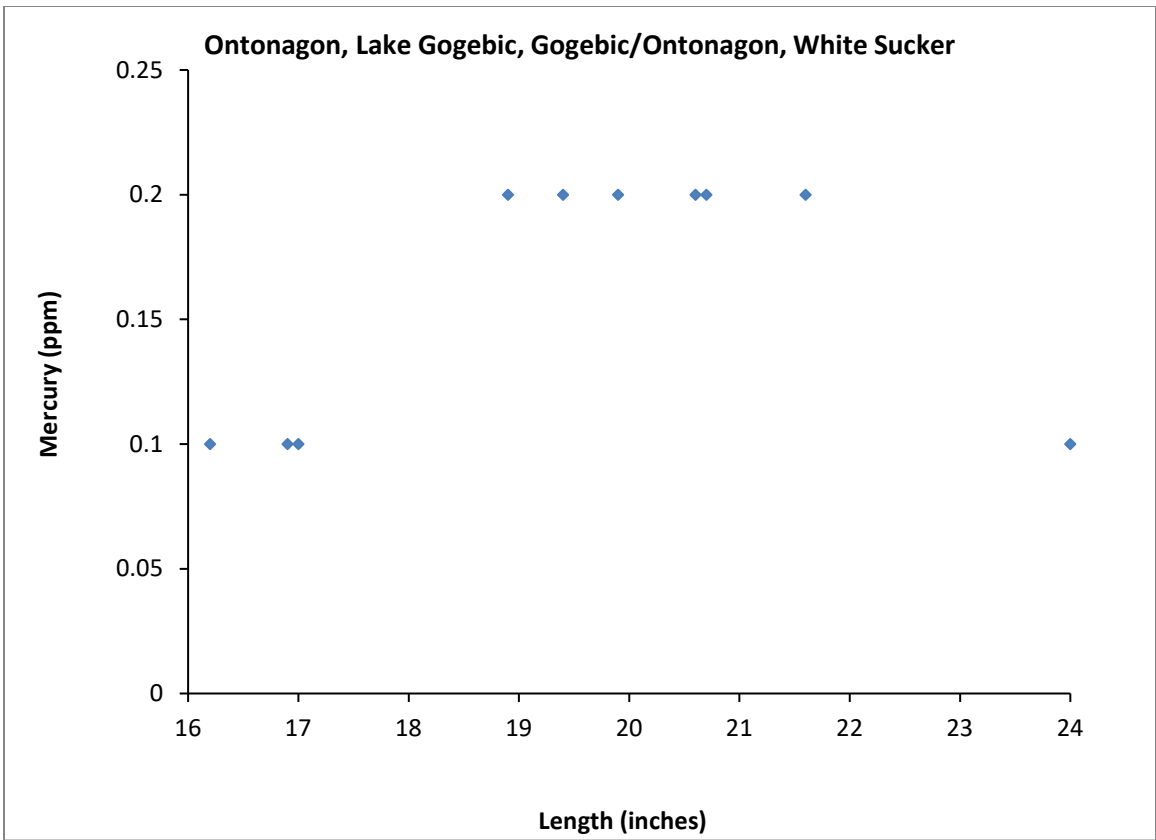
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1985	1985	10	16.2	na	16.2	24
Datasets available: 1985						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.16	0.1	0.2	0.20	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.128	0.128				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

**Existing Advisory:** Lake Gogebic white sucker have no existing advisory.

**Recommendation:** No one should eat more than 4 meals per month of Lake Gogebic sucker due to mercury.



**Bluegill**

**Langford Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	1986	10	7.5	na	7.5	9.3
Datasets available: 1986						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.29	0.20	0.60	0.39	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.615	0.617				

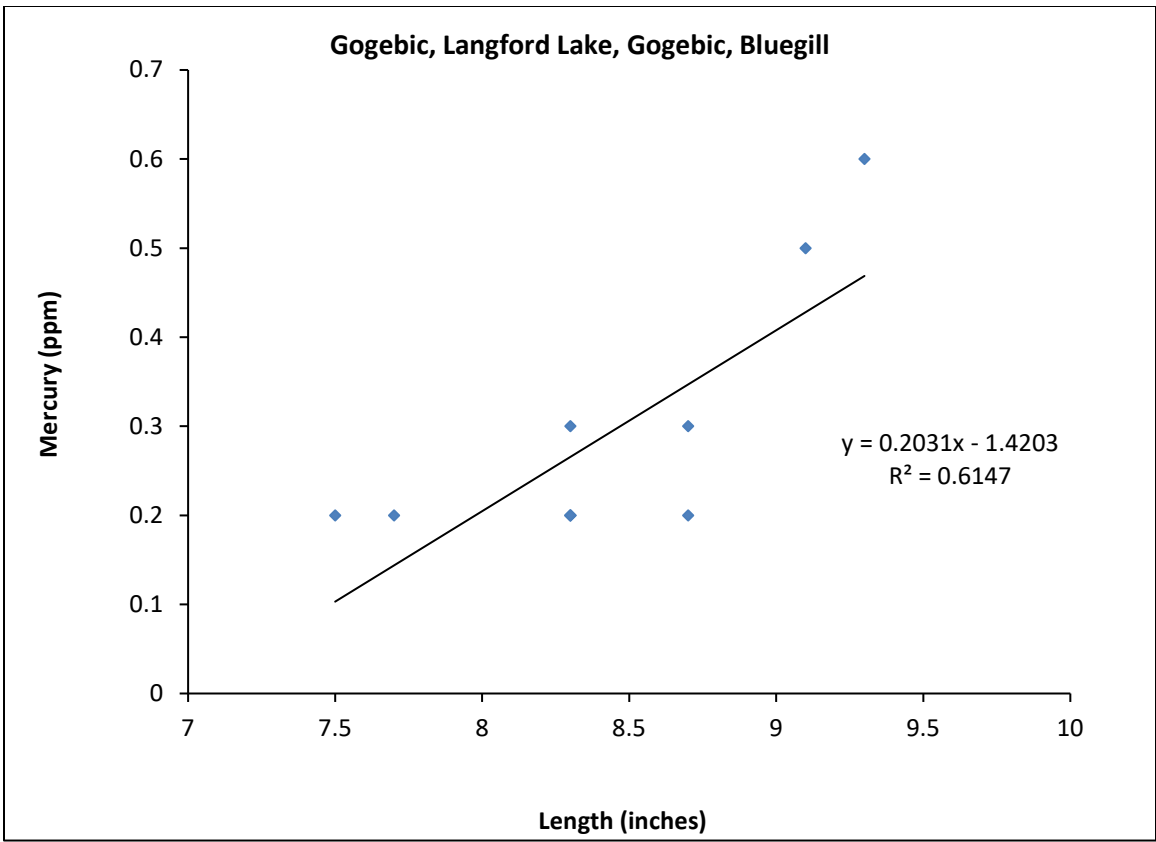
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** There are no existing advisories for bluegill in Langford Lake.

**Recommendation:** No one should eat more than 4 meals per month of Langford Lake sunfish smaller than 8 inches or more than 2 meals per month of those fish larger than 8 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
6	0	16
7	0.001	16
8	0.20	4
9	0.41	2
10	0.61	1
11	0.81	1
12	1.02	1
13	1.22	0.5
14	1.42	0.5
<i>Shaded area denotes extrapolated estimates</i>		



**Northern Pike**

**Langford Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1994	1994	5	20.3	24	25.2	28.3
Datasets available: 1994						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	5	0.52	0.30	0.65	0.71	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.633	0.569				

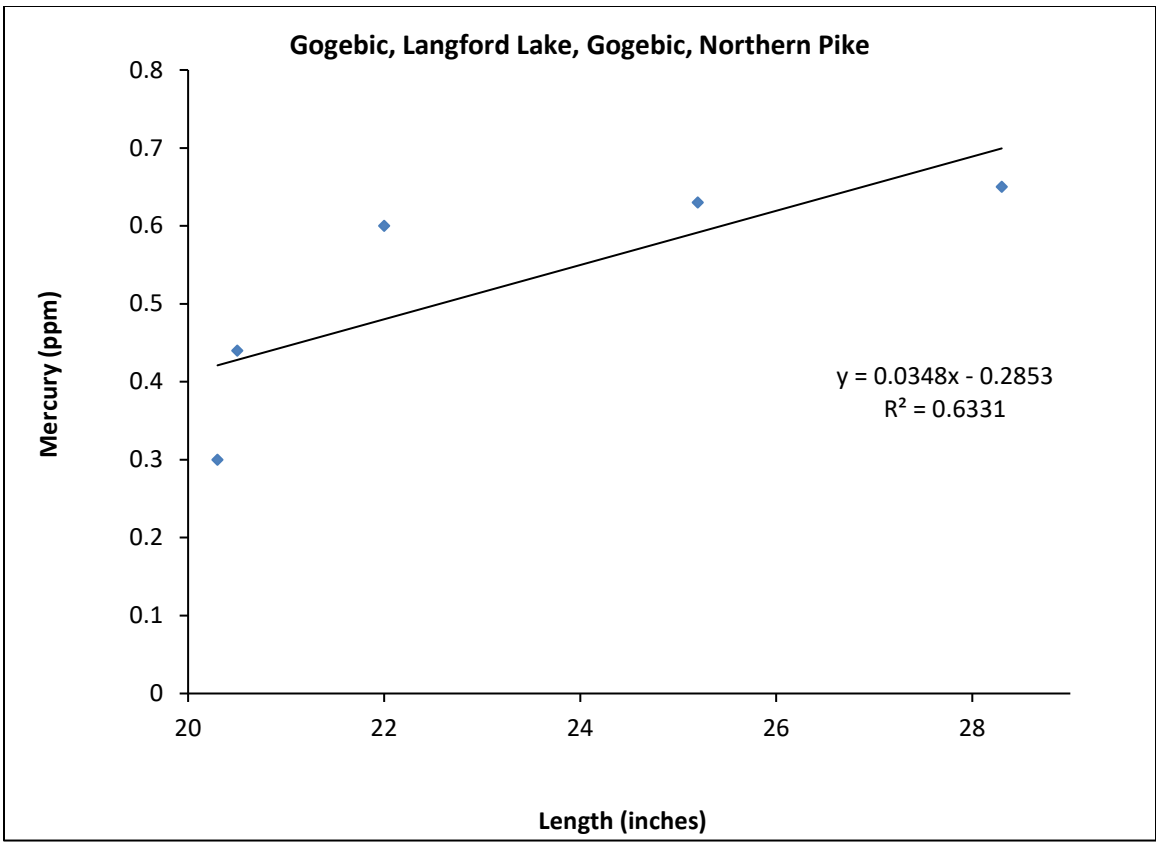
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Langford Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Langford Lake northern pike smaller than 30 inches or more than 6 meals per year of those fish larger than 30 inches due to mercury. The statewide length break was applied as the size range was limited.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
20	0.41	2
21	0.45	2
22	0.48	2
23	0.52	2
24	0.55	1
25	0.58	1
26	0.62	1
27	0.65	1
28	0.69	1
<i>Shaded area denotes extrapolated estimates</i>		





**Walleye**

**Langford Lake**

**Gogebic County**

**Hg Analysis:**

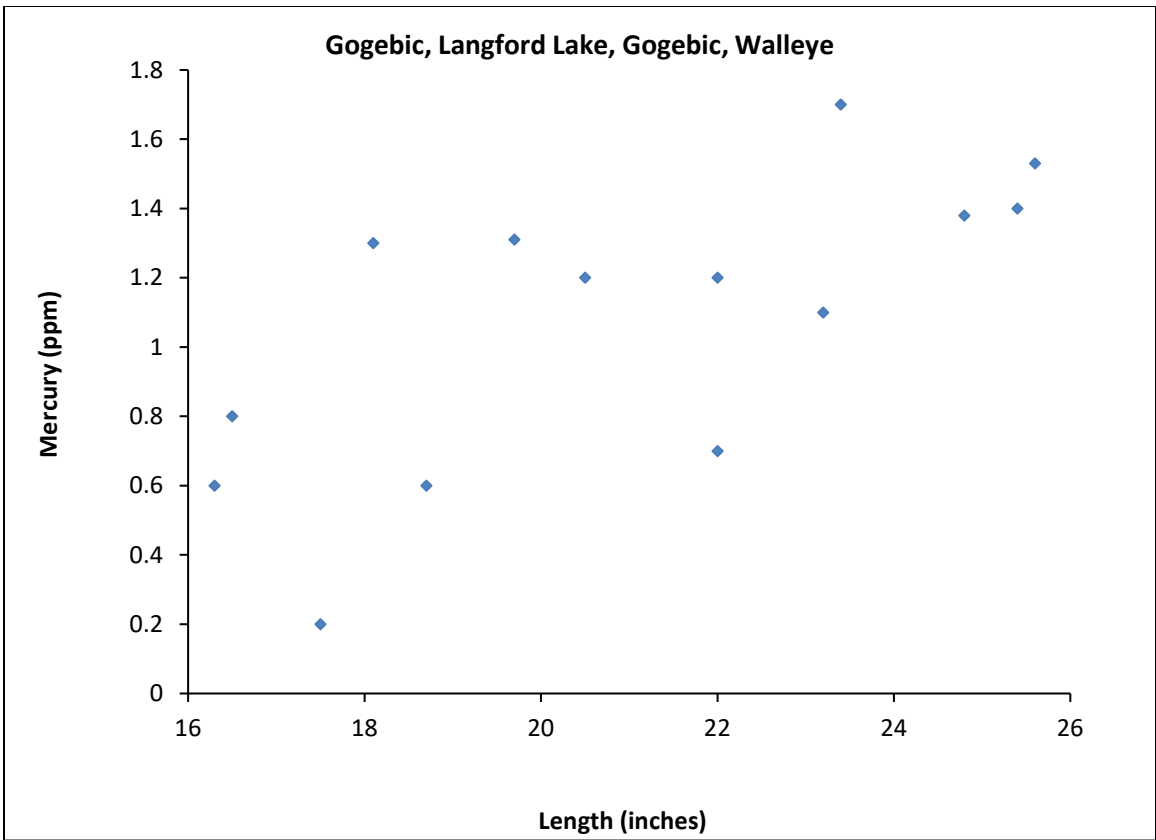
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	1994	14	16.3	15	16.3	25.6
Datasets available: 1986, 1994						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	14	1.07	0.20	1.70	1.32	0.5
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.486	0.391				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>0.5</b>

**Existing Advisory:** No one should eat walleye greater than 22 inches from Langford Lake due to mercury.

**Recommendation:** No one should eat more than 6 meals per year of Langford Lake walleye due to mercury.



**Largemouth Bass**

**Little Oxbow Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2005	2005	7	13.7	14	13.7	16.3
Datasets available: 2005						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	7	0.29	0.16	0.55	0.44	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.890	0.870				

**Organics Analysis:**

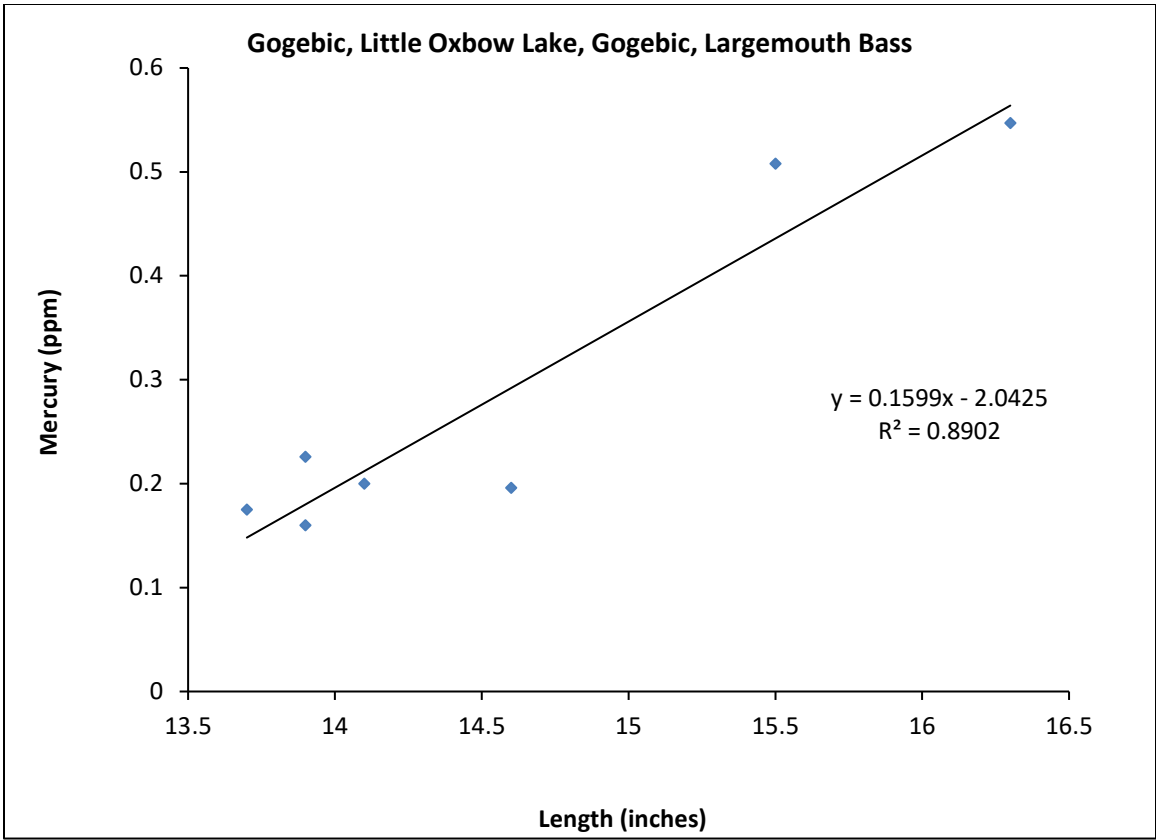
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Little Oxbow Lake largemouth bass are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Little Oxbow Lake largemouth or smallmouth bass smaller than 16 inches or more than 1 meal per month of those fish larger than 16 inches due to mercury. Length break based on regression estimates.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
13	0.04	16
14	0.20	4
15	0.36	2
16	0.52	2
17	0.68	1
18	0.84	1
19	1.00	1
20	1.16	0.5
21	1.32	0.5

*Shaded area denotes extrapolated estimates*



**Walleye**

**Little Oxbow Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples				
Earliest	Most Recent				Min	Max			
2005	2005	3	15.1	15	15.1	16.3			
Datasets available:		2005							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category			
Mercury	3	0.81	0.73	0.86	--	--			
Chemical	Linear Regression	Exponential Regression							
	R <sup>2</sup>	R <sup>2</sup>							
Mercury	0.393	0.410							

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples				
Earliest	Most Recent				Min	Max			
--	--	--	--	--	--	--			
Datasets available:		--							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category			
PCB	0	--	--	--	--	--			
DDT	0	--	--	--	--	--			
Chlordane	0	--	--	--	--	--			
Toxaphene	0	--	--	--	--	--			
Chemical	Linear Regression	Exponential Regression							
	R <sup>2</sup>	R <sup>2</sup>							
PCB	--	--							
DDT	--	--							
Chlordane	--	--							
Toxaphene	--	--							
						<b>Final meal category based on UCL:</b>		--	

**Existing Advisory:** Little Oxbow Lake walleye are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. Statewide guidelines apply. No one should eat more than 2 meals per month of walleye smaller than 20 inches or more than 1 meal per month of walleye larger than 20 inches.

**Northern Pike**

**Marion Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
2003	2003	1	29.0	24	--	--	
Datasets available: 2003							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)		
Mercury	1	0.90	--	--	--		
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	--	--					

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
--	--	--	--	--	--	--	
Datasets available: --							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)		
PCB	0	--	--	--	--		
DDT	0	--	--	--	--		
Chlordane	0	--	--	--	--		
Toxaphene	0	--	--	--	--		
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
<b>Final meal category based on UCL:</b>							--

**Existing Advisory:** Marion Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. Statewide guidelines apply. No one should eat more than 1 meal per month of northern pike larger than 30 inches or more than 2 meals per month of northern pike smaller than 30 inches in length.

**Rock Bass**

**Marion Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1987	1987	8	6.7	na	6.7	8.7
Datasets available: 1987						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	8	0.25	0.15	0.43	0.32	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.772	0.688				

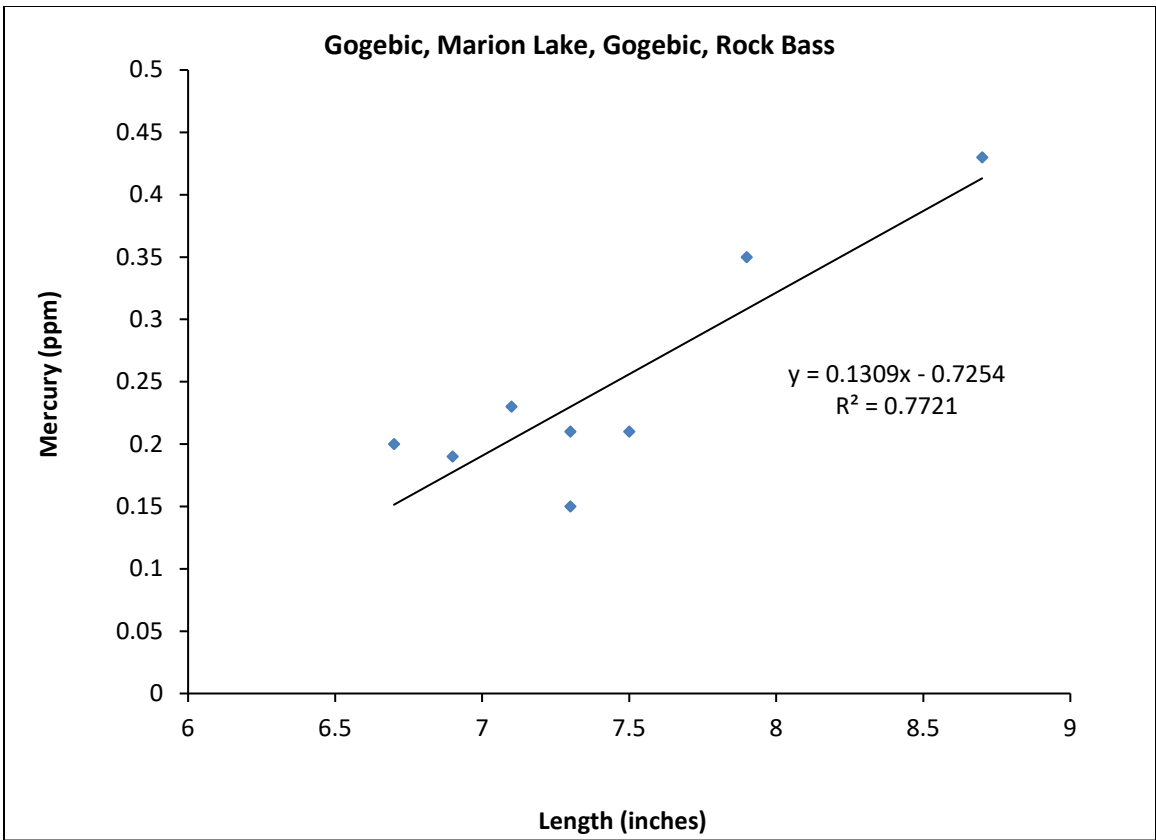
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Marion Lake rock bass are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Marion Lake rock bass smaller than 9 inches or more than 1 meal per month of those fish larger than 9 inches due to mercury. Length break based on the regression estimates.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
6	0.060	16
7	0.191	4
8	0.322	2
9	0.453	2
10	0.584	1
11	0.715	1
12	0.845	1
13	0.976	1
14	1.107	0.5
<i>Shaded area denotes extrapolated estimates</i>		





**Smallmouth Bass**

**Marion Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples				
Earliest	Most Recent				Min	Max			
2003	2003	1	15.0	14.0	15.0	15.0			
Datasets available:		2003							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category			
Mercury	1	0.47	--	--	--	--			
Chemical	Linear Regression	Exponential Regression							
	R <sup>2</sup>	R <sup>2</sup>							
Mercury	--	--							

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples				
Earliest	Most Recent				Min	Max			
--	--	--	--	--	--	--			
Datasets available:		--							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category			
PCB	0	--	--	--	--	--			
DDT	0	--	--	--	--	--			
Chlordane	0	--	--	--	--	--			
Toxaphene	0	--	--	--	--	--			
Chemical	Linear Regression	Exponential Regression							
	R <sup>2</sup>	R <sup>2</sup>							
PCB	--	--							
DDT	--	--							
Chlordane	--	--							
Toxaphene	--	--							
						<b>Final meal category based on UCL:</b>		--	

**Existing Advisory:** Marion Lake smallmouth bass are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. Statewide guidelines apply. No one should eat more than 2 meals per month of largemouth or smallmouth bass smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches.

**Walleye**

**Marion Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1987	2003	8	13.2	15	15.0	19.7
Datasets available: 1987, 2003						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.87	0.62	1.28	1.13	0.5
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.654	0.686				

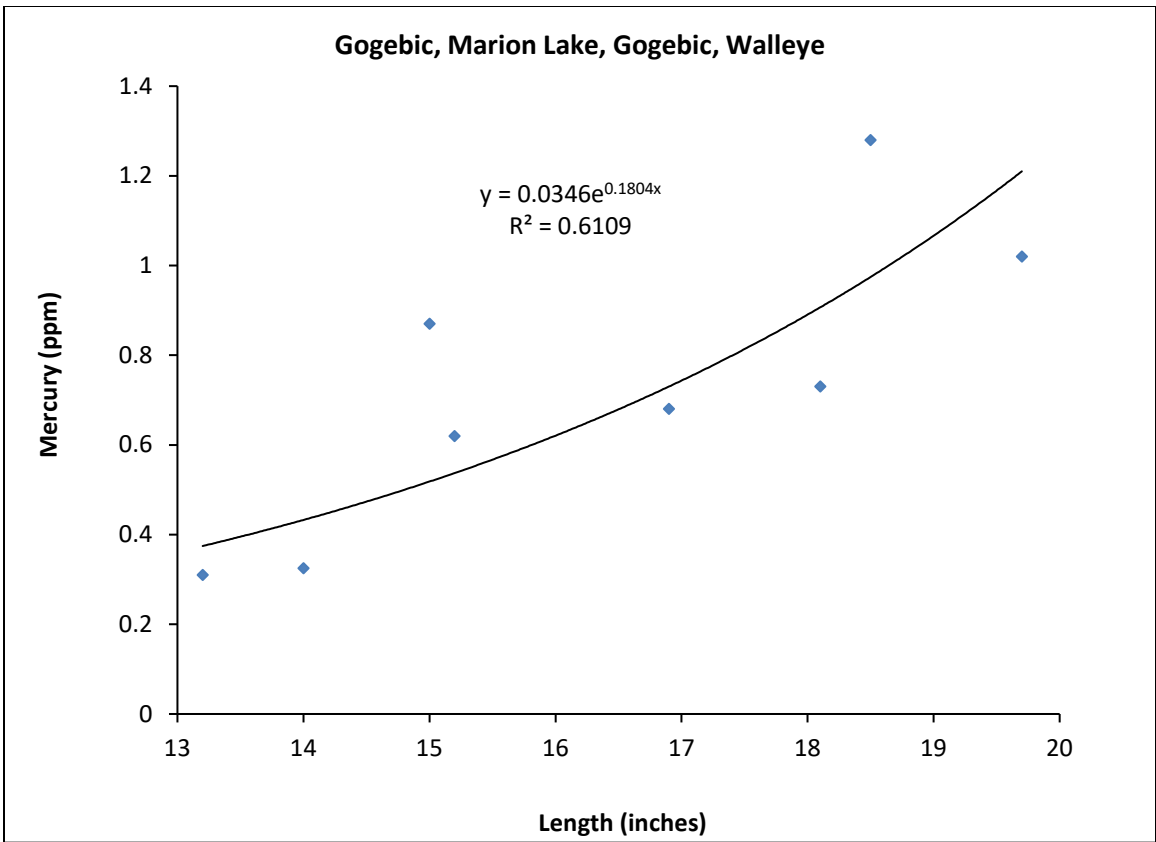
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>0.5</b>

**Existing Advisory:** Marion Lake walleye are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Marion Lake walleye smaller than 20 inches or more than 6 meals per year of those fish larger than 20 inches due to mercury. Statewide length break was applied and is in agreement with the regression estimates.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
13	0.36	2
14	0.43	2
15	0.52	2
16	0.62	1
17	0.74	1
18	0.89	1
19	1.07	1
20	1.28	0.5
<i>Shaded area denotes extrapolated estimates</i>		



**Yellow Perch**

**Marion Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
2003	2003	1	9.0	na	--	--		
Datasets available:		2003						
Chemical	Sample Size (Legal)	Mean (ppm)		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
Mercury	1	0.26		--	--	--	--	
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
Mercury	--	--						

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
--	--	--	--	--	--	--		
Datasets available:		--						
Chemical	Sample Size (Legal)	Mean (ppm)		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
PCB	0	--		--	--	--	--	
DDT	0	--		--	--	--	--	
Chlordane	0	--		--	--	--	--	
Toxaphene	0	--		--	--	--	--	
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
PCB	--	--						
DDT	--	--						
Chlordane	--	--						
Toxaphene	--	--						
<b>Final meal category based on UCL:</b>							--	

**Existing Advisory:** Marion Lake yellow perch are covered by the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. Statewide guidelines apply. No one should eat more than 4 meals per month of yellow perch from inland waters.

**Largemouth Bass**

**Ormes Lake**

**Gogebic County**

**Hg Analysis:**

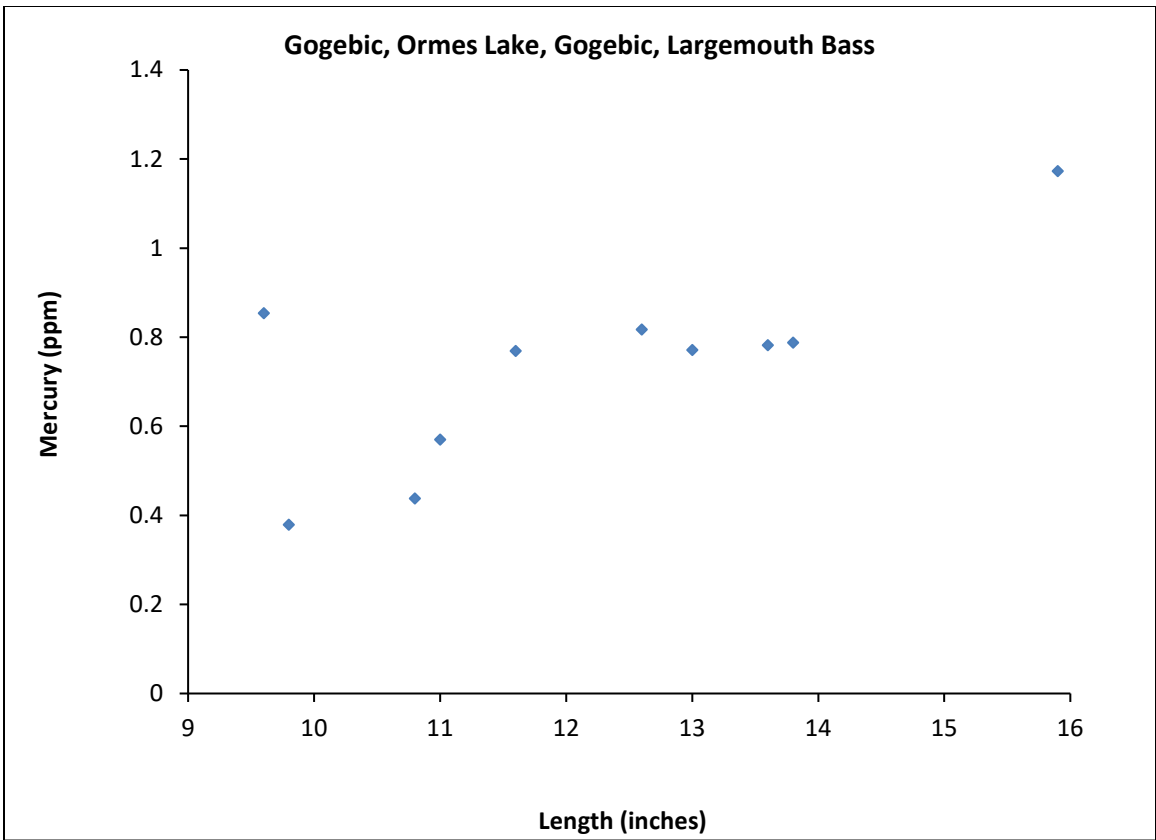
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2005	2005	10	9.6	14	13.6	15.9
Datasets available: 2005						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.73	0.37	1.17	0.9	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.541	0.493				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Ormes Lake largemouth bass are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Ormes Lake largemouth or smallmouth bass smaller than 18 inches or more than 6 meals per year of those fish larger than 18 inches due to mercury. The statewide length break was applied as the length range was limited.



**Walleye**

**Pomeroy Lake**

**Gogebic County**

**Hg Analysis:**

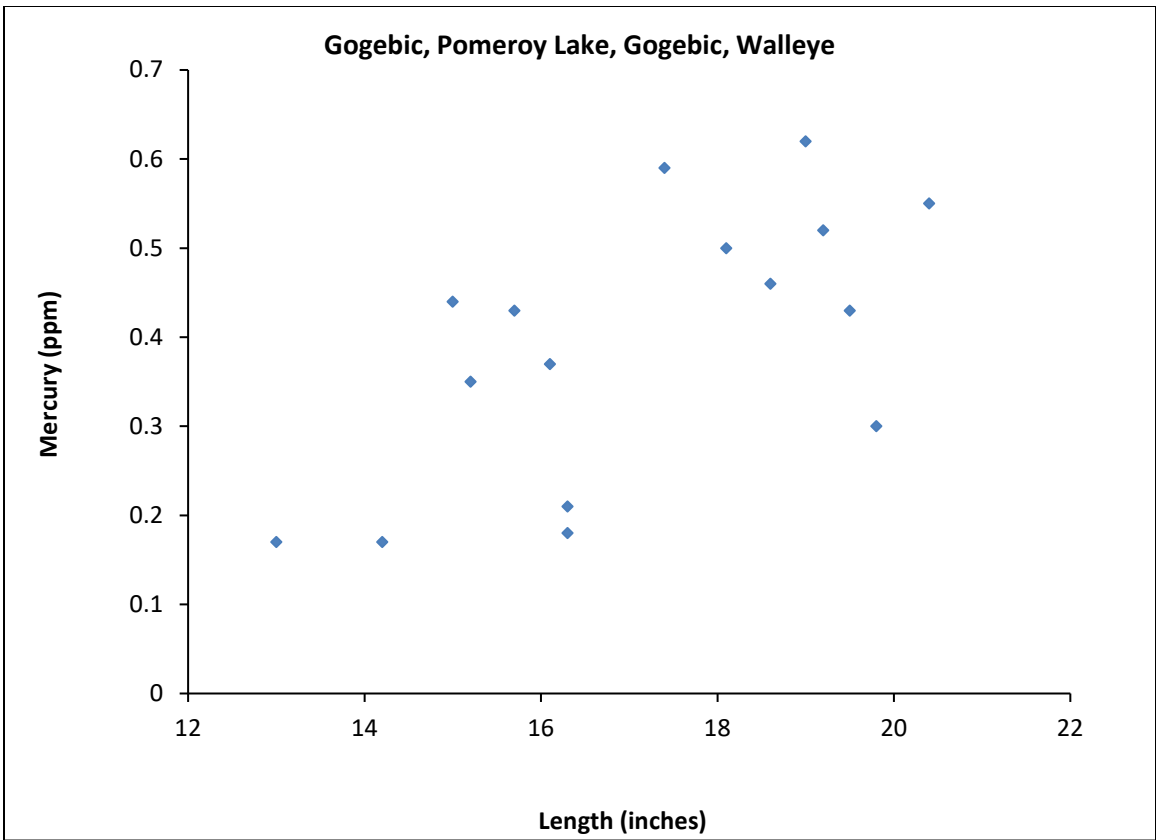
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1997	1999	16	13	15	15	20.4
Datasets available: 1997, 1999						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	14	0.42	0.18	0.62	0.50	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.400	0.412				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Women and children should not eat more than one meal per month of walleye greater than 18 inches from Pomeroy Lake.

**Recommendation:** No one should eat more than 2 meals per month of Pomeroy Lake walleye smaller than 20 inches or more than 1 meal per month of those fish larger than 20 inches due to mercury. The statewide length break was applied as the length range was limited.





**Hg Analysis:**

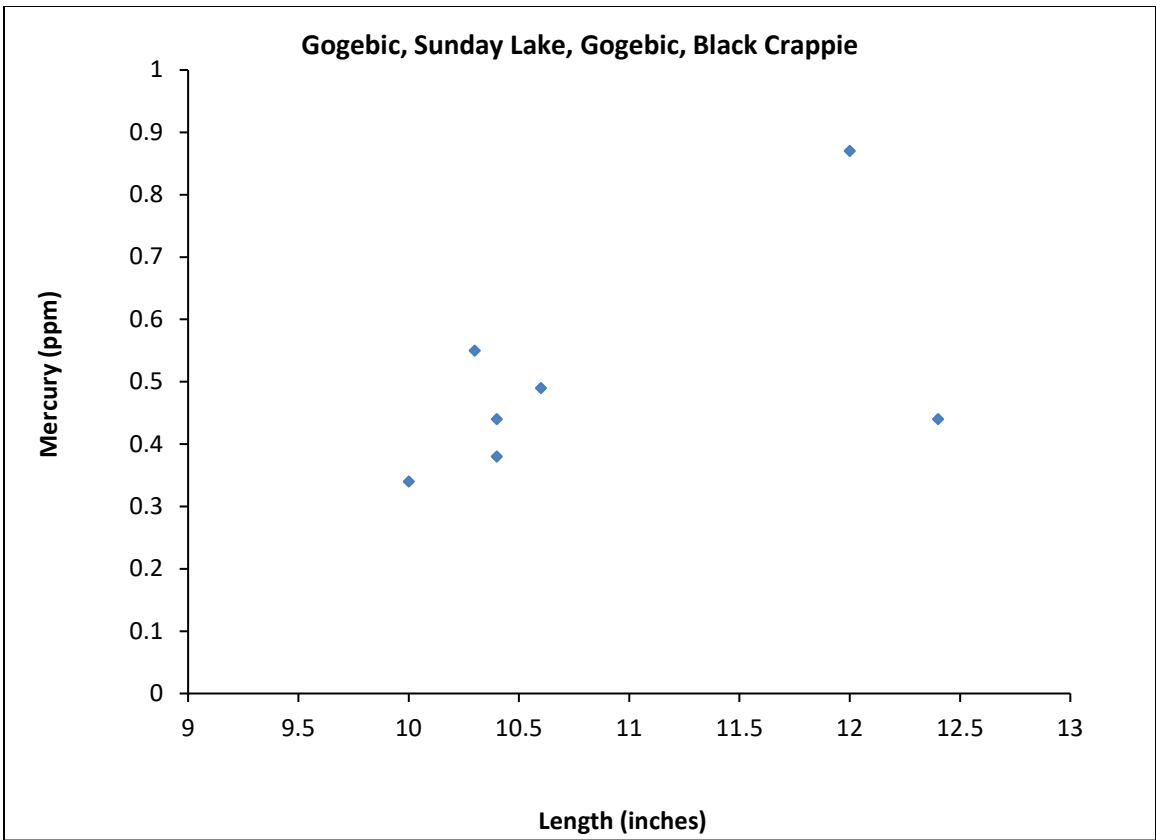
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2003	2003	7	10	na	10	12.4
Datasets available: 2003						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	7	0.50	0.34	0.87	0.66	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.282	0.281				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Sunday Lake black crappie are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Sunday Lake crappie due to mercury.



Northern Pike

Sunday Lake

Gogebic County

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Length Range of All Samples	
Earliest	Most Recent				Min	Max
2003	2003	8	16.2	24	16.2	20.1
Datasets available: 2003						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	8	0.864	0.590	1.220	1.040	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.731	0.797				

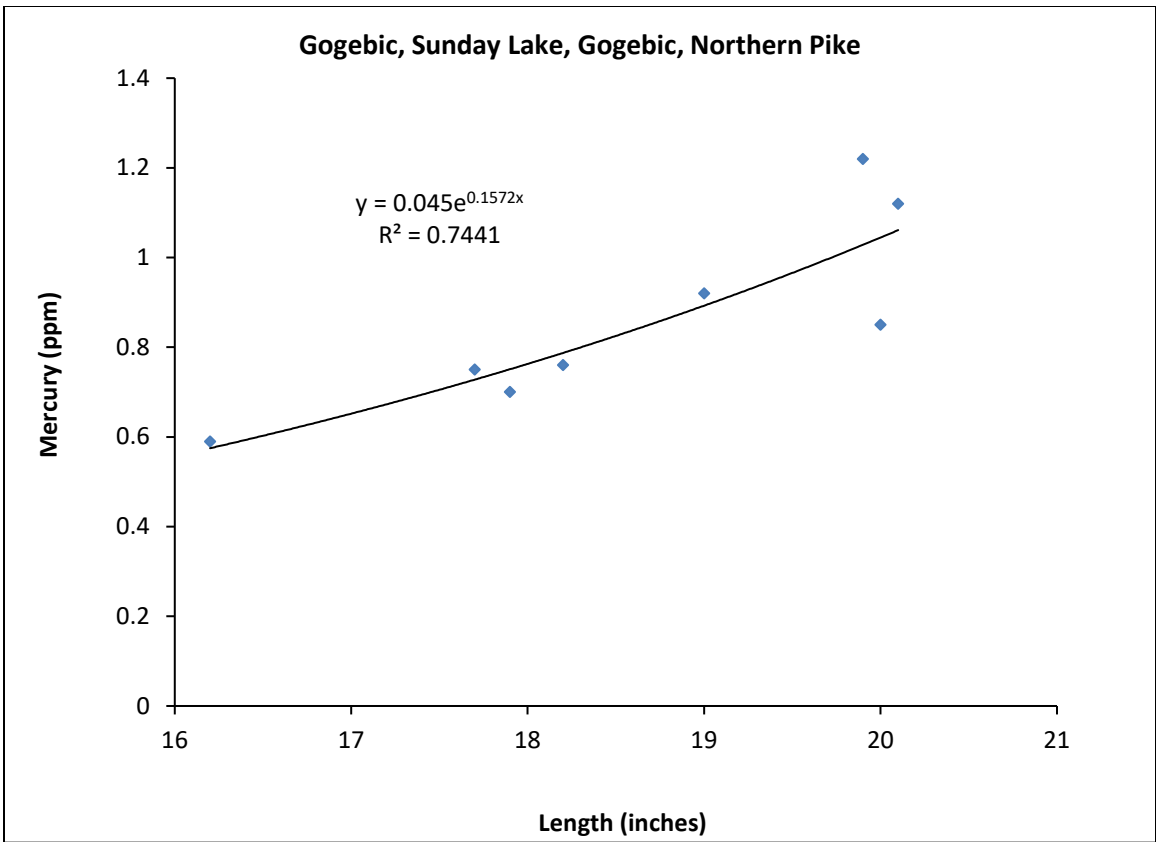
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Sunday Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat any Sunday Lake northern pike due to mercury. Dataset is limited by sublegal samples. Mercury concentrations in the sublegal samples are relatively high for the lengths, and the extrapolated region of the regression indicates that legal sized northern pike should not be eaten due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
16	0.56	1
18	0.76	1
20	1.04	1
22	1.43	0.5
24	1.96	0.5
26	2.68	0
28	3.67	0
30	5.03	0
32	6.88	0
<i>Shaded area denotes extrapolated estimates</i>		



**Walleye**

**Sunday Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
2003	2003	2	17.1	15	17.1	17.1		
Datasets available: 2003								
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category		
Mercury	2	1.04	0.9	1.18	--	--		
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
Mercury	--	--						

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
--	--	0						
Datasets available: --								
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category		
PCB	0	--	--	--	--	--		
DDT	0	--	--	--	--	--		
Chlordane	0	--	--	--	--	--		
Toxaphene	0	--	--	--	--	--		
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
PCB	--	--						
DDT	--	--						
Chlordane	--	--						
Toxaphene	--	--						
						<b>Final meal category based on UCL:</b>		--

**Existing Advisory:** Sunday Lake walleye are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. However, the 2 walleye samples suggest elevated mercury levels. No one should eat more than 1 meal per month of Sunday Lake walleye smaller than 20 inches or more than 6 meals per year of those fish larger than 20 inches due to mercury. The advice is one step more restrictive than the statewide advice for walleye.

*Note: Northern pike and crappie from the same lake have relatively high Hg concentrations.*

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2003	2003	3	10.2	na	10.2	12
Datasets available: 2003						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	3	0.67	0.61	0.77	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Sunday Lake yellow perch are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. However, other fish from that lake have relatively high levels of mercury. No one should eat more than 2 meals per month of Sunday Lake yellow perch due to mercury. The advice is one step more restrictive than the statewide advice.

*Note: Northern pike and crappie from the same lake had relatively high Hg concentrations.*

**Walleye**

**Thousand Island Lake**

**Gogebic County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1999	1999	10	15.8	15	15.8	26.7
Datasets available: 1999						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.51	0.27	1.05	0.69	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.632	0.621				

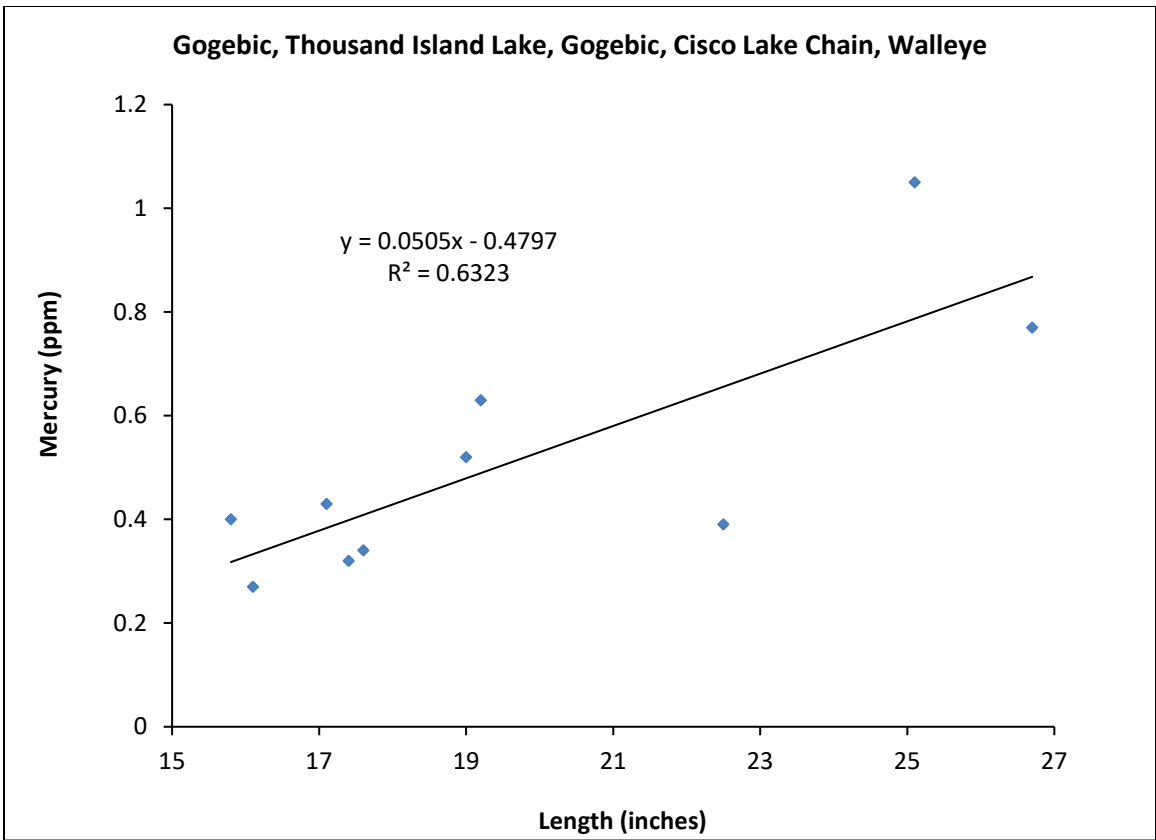
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Women and children should not eat more than one meal per month of Thousand Island Lake walleye larger than 18 inches.

**Recommendation:** No one should eat more than 2 meals per month of Thousand Island Lake walleye smaller than 20 inches or more than 1 meal per month of those fish larger than 20 inches due to mercury. Statewide length break and regression agree.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
15	0.28	2
17	0.38	2
19	0.48	2
20	0.53	1
23	0.68	1
25	0.78	1
27	0.88	1
<i>Shaded area denotes extrapolated estimates</i>		





# Houghton County

**Walleye**

**Bob Lake**

**Houghton County**

**Hg Analysis:**

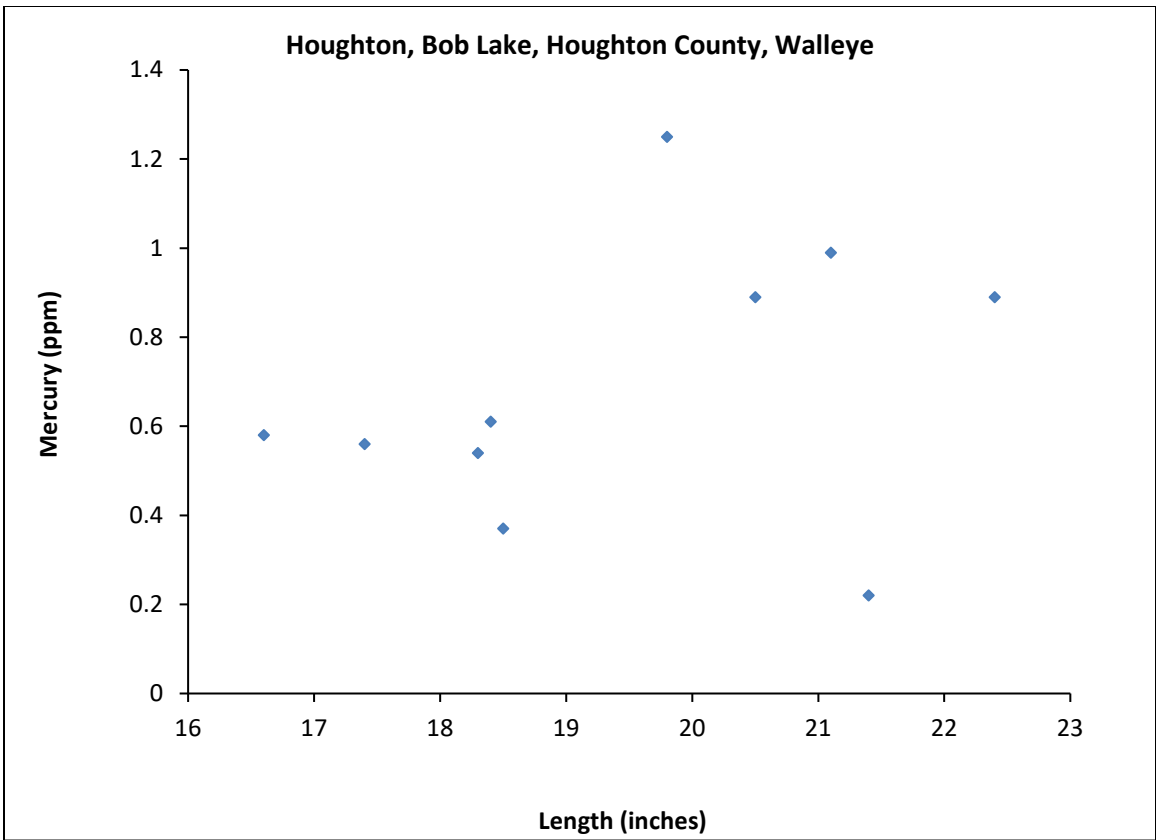
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2001	2001	10	16.6	15	16.6	22.4
Datasets available: 2001						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.69	0.22	1.25	0.91	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.106	0.030				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Bob Lake walleye are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Bob Lake walleye due to mercury.



**White Sucker**

**Boston Pond**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2000	2000	10	12.1	na	12.1	14.4
Datasets available: 2000						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.02	0.01	0.04	0.03	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.368	0.523				

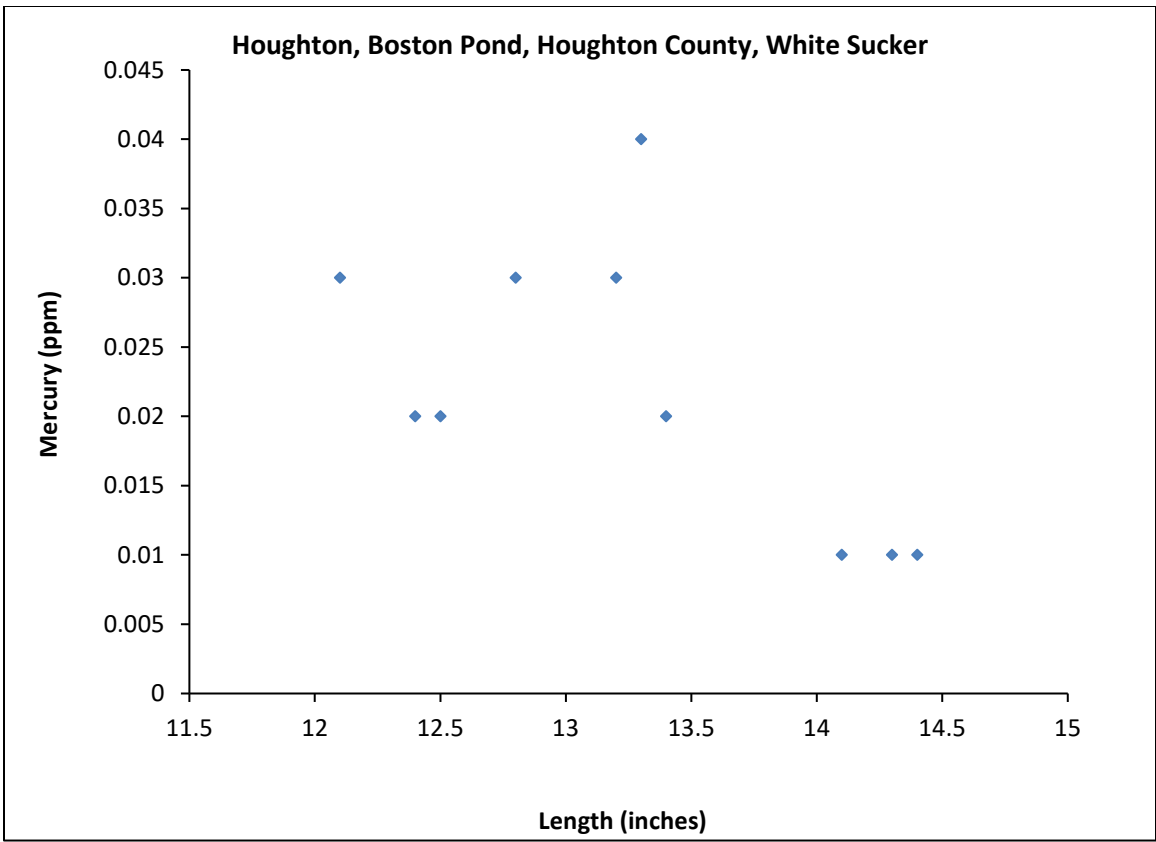
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2000	2000	10	12.1	NA	12.1	14.4
Datasets available: 2000						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	ND	--	--	--	--
DDT	10	0.003*	0.003	0.003	0.003	--
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>16</b>

\* - 2 samples at detection level of 0.003 ppm

**Existing Advisory:** Boston Pond white sucker have no existing advisory.

**Recommendation:** No consumption restrictions are needed for Boston Pond sucker.



**Yellow Perch**

**Boston Pond**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2000	2000	10	8	NA	8	13.6
Datasets available: 2000						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.07	0.05	0.12	0.09	12
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.717	0.693				

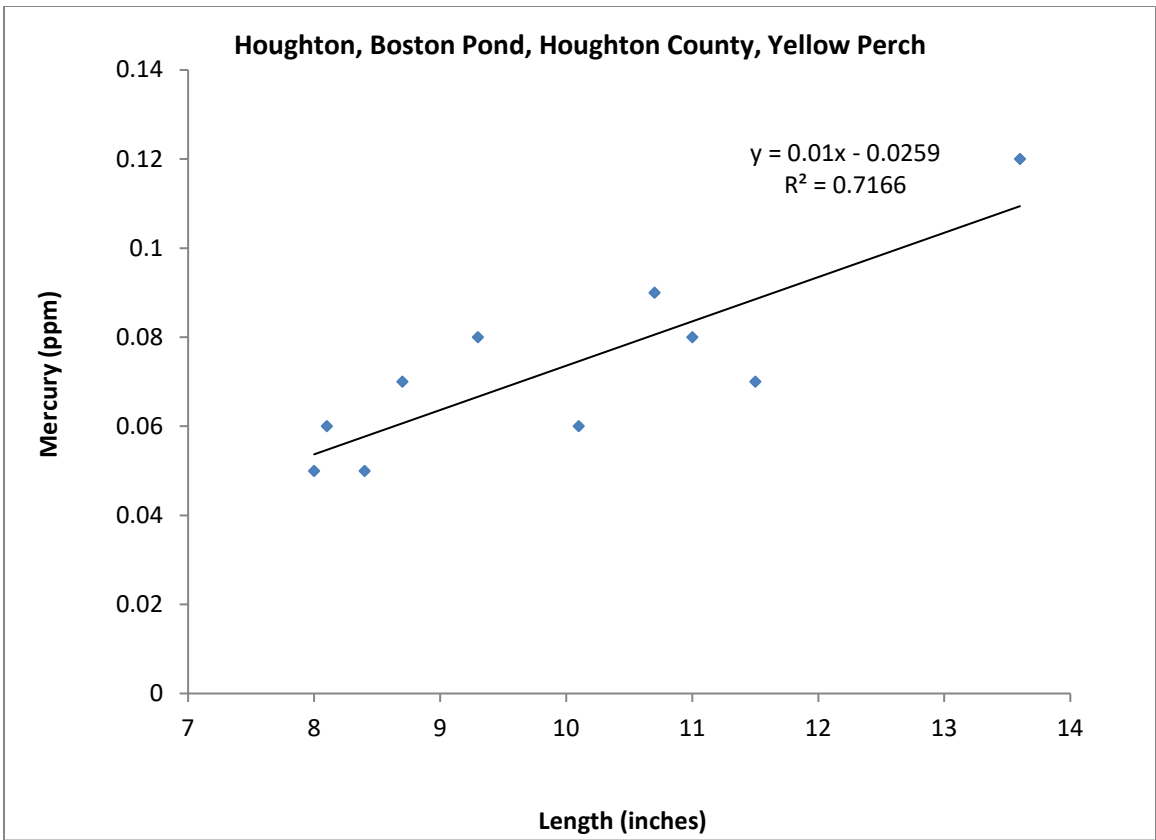
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2000	2000	10	8	NA	8	13.6
Datasets available: 2000						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	ND	--	--	--	--
DDT	10	ND	--	--	--	--
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>12</b>

**Existing Advisory:** Women and children have no eating restrictions on Boston Pond yellow perch.

**Recommendation:** No one should eat 12 meals per month of Boston Pond yellow perch smaller than 12 inches or more than 8 meals per month of yellow perch larger than 12 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
8	0.05	16
9	0.06	16
10	0.07	12
11	0.08	12
12	0.09	8
13	0.10	8
14	0.11	8
<i>Shaded area denotes extrapolated estimates</i>		



**Walleye**

**Emily Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2002	2002	10	15.6	15	15.6	23.4
Datasets available: 2002						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.41	0.32	0.59	0.48	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.366	0.415				

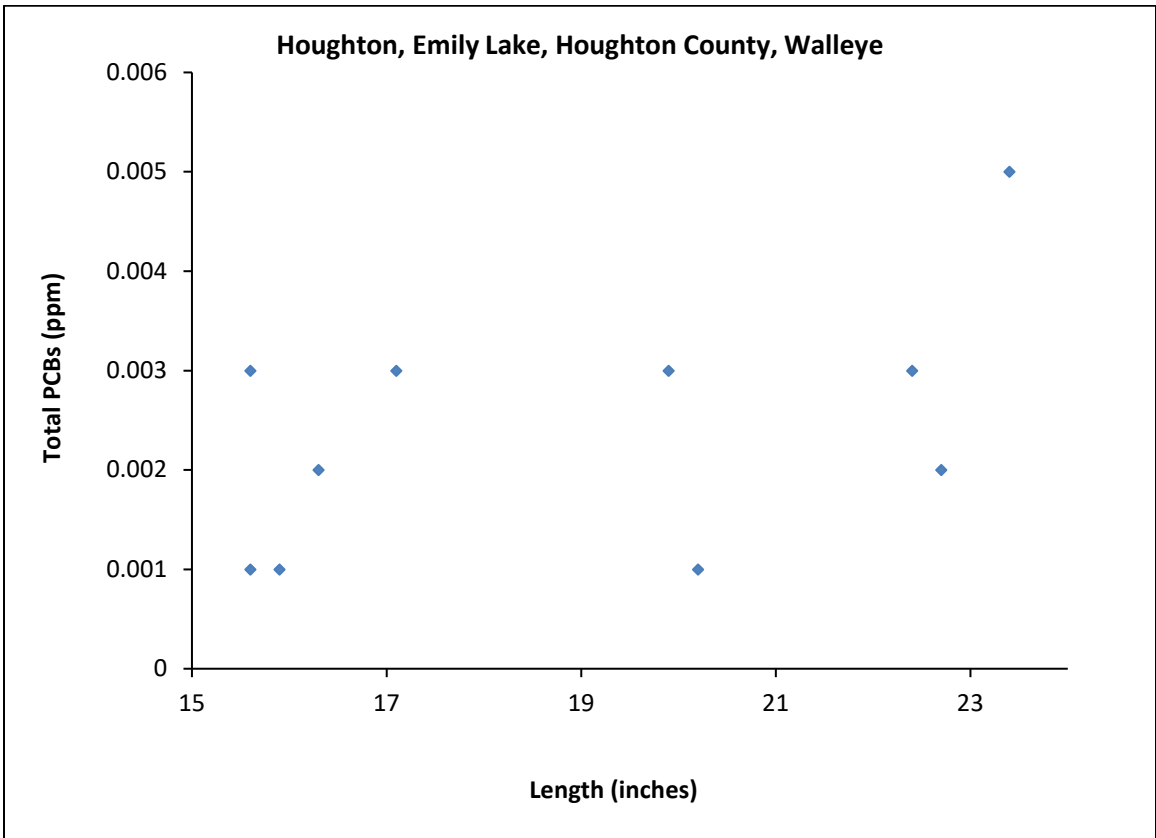
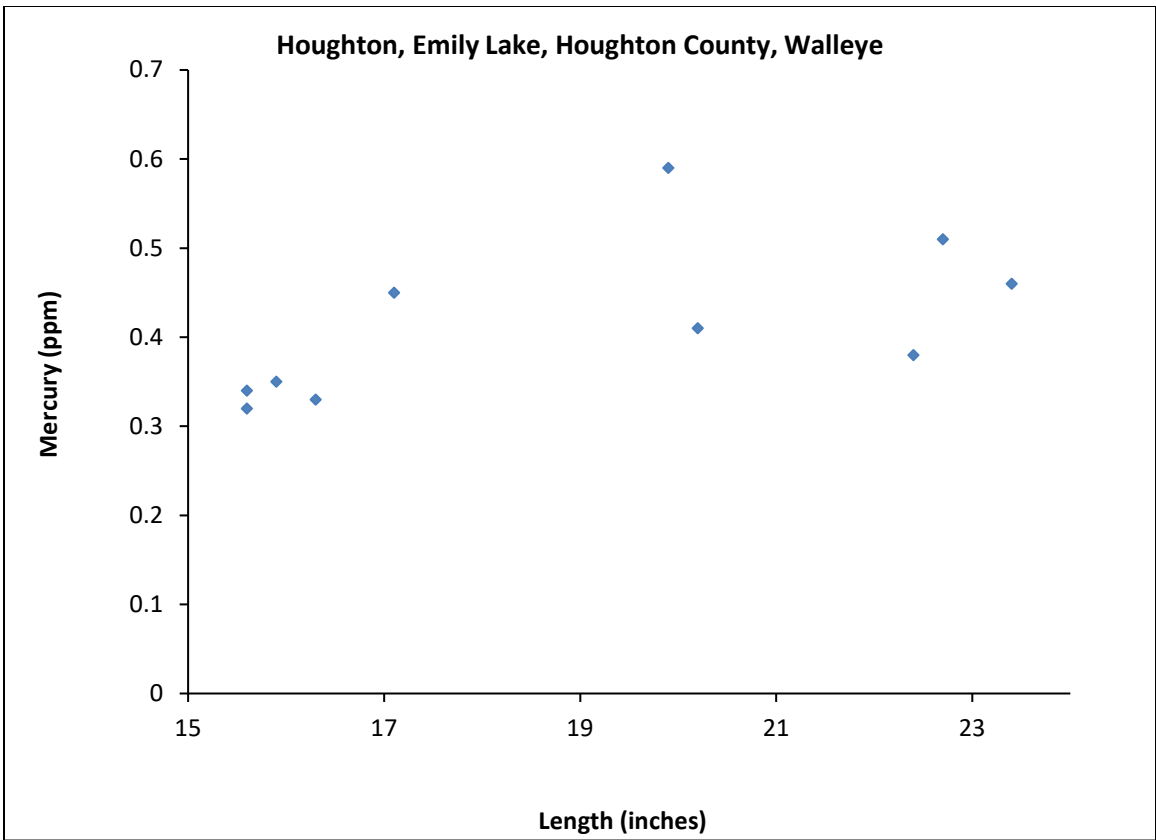
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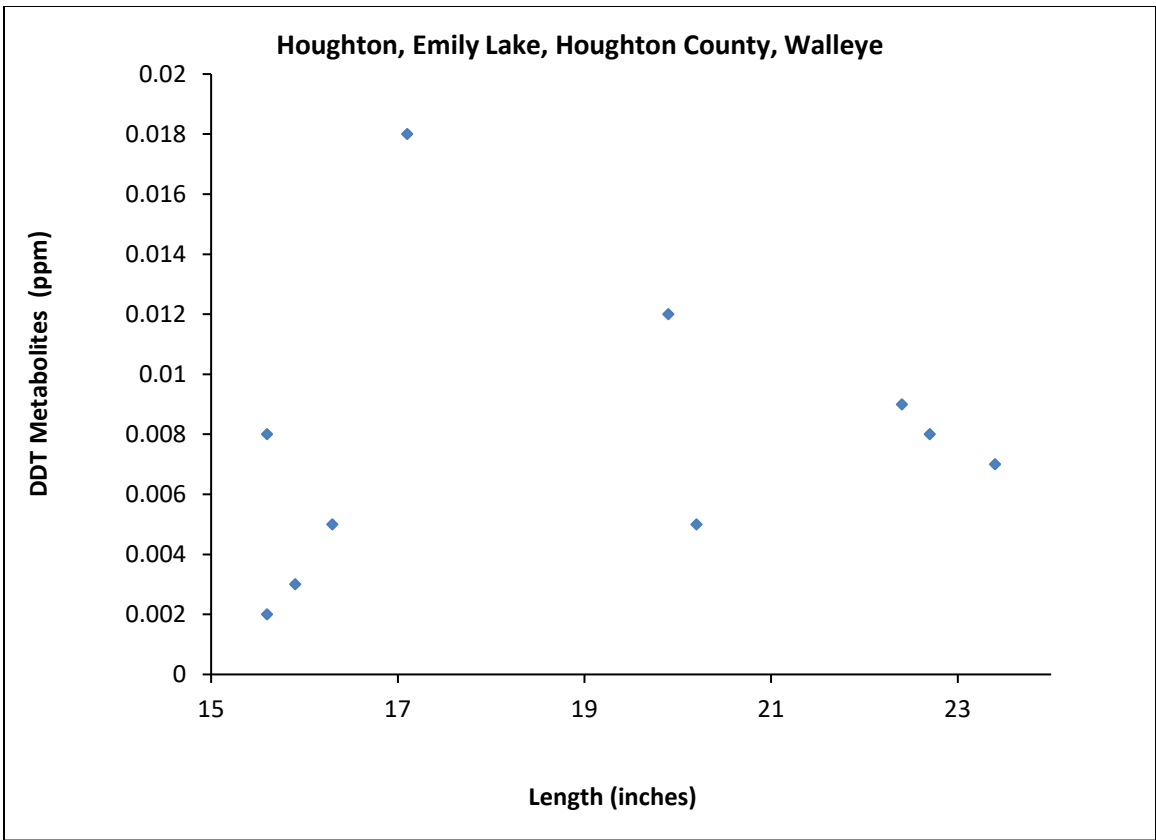
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2002	2002	10	15.6	15	15.6	23.4
Datasets available: 2002						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	0.002	0.001	0.005	0.000	16
DDT	10	0.008	0.002	0.018	0.010	16
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.245	0.204				
DDT	0.032	0.141				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Emily Lake walleye are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Emily Lake walleye due to mercury.







**Walleye**

**Otter Lake**

**Houghton County**

**Hg Analysis:**

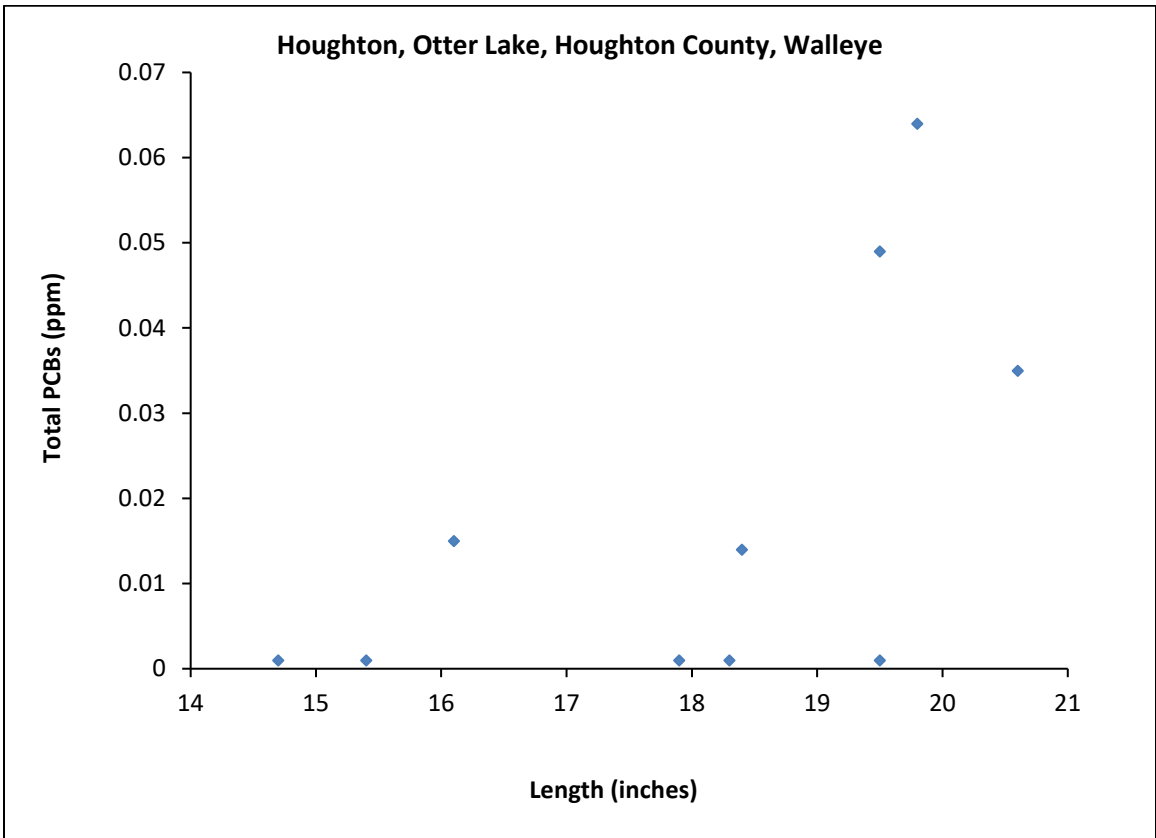
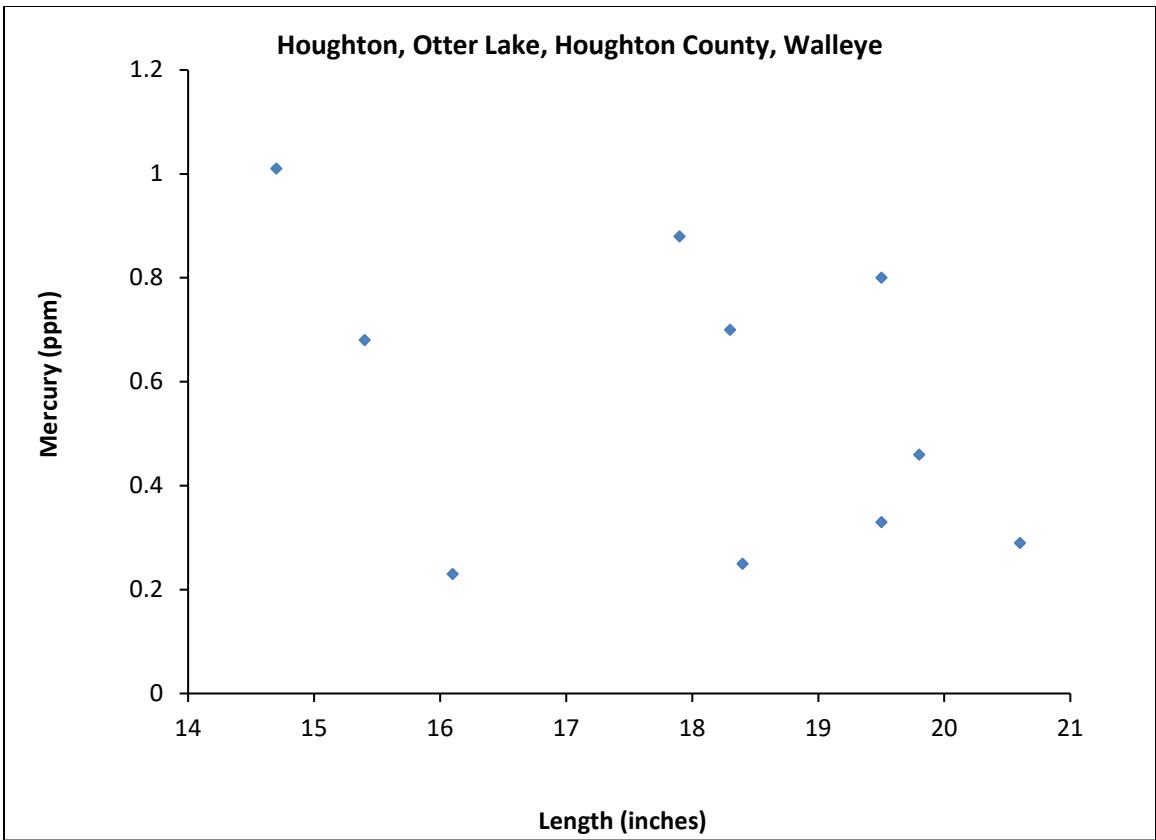
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2000	2000	10	14.7	15	14.7	20.6
Datasets available: 2000						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.56	0.23	1.01	0.77	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.174	0.112				

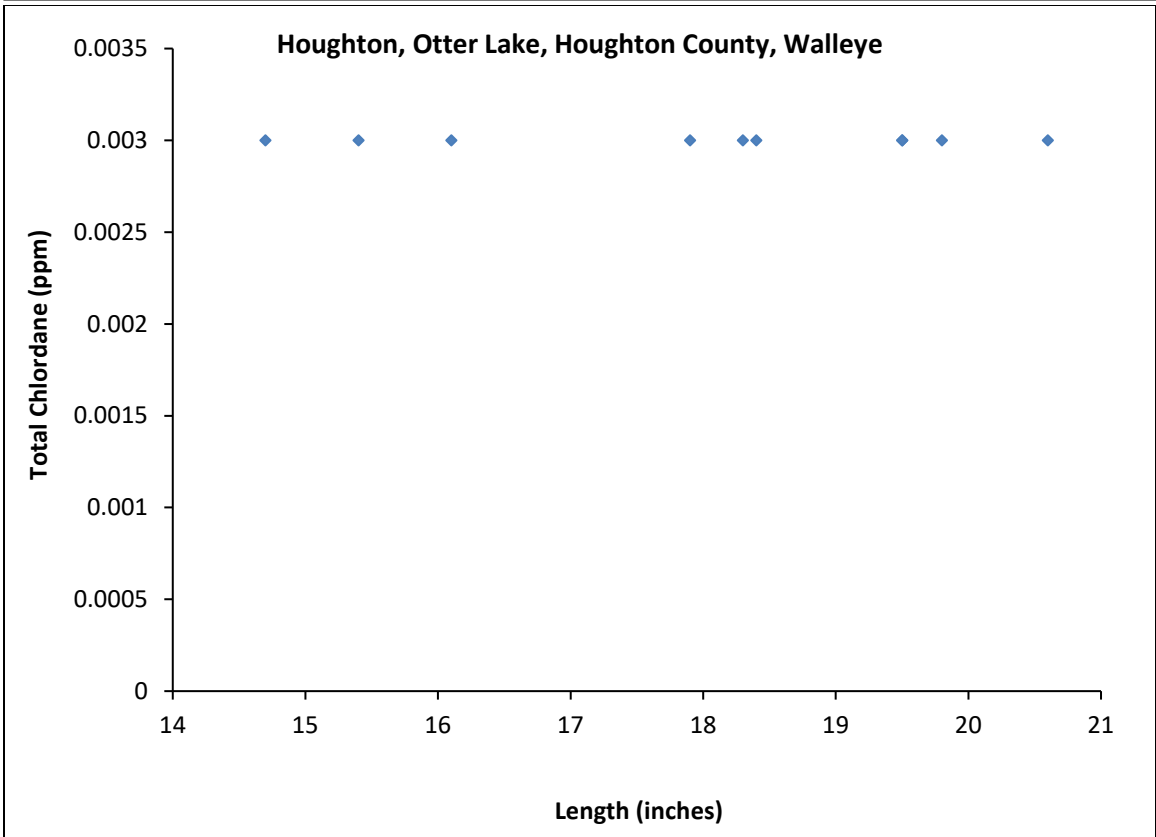
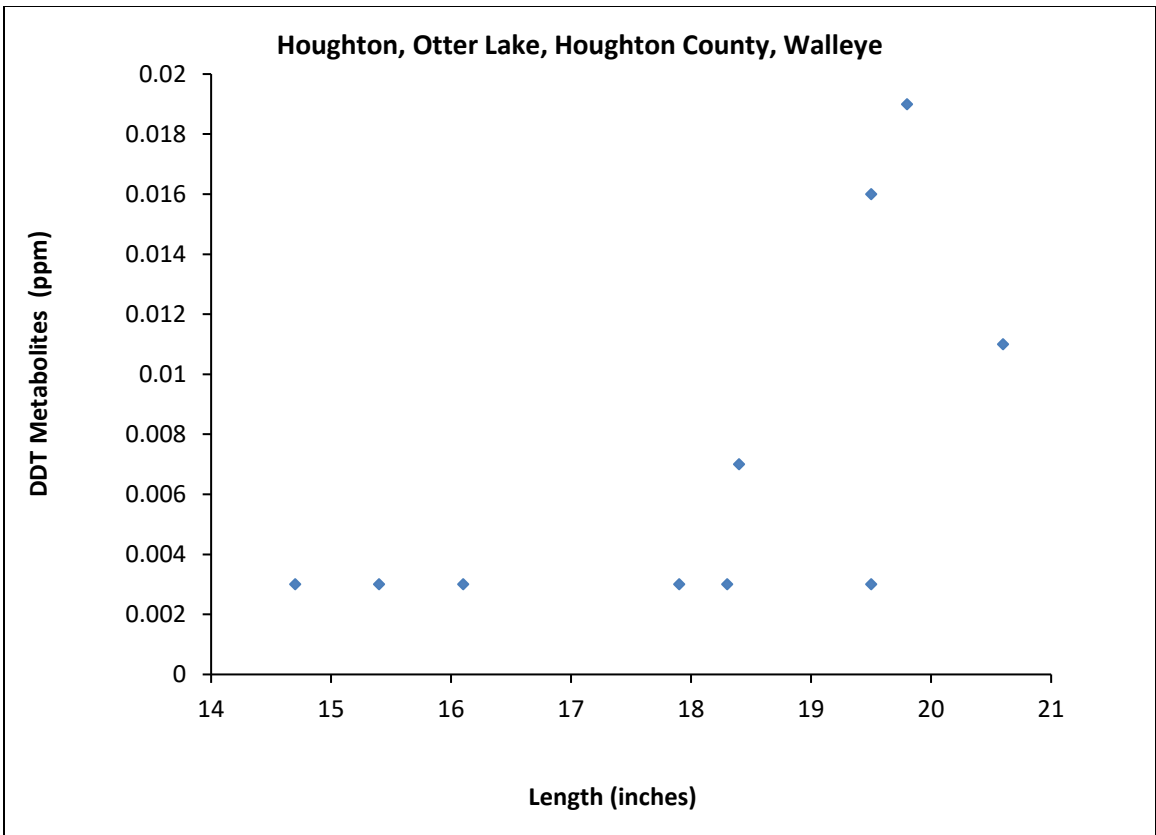
**Organics Analysis:**

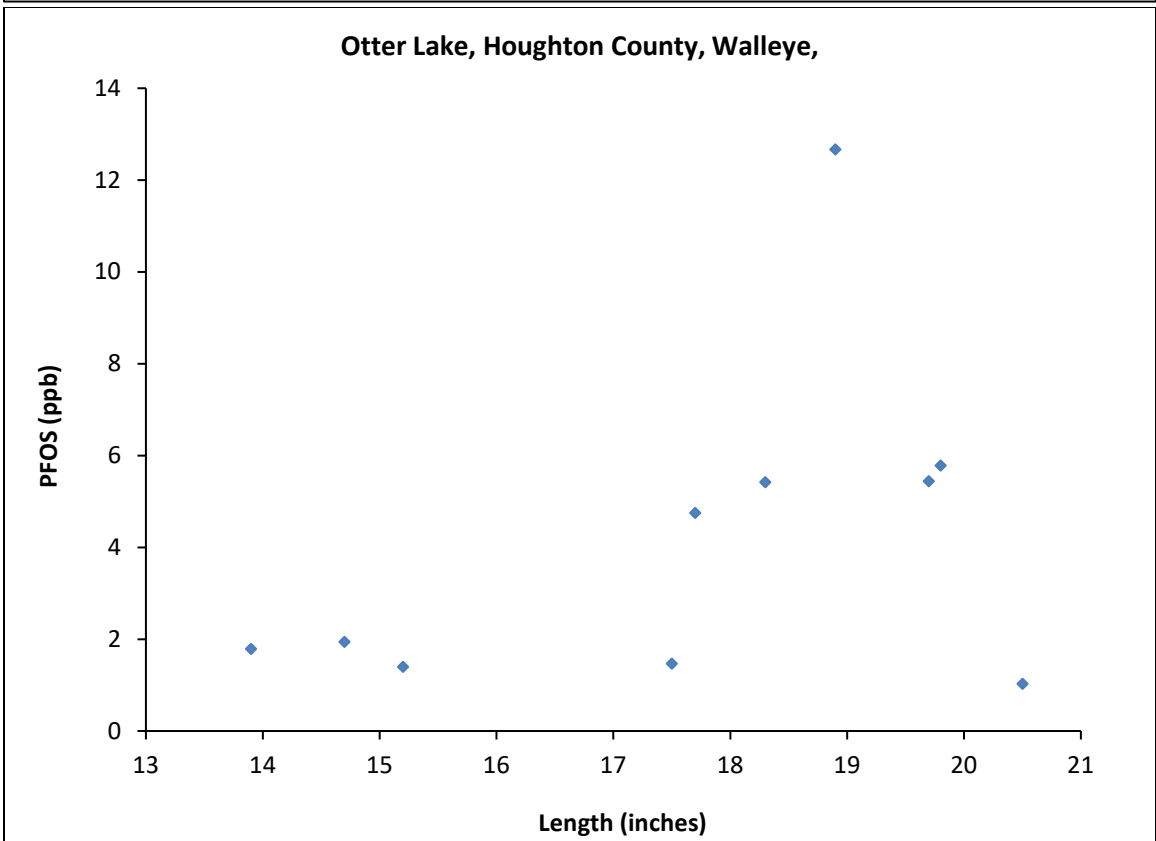
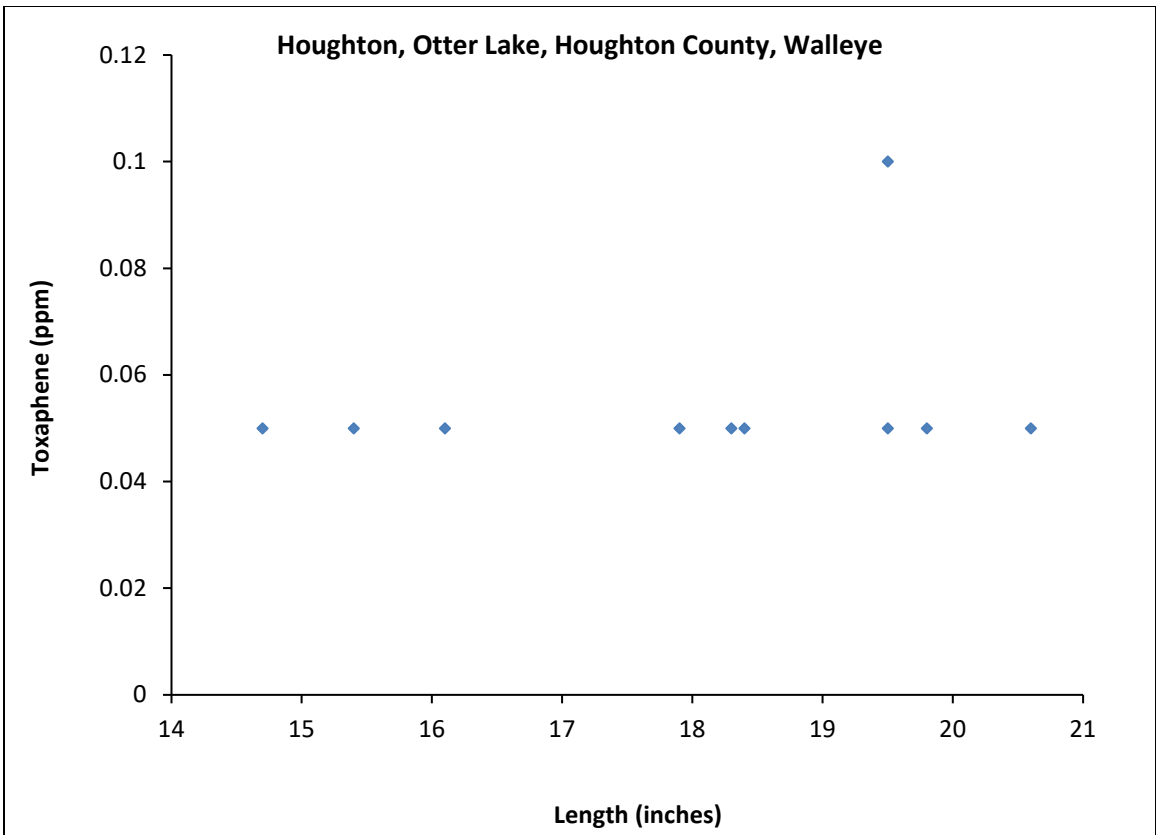
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2000	2010	10	14.7	15	14.7	20.6
Datasets available: 2000, 2010						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	0.02	0.001	0.064	0.03	8
DDT	10	0.007	0.003	0.019	0.01	16
Chlordane	10	0.003	0.003	0.003	0.003	--
Toxaphene	10	0.06	0.05	0.10	0.07	4
PFOS	9	4.4 ppb	1.0 ppb	12.7 ppb	7.2 ppb	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.356	0.298				
DDT	0.402	0.458				
Chlordane	--	--				
Toxaphene	0.068	0.068				
PFOS	0.180	0.168				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Otter Lake walleye are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Otter Lake walleye smaller than 20 inches or more than 6 meals per year of those fish larger than 20 inches due to mercury. Statewide length break was applied as the size range was limited. PCBs and toxaphene would cause advisories.







**White Sucker**

**Otter Lake**

**Houghton County**

**Hg Analysis:**

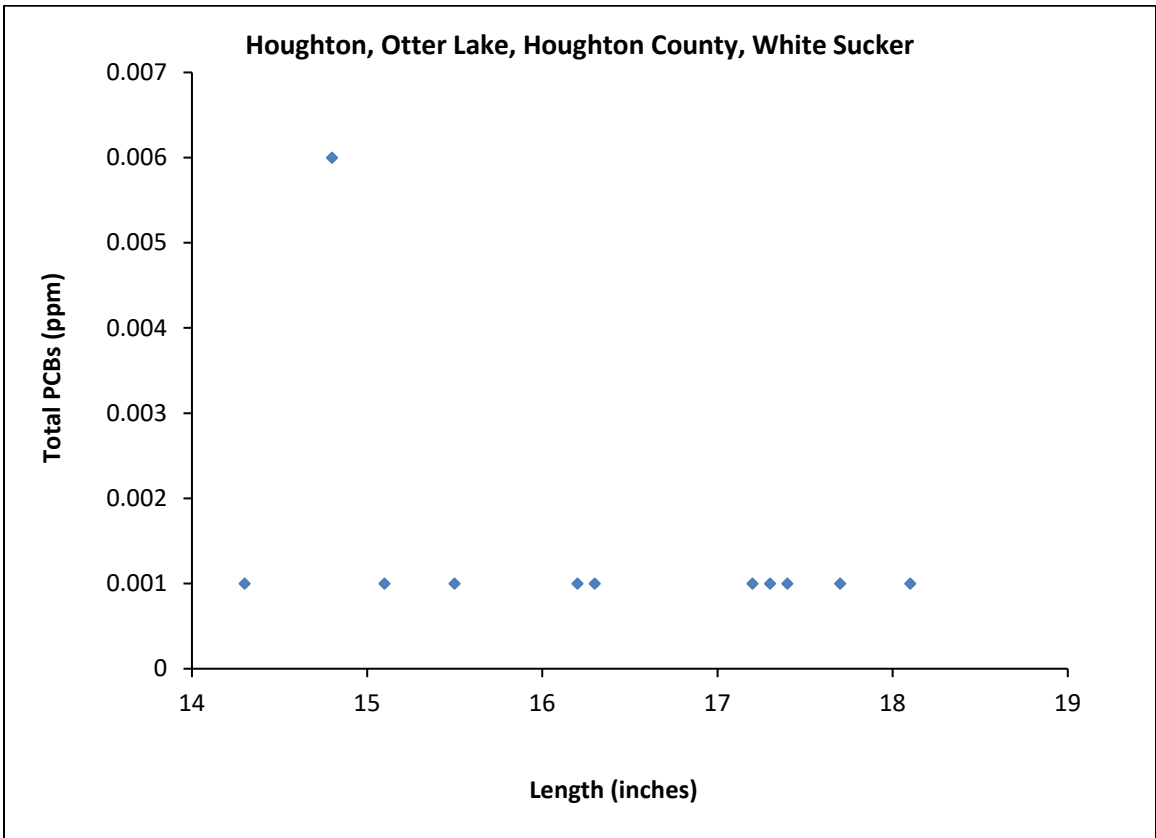
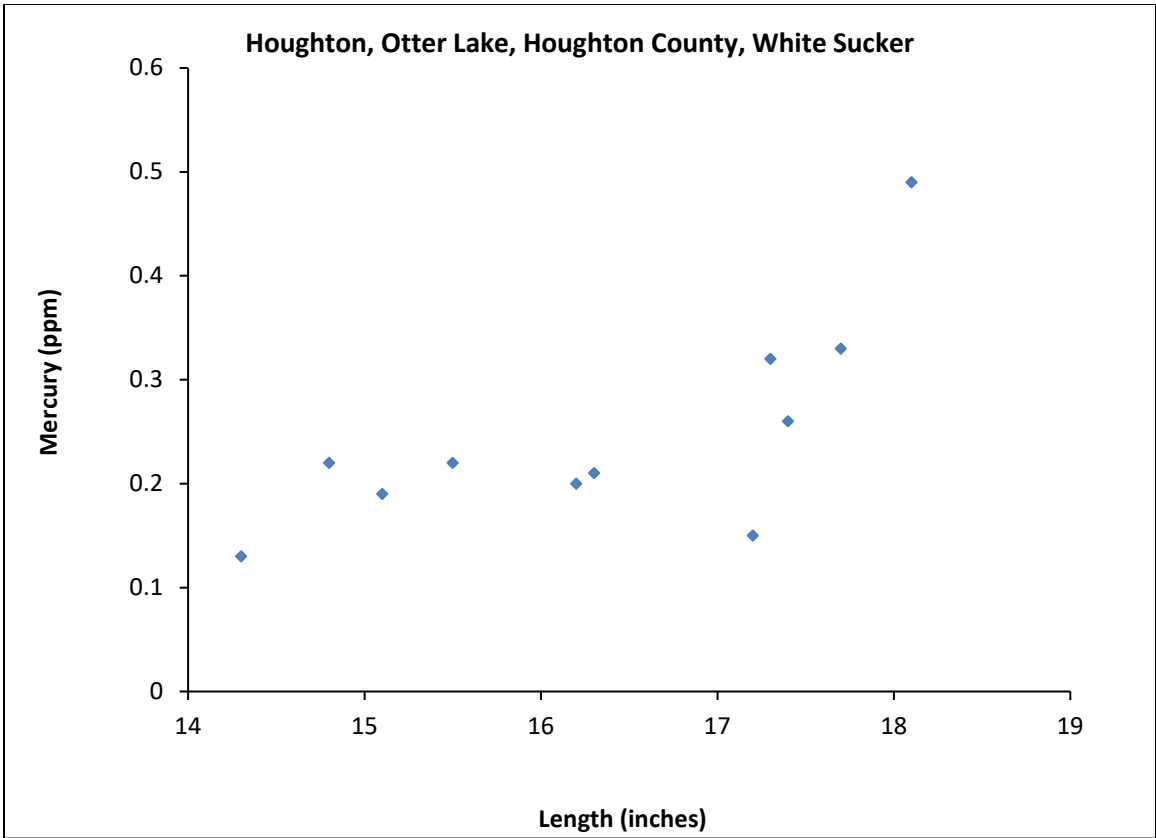
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2000	2000	11	14.3	na	14.3	18.1
Datasets available: 2000						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	11	0.25	0.13	0.49	0.32	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.501	0.508				

**Organics Analysis:**

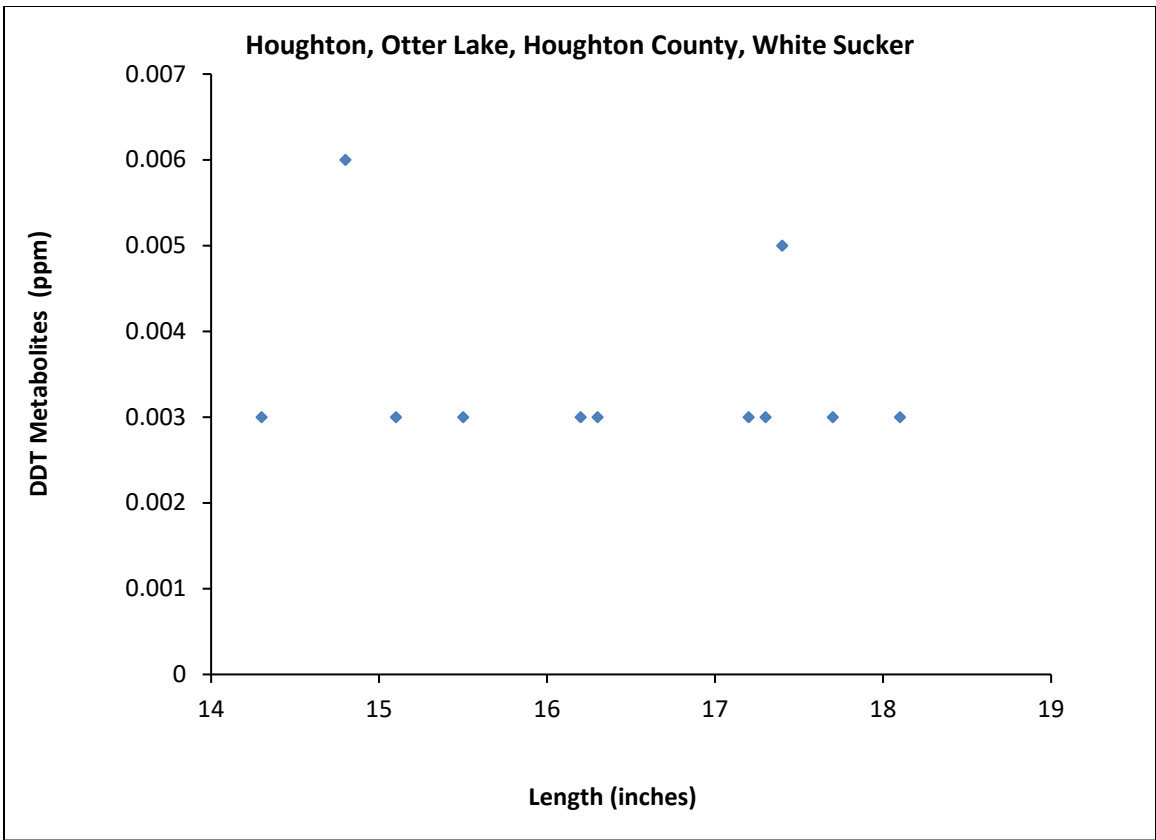
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2000	2000	11	14.3	NA	14.3	18.1
Datasets available: 2000						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	11	0.001	0.001	0.006	0.000	16
DDT	11	0.003	0.003	0.006	0.000	16
Chlordane	11	ND	--	--	--	--
Toxaphene	11	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.161	0.161				
DDT	0.037	0.029				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Otter Lake white sucker have no existing advisories.

**Recommendation:** No one should eat more than 2 meals per month of Otter Lake sucker due to mercury.







**Northern Pike**

**Pike Lake**

**Houghton County**

**Hg Analysis:**

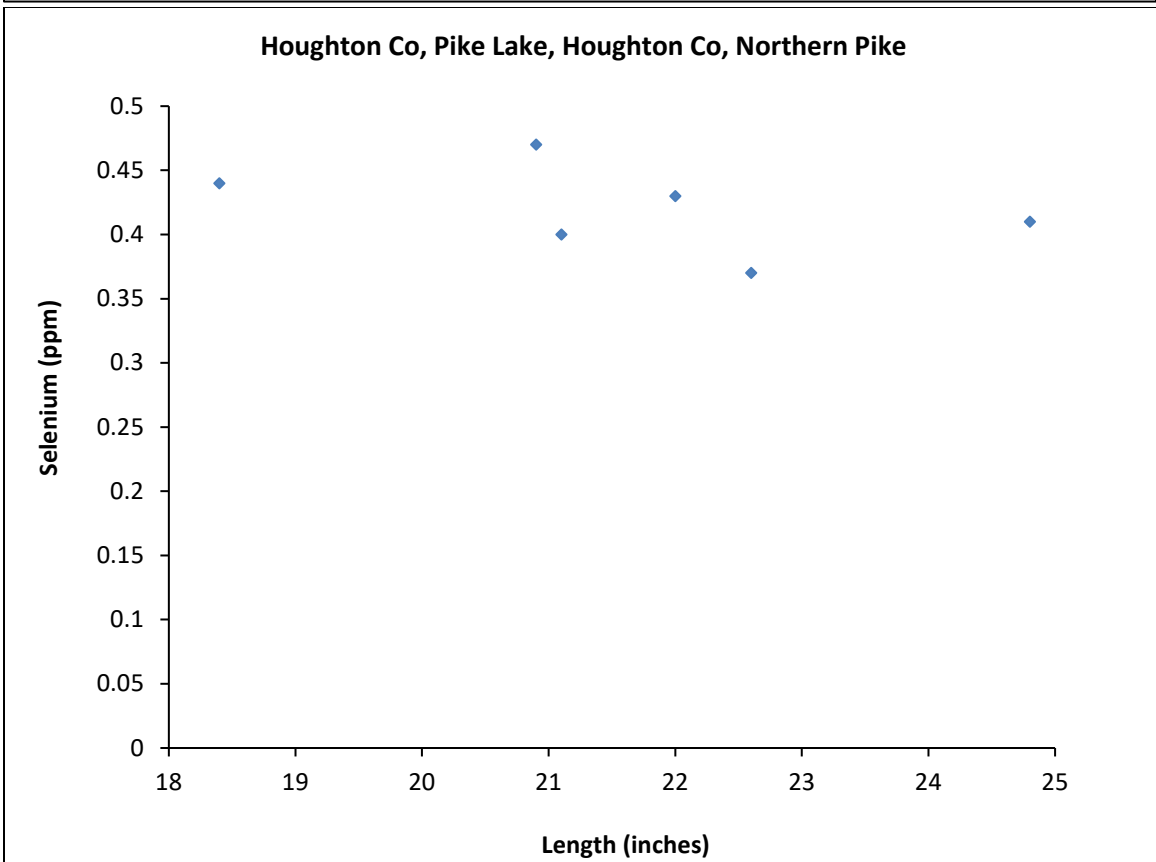
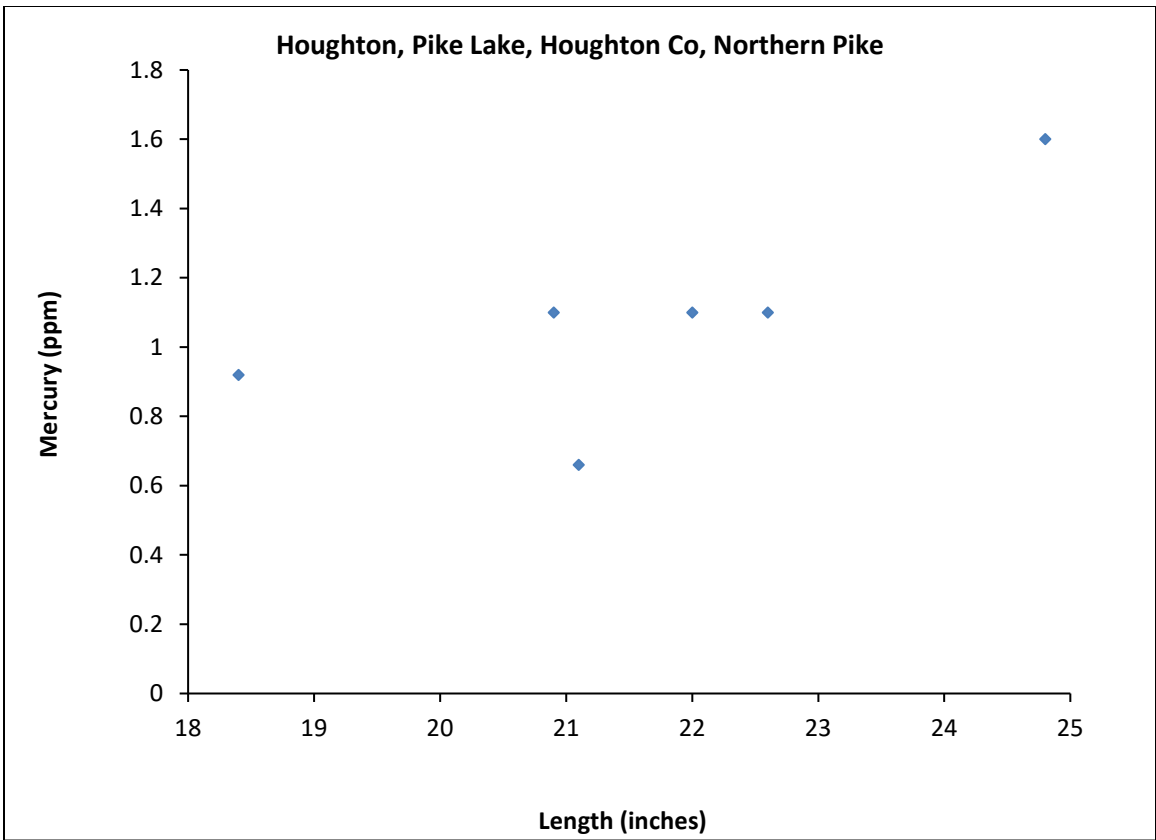
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2007	2007	6	18.4	24	24.8	24.8
Datasets available: 2007						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	1.08	0.66	1.6	1.4	0.5
Selenium	6	0.42	0.37	0.47	0.46	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.544	0.445				
Selenium	0.208	0.205				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>0.5</b>

**Existing Advisory:** Pike Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat any Pike Lake northern pike larger than 30 inches or more than 6 meals per year of those fish smaller than 30 inches due to mercury. Statewide length break was applied as the size range was limited.



**Brown Trout**

**Portage Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	10	13.2	10	13.2	26.5
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.19	0.1	0.44	0.28	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.251	0.238				

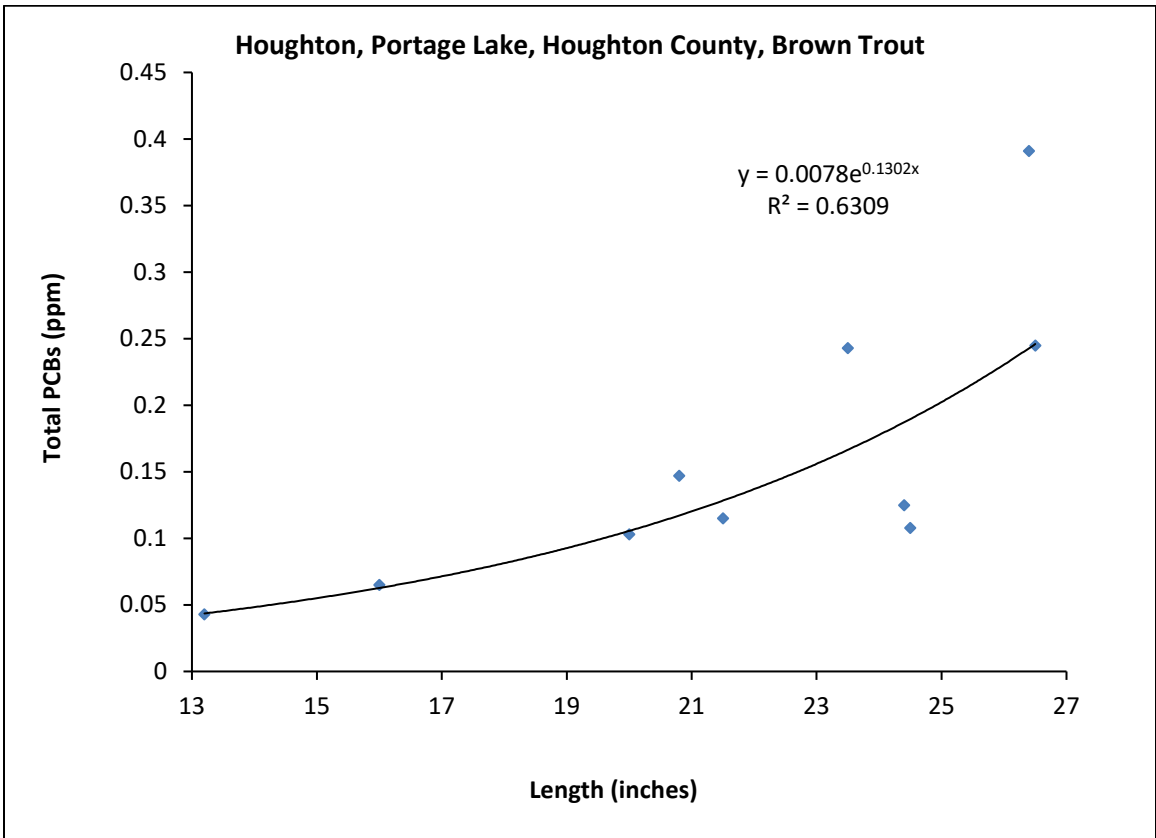
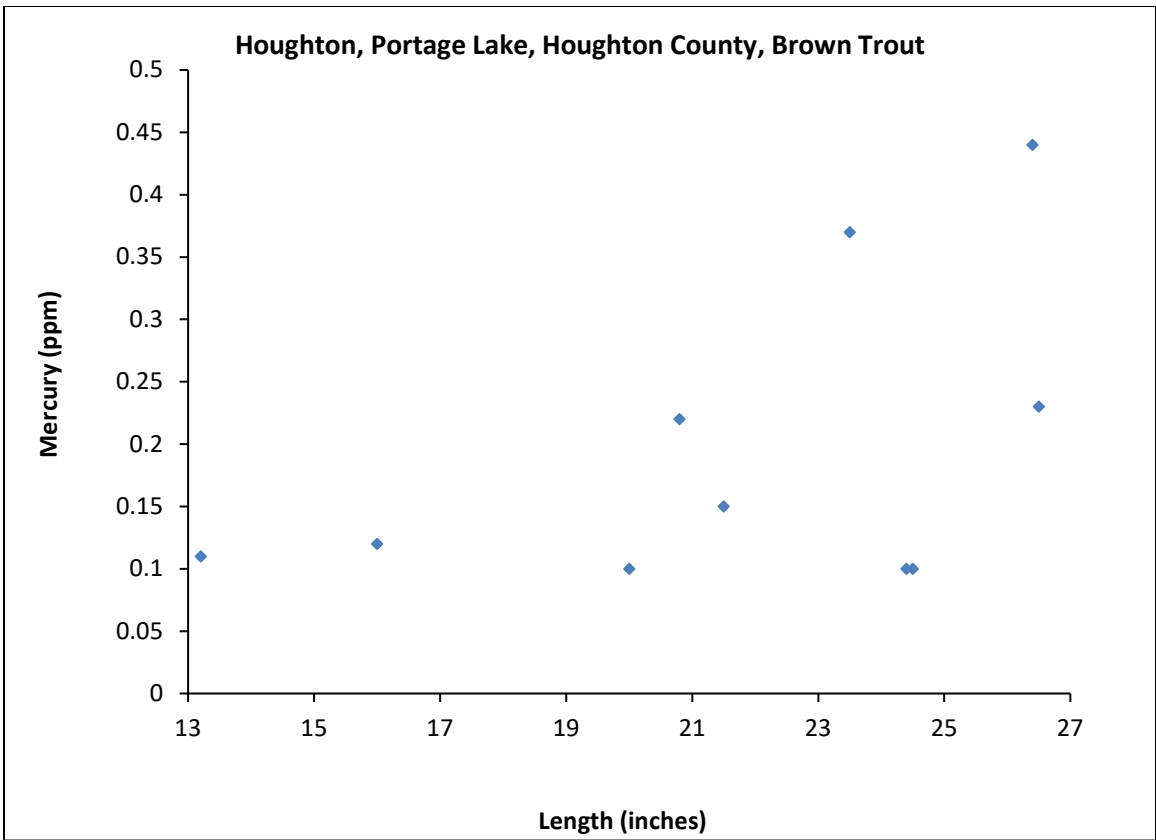
**Organics Analysis:**

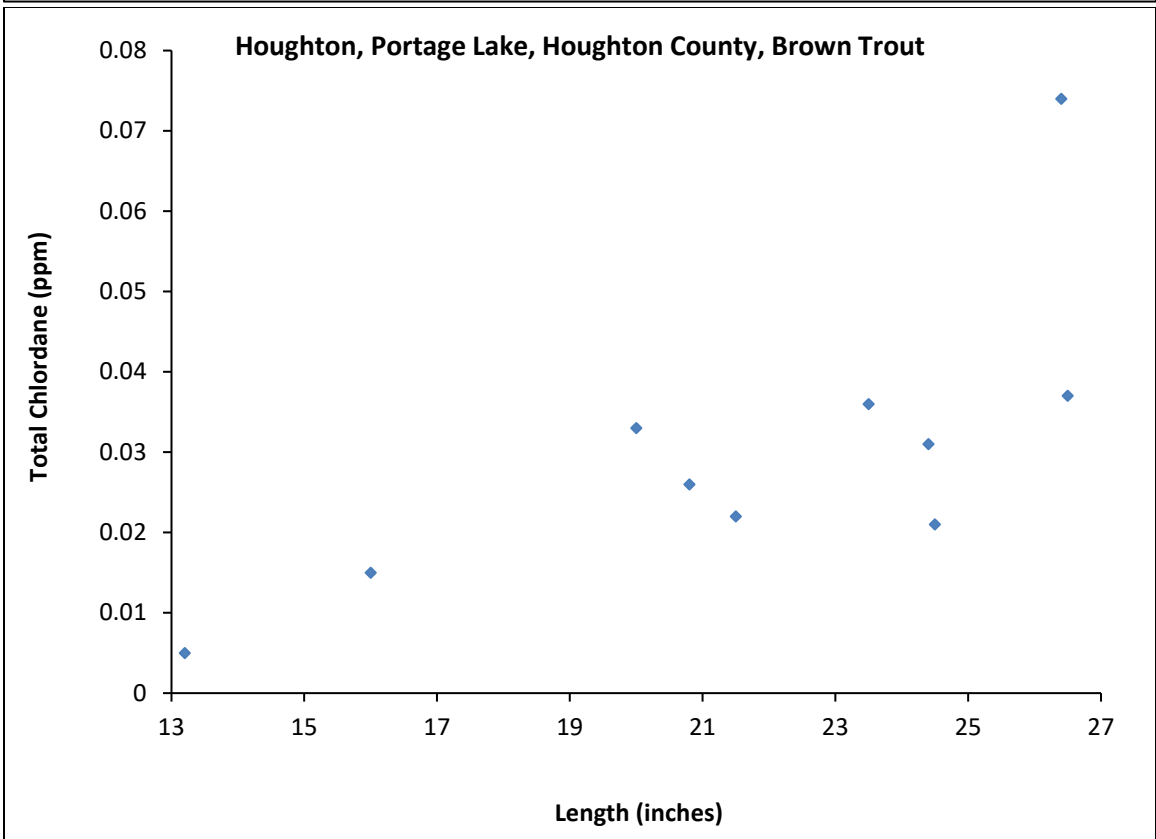
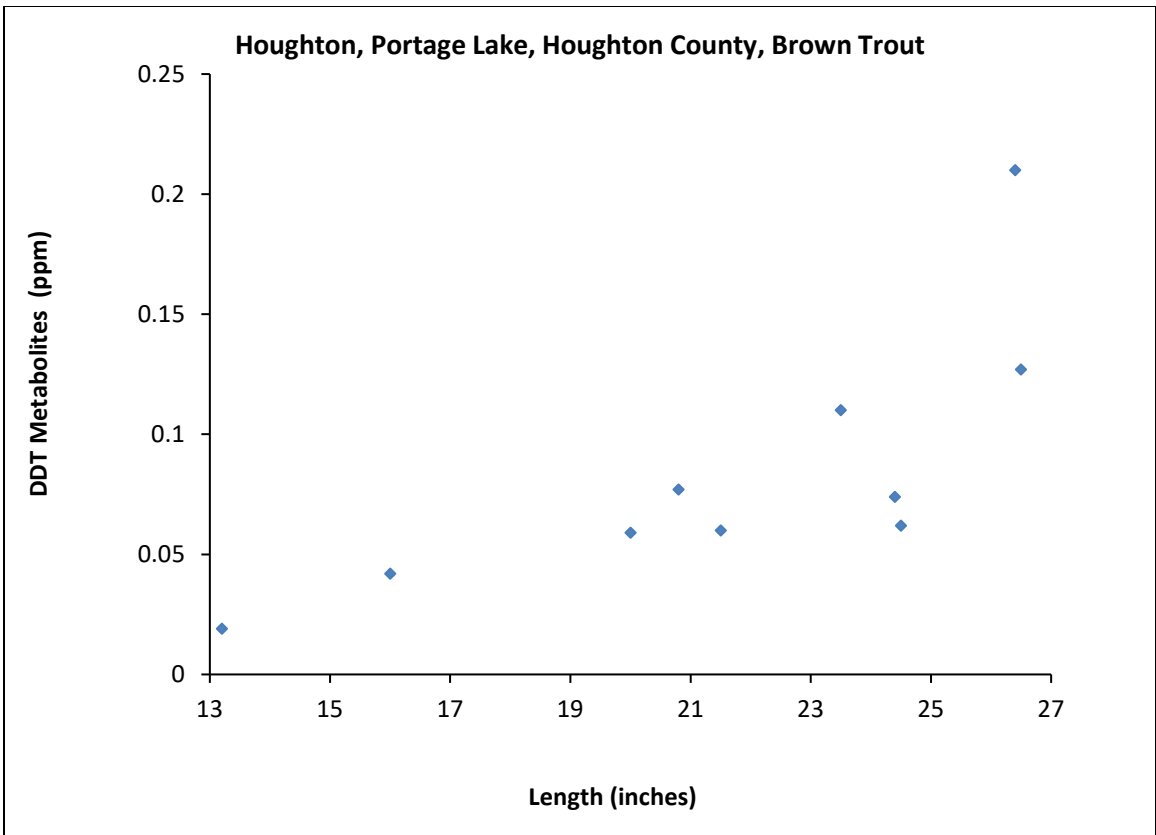
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	10	13.2	10	13.2	26.5
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	0.16	0.043	0.391	0.23	0.5
DDT	10	0.08	0.019	0.21	0.12	12
Chlordane	10	0.03	0.005	0.074	0.04	--
Toxaphene	10	0.18	0.05	0.35	0.25	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.546	0.761				
DDT	0.569	0.799				
Chlordane	0.530	0.737				
Toxaphene	0.402	0.367				
<b>Final meal category based on UCL:</b>						<b>0.5*</b>

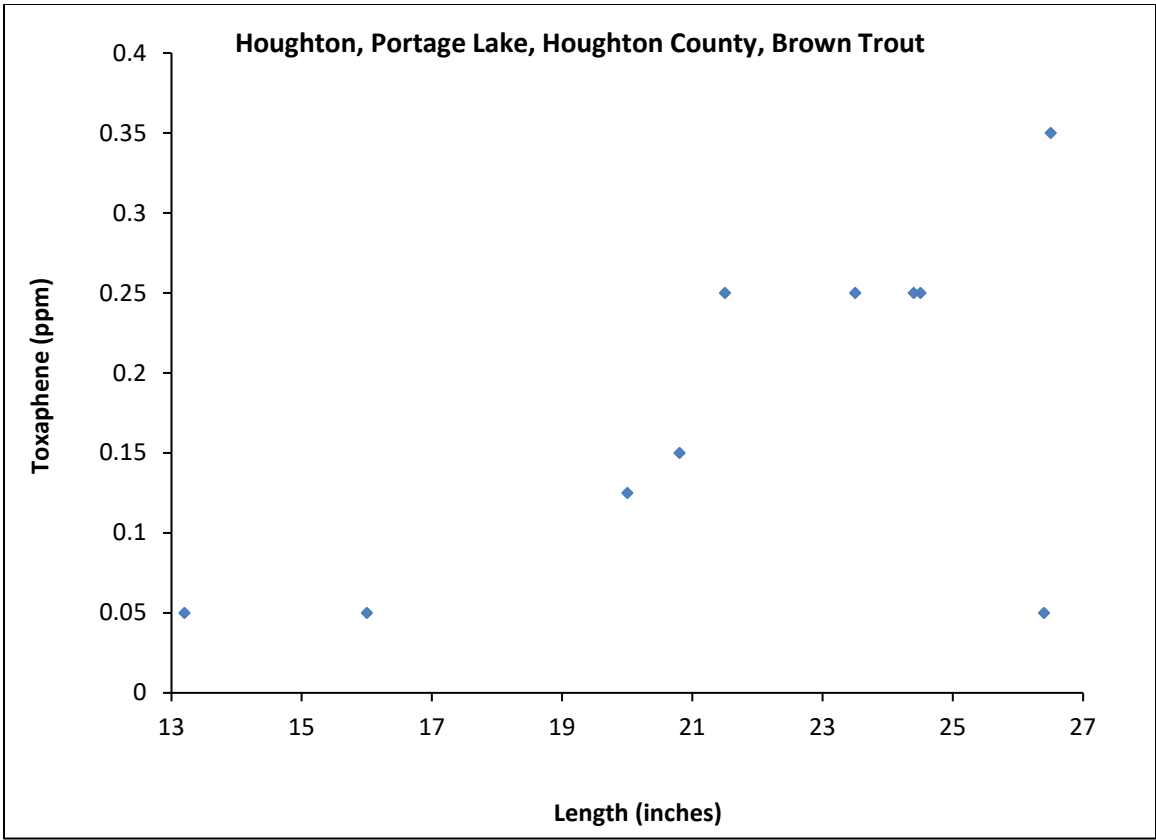
**Existing Advisory:** Women and children should not eat more than one meal per week of Portage Lake brown trout smaller than 22 inches and no more than one meal per month of brown trout larger than 22 inches due to PCBs.

**Recommendation:** No one should eat more than 2 meals per month of Portage Lake brown trout smaller than 20 inches due to mercury or more than 2 meals per month of those fish larger than 20 inches due to mercury and PCBs. DDT and toxaphene would cause advisories. The quality of this dataset is limited due to the age of the data. \*Based on the EGLE Fish Contaminant Monitoring Program, PCB, DDT, and toxaphene concentrations ≥15 years old are expected to have declined to concentrations that allow a less restrictive meal category.

Length (Inches)	PCB Regression Equation Estimate (ppm)	Meal Category*
13	0.04	4
15	0.05	4
17	0.07	2
19	0.09	2
20	0.11	2
21	0.12	1
23	0.16	1
25	0.20	1
27	0.26	0.5
<i>Shaded area denotes extrapolated estimates</i>		







**Northern Pike**

**Portage Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	9	19.6	24	23.5	37.5
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.27	0.16	0.43	0.40	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.181	0.182				

**Organics Analysis:**

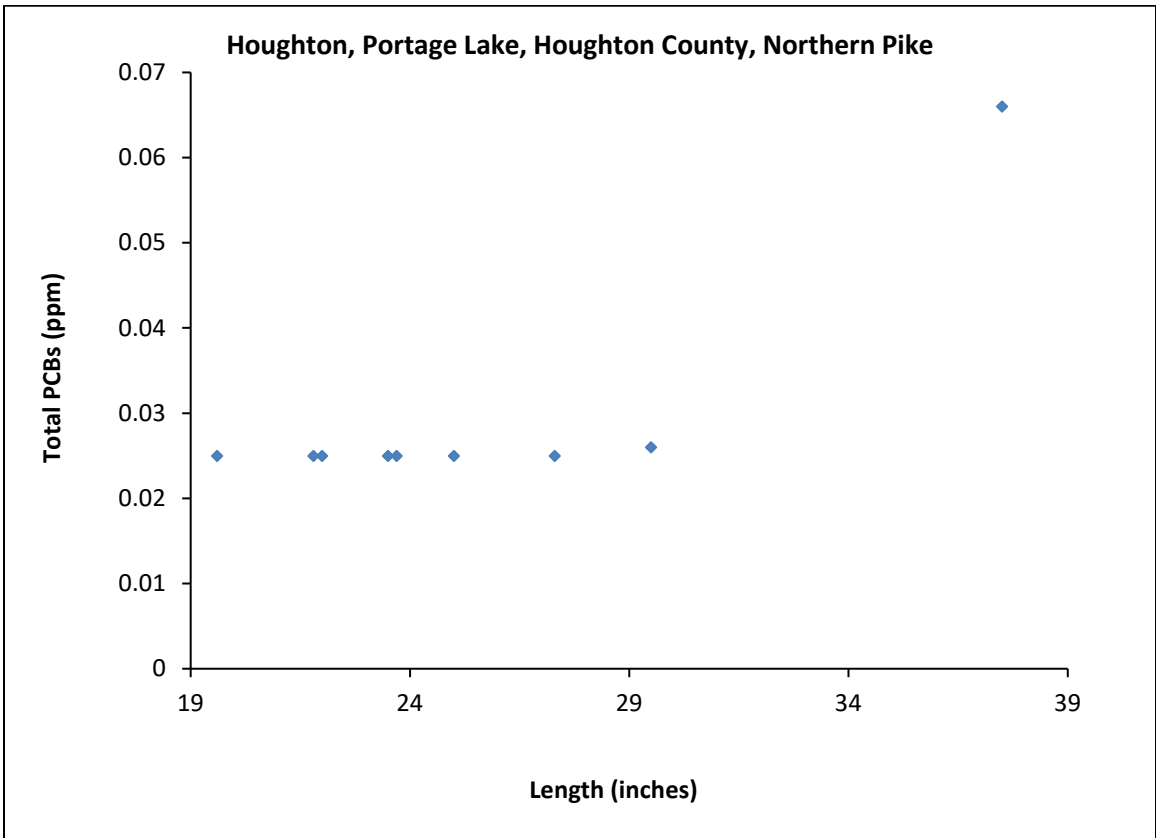
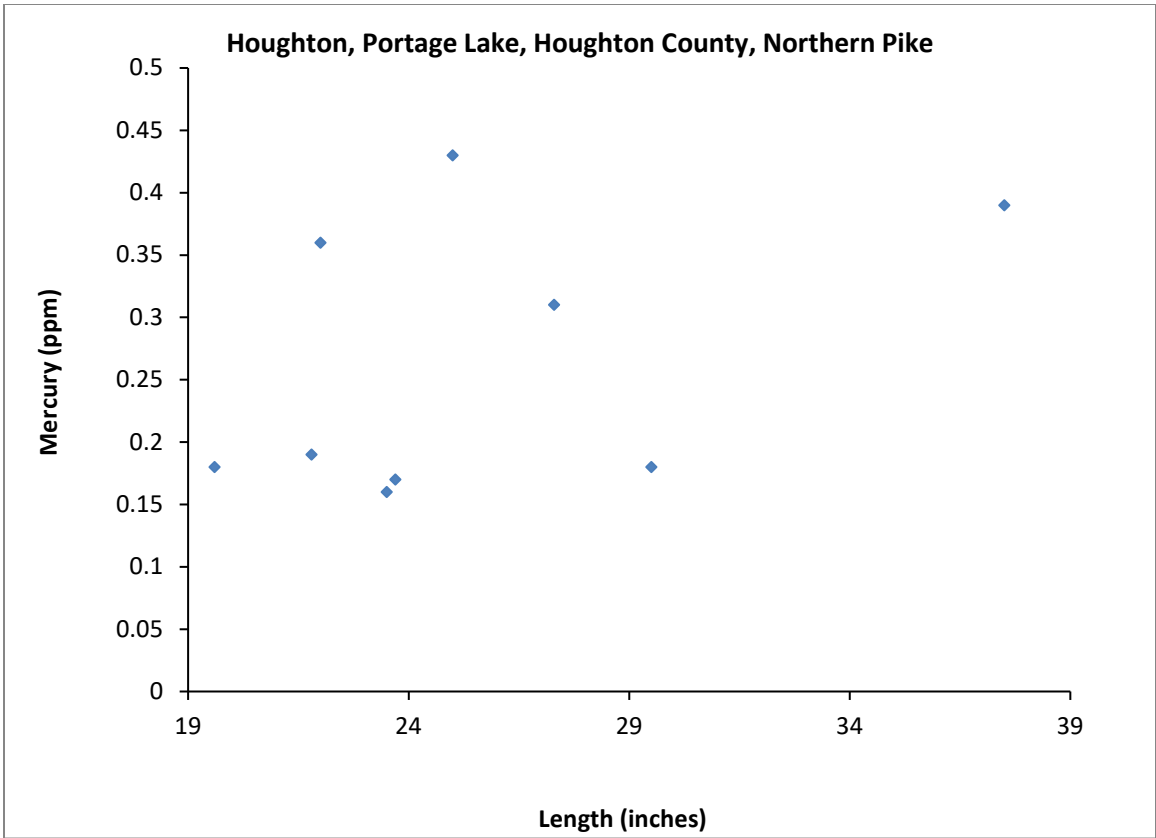
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	9	19.6	24	23.5	37.5
Datasets available: 1988						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	9	0.03	0.025	0.066	0.040	4
DDT	9	0.009	0.003	0.027	0.010	16
Chlordane	9	0.003	0.003	0.005	0.00	--
Toxaphene	9	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.710*	0.720*	*Regression not used, due to slopes for PCBs and chlordane are cause by one data point.			
DDT	0.859	0.736				
Chlordane	0.695*	0.695*				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

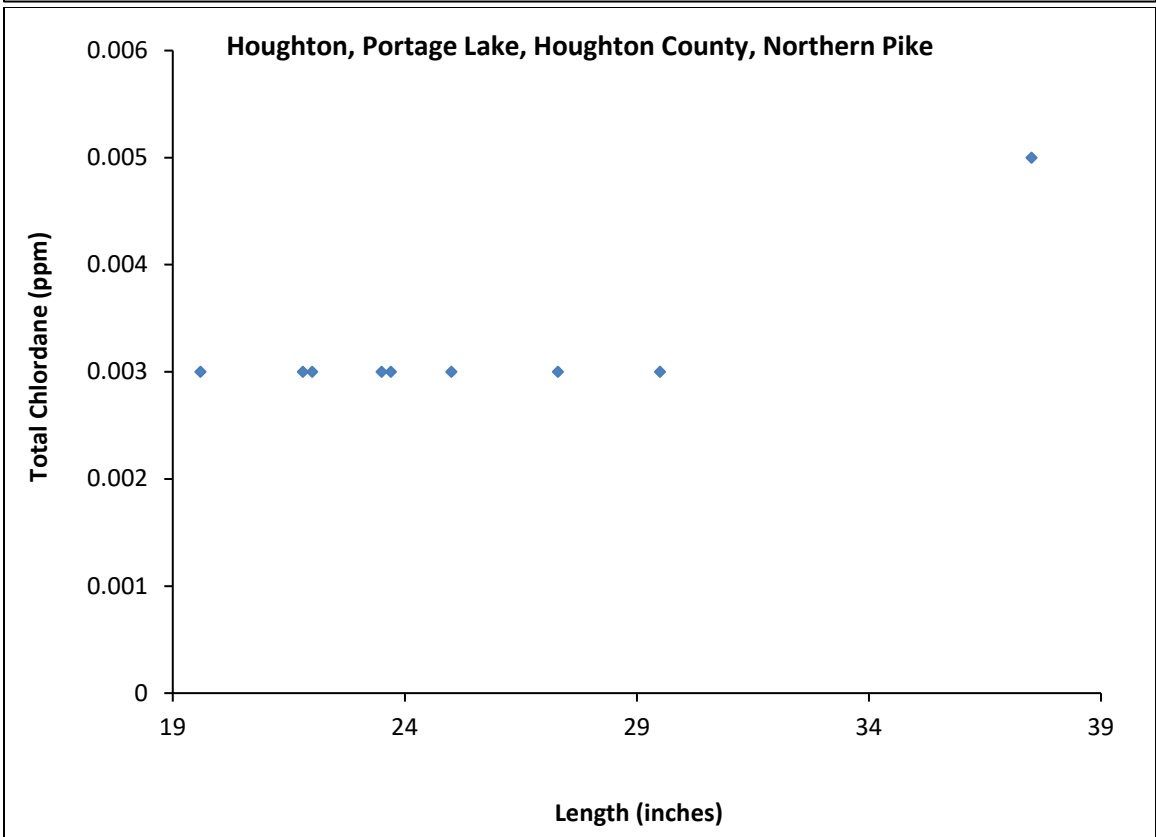
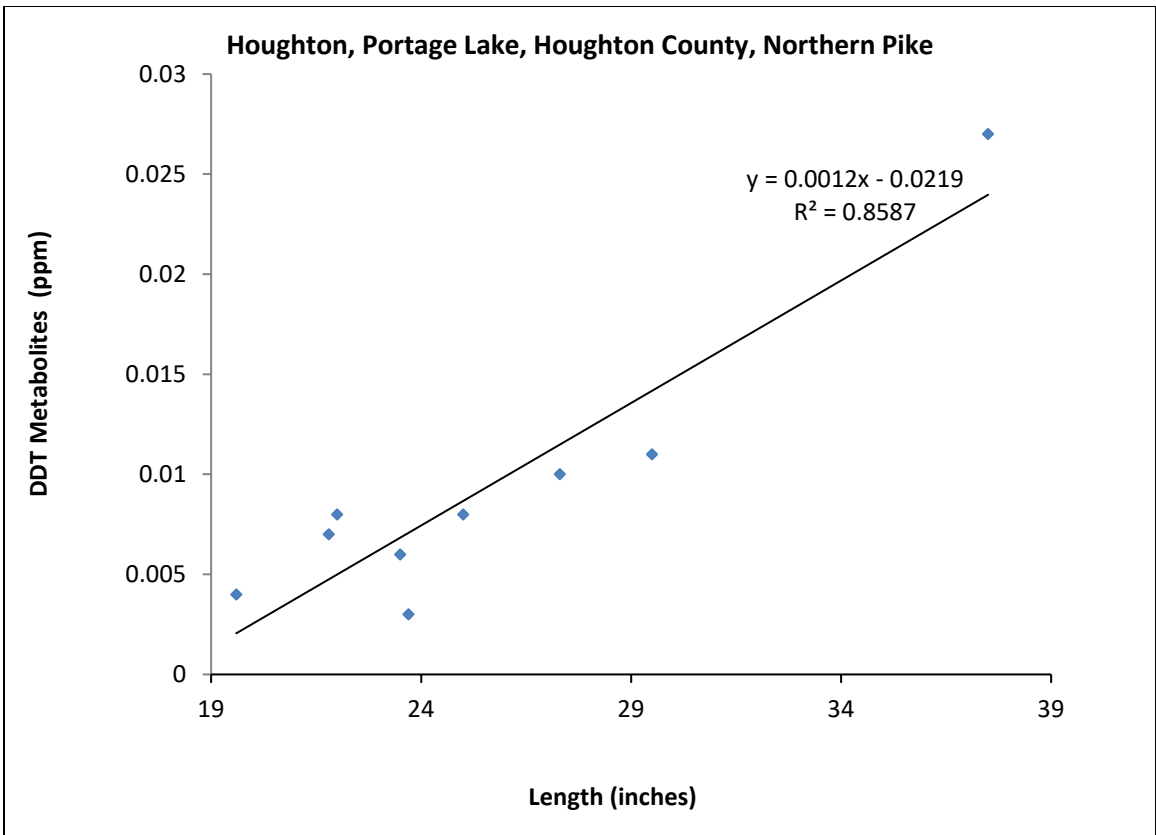
**Existing Advisory:** Portage Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Portage Lake northern pike due to mercury. PCBs would cause an advisory. Organics data is limited due to the age of the dataset.

Length (Inches)	DDT Regression Equation Estimate (ppm)	Meal Category
19	0.001	16
22	0.005	16
25	0.01	16
28	0.01	16
31	0.02	16
34	0.02	16
37	0.02	16
40	0.03	16
<i>Shaded area denotes extrapolated estimates</i>		







**Rainbow Smelt**

**Portage Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2021	2021	1*	3.8	NA	3.8	6.4
Datasets available: 2021						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	1*	0.051	--	--	--	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2021	2021	1*	3.8	NA	3.8	6.4
Datasets available: 2021						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	1*	0.002	--	--	--	16
DDT	1*	0.001	--	--	--	16
Chlordane	1*	ND	--	--	--	16
Toxaphene	1*	ND	--	--	--	--
PFOS	1*	22.5 ppb	--	--	--	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	--	--	<b>Final meal category based on mean PFOS: 4</b>			

\*A single composite sample of 20 headless and gutted smelt were analyzed from Portage Lake.

**Existing MDHHS Advisory:** Smelt from Portage Lake in Houghton County are not currently under any consumption guidance.

**Recommendation:** No one should eat more than 1 meal per month of smelt from Portage Lake in Houghton County due to PFOS. While the PFOS concentration in this sample corresponds to a 4 meal per month advisory, PFOS concentrations in rainbow smelt from Lake Superior correspond to an advisory of 1 meal per month. Smelt from Lake Superior can travel into Portage Lake through the Keweenaw Waterway. Therefore, the advisory for Portage Lake smelt was set to match the Lake Superior smelt guideline.

Additional samples should be collected from Portage Lake to determine if PFOS in smelt from this waterbody is lower compared to other Lake Superior waters.

**Walleye**

**Portage Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	2007	25	14.3	15	14.5	30
Datasets available: 1988, 1998, 2007						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	25	0.36	0.1	1.3	0.48	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.796	0.843				

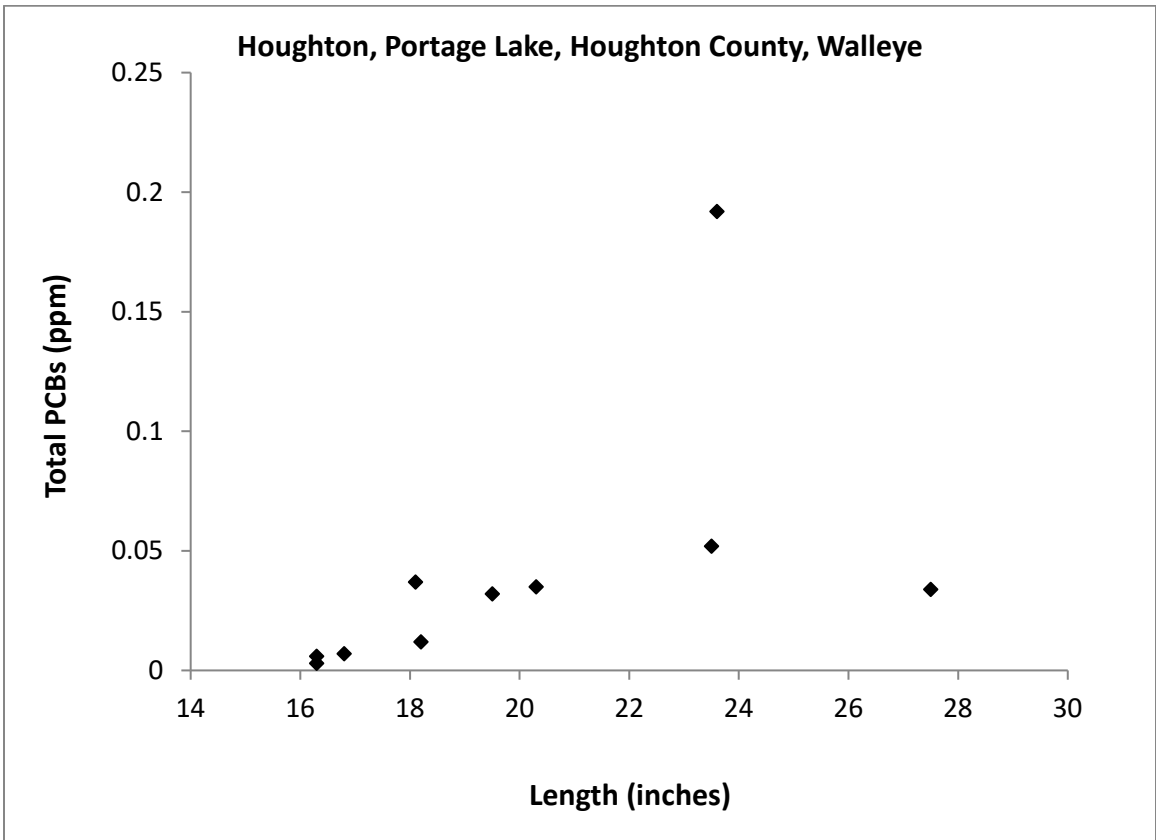
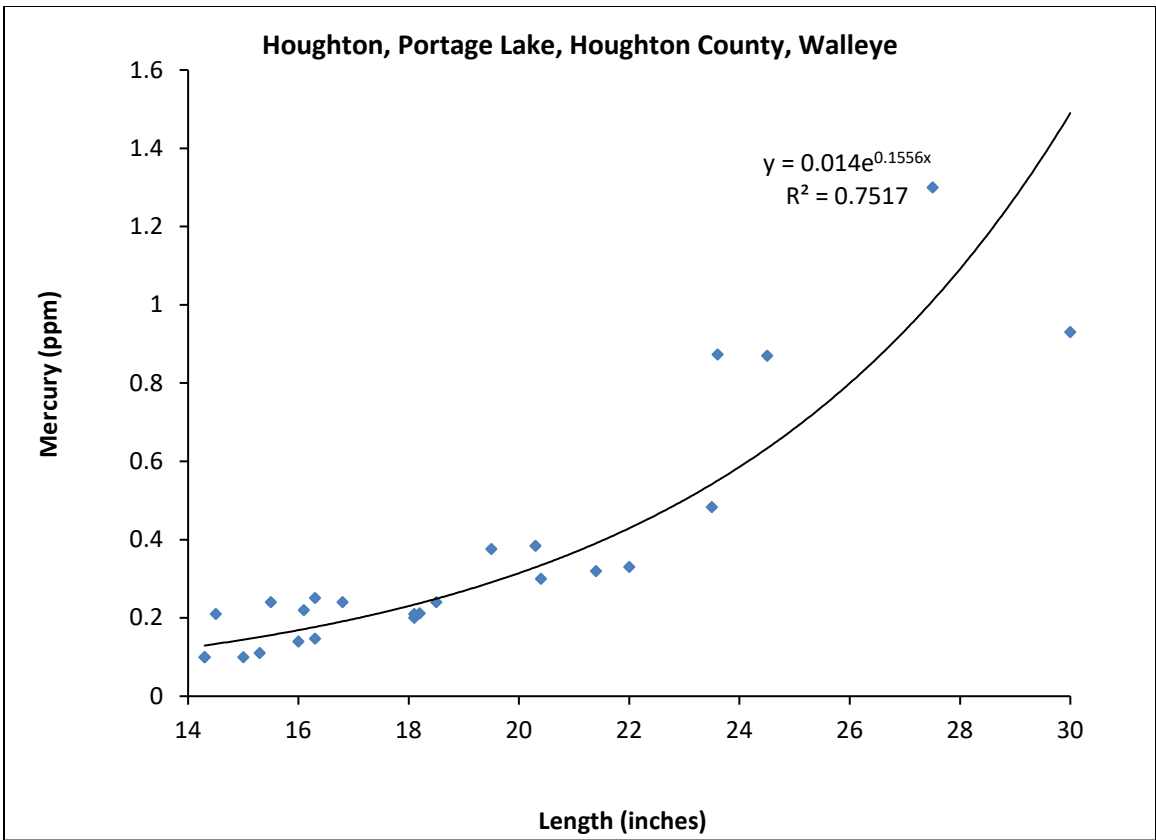
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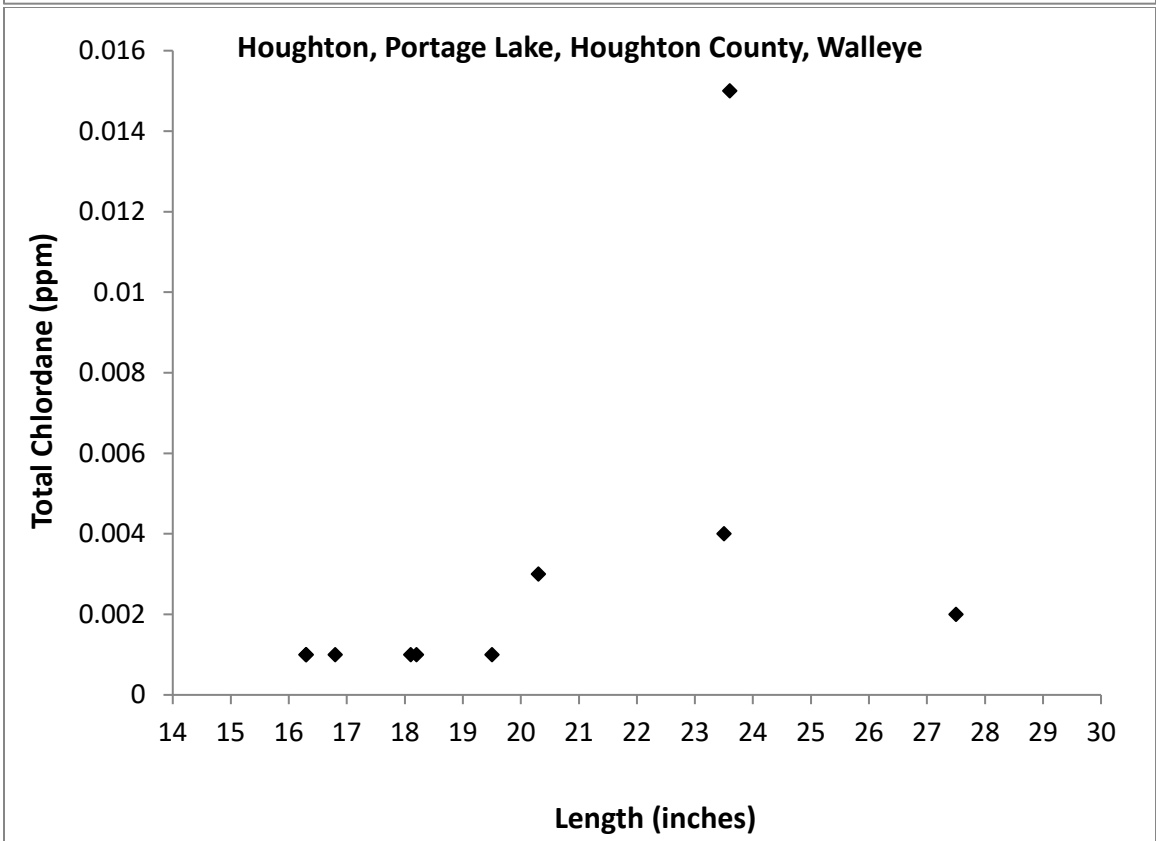
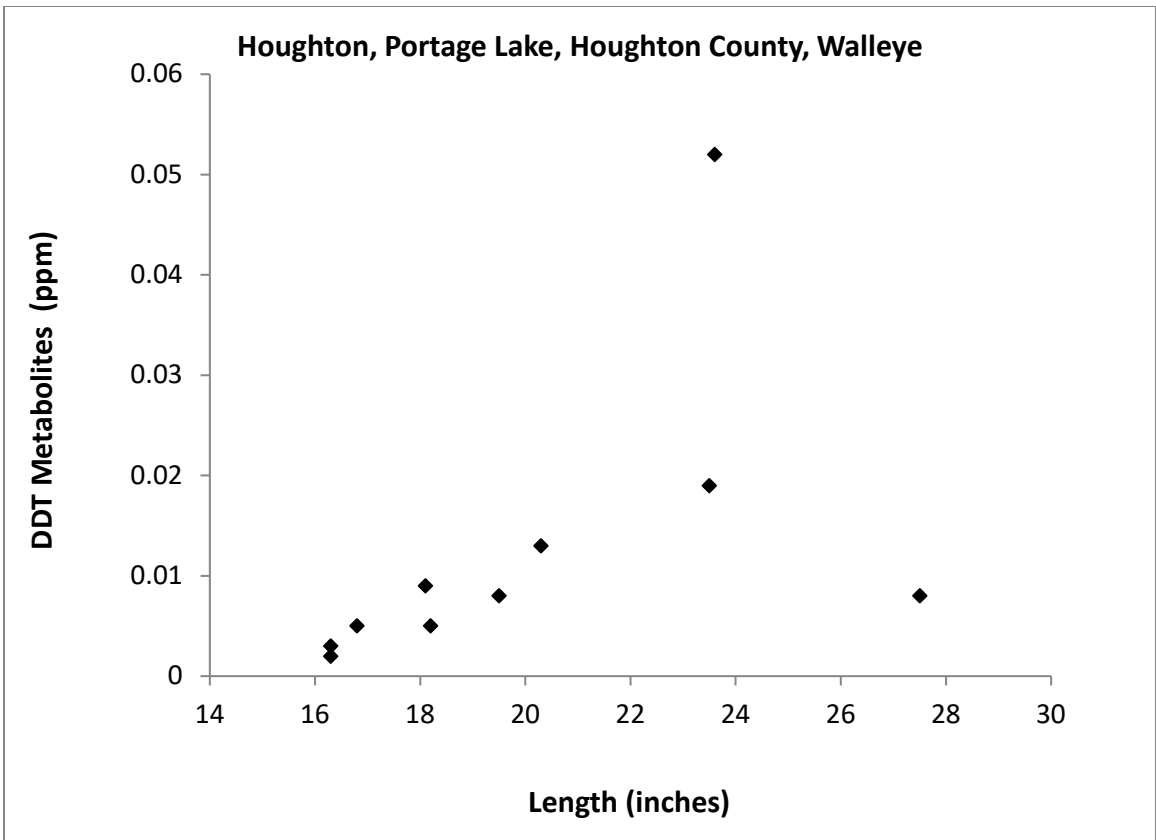
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2007	2007	10	16.3	15	16.3	27.5
Datasets available: 1988, 1998, 2007						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	0.041	0.003	0.19	0.08	2
DDT	10	0.012	0.002	0.05	0.02	16
Chlordane	10	0.003	0.001	0.02	0.01	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.338	0.355				
DDT	0.419	0.617				
Chlordane	0.371	0.317				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Women and children should not eat more than one meal per month of Portage Lake walleye over 22 inches due to mercury and PCBs.

**Recommendation:** No one should eat more than 2 meals per month of Portage Lake walleye less than 24 inches due to mercury and PCBs, 1 meal per month of walleye between 24 and 28 inches, or 6 meals per year greater than 28 inches.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
14	0.12	8
16	0.17	4
18	0.23	4
20	0.31	2
22	0.43	2
24	0.59	1
26	0.80	1
27	0.93	1
28	1.1	1
29	1.28	0.5
30	1.49	0.5
<i>Shaded area denotes extrapolated estimates</i>		





**White Sucker**

**Portage Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1998	1998	1	16.4	na	16.4	16.4
Datasets available:		1998				
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	1	0.12	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1998	1998	1	16.4	na	16.4	16.4
Datasets available:		1998				
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	1	ND	--	--	--	--
DDT	1	0.009	0.009	0.009	--	--
Chlordane	1	ND	--	--	--	--
Toxaphene	1	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** There are no current consumption advisories for Portage Lake white sucker.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. The statewide guidelines apply. No one should eat more than 8 meals per month of sucker from inland waters.

**Northern Pike**

**Rice Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1991	1991	5	20.2	NA*	20.2	23.4
Datasets available: 1991						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	5	0.15	0.13	0.18	0.17	4
Chemical	Linear Regression	Exponential Regression	*There is no size limit on Rice Lake (Houghton County) northern pike.			
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.691	0.645				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1991	1991	5	20.2	NA*	20.2	23.4
Datasets available: 1991						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	5	ND	--	--	--	--
DDT	5	0.003	0.003	0.004	0.000	16
Chlordane	5	ND	--	--	--	--
Toxaphene	5	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression	*There is no size limit on Rice Lake (Houghton County) northern pike.			
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	0.182	0.182				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

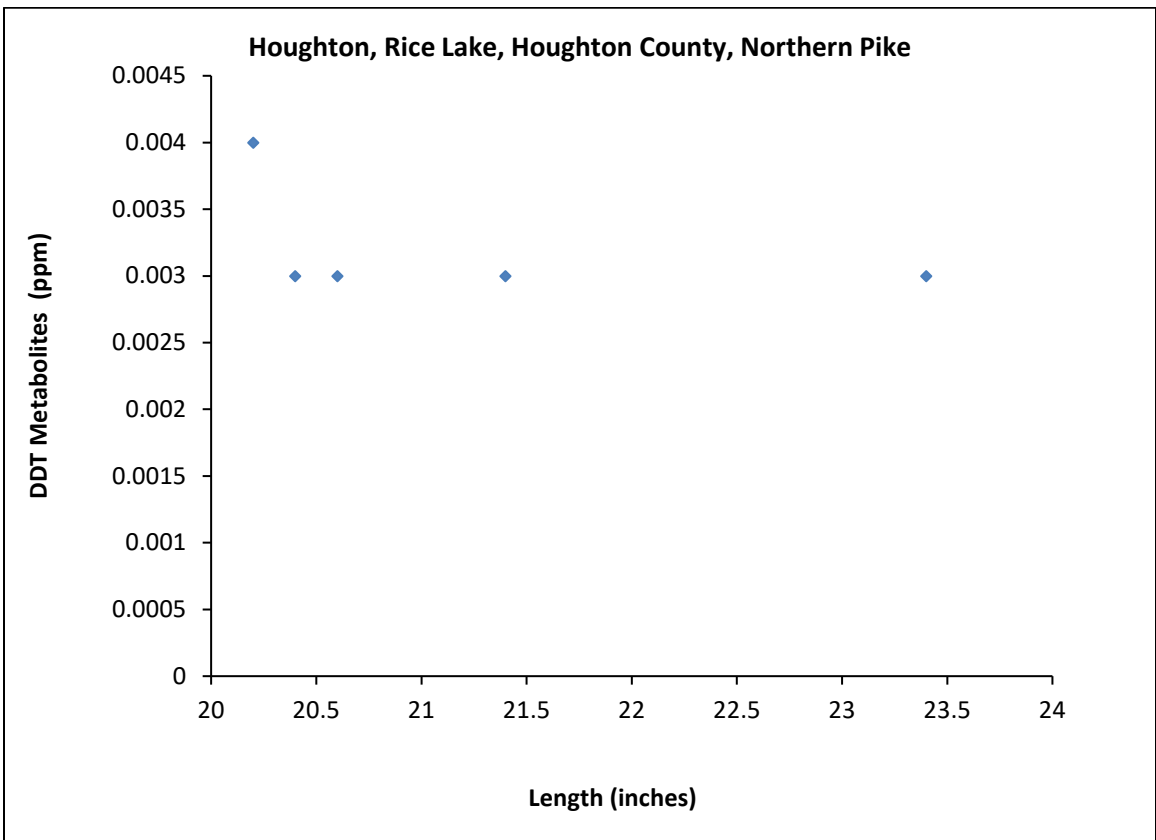
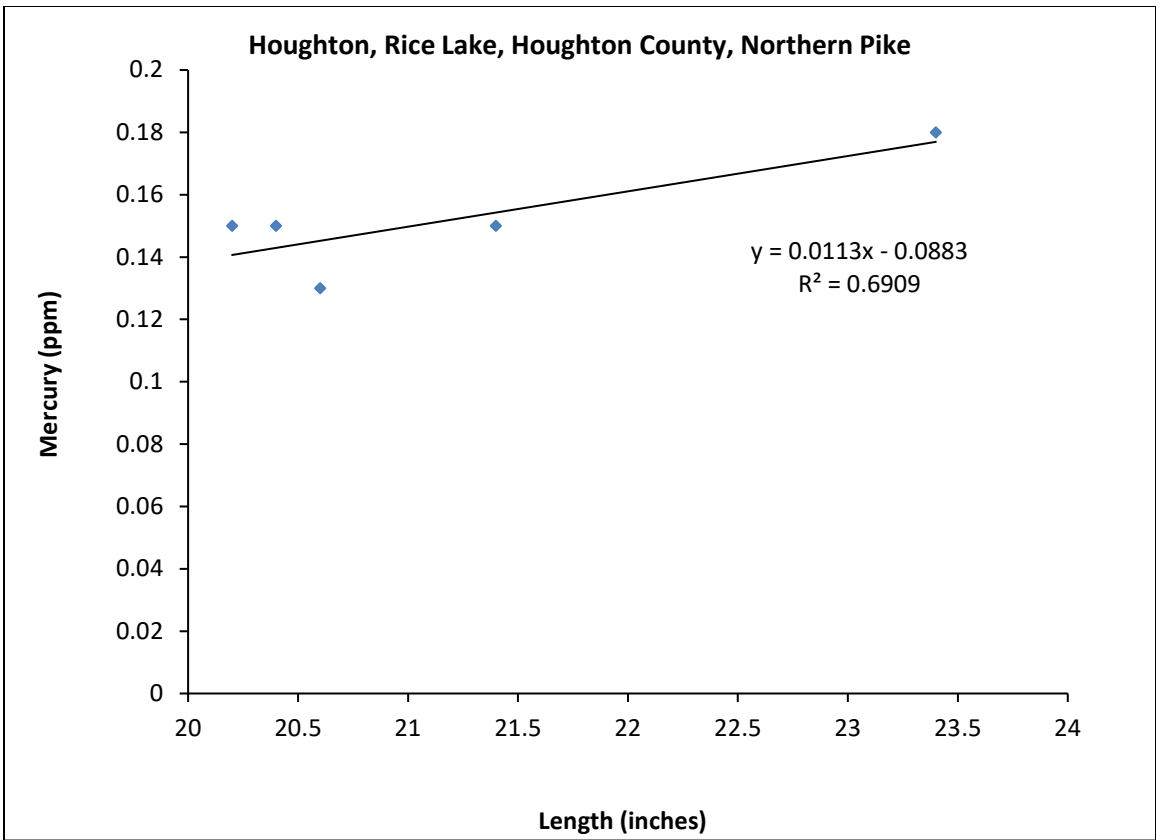
**Existing Advisory:** Rice Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 4 meals per month of Rice Lake northern pike smaller than 24 inches or more than 2 meals per month of those fish larger than 24 inches due to mercury. Length break based on regression estimates was applied as the size range of the fish was limited.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
20	0.14	4
21	0.15	4
22	0.16	4
23	0.17	4
24	0.18	4
25	0.19	4
26	0.21	4
27	0.22	4
28	0.23	4

*Shaded area denotes extrapolated estimates*





**Walleye**

**Rice Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1991	1991	6	15.1	15	15.1	26.5
Datasets available: 1991						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.39	0.11	0.8	0.70	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.964	0.857				

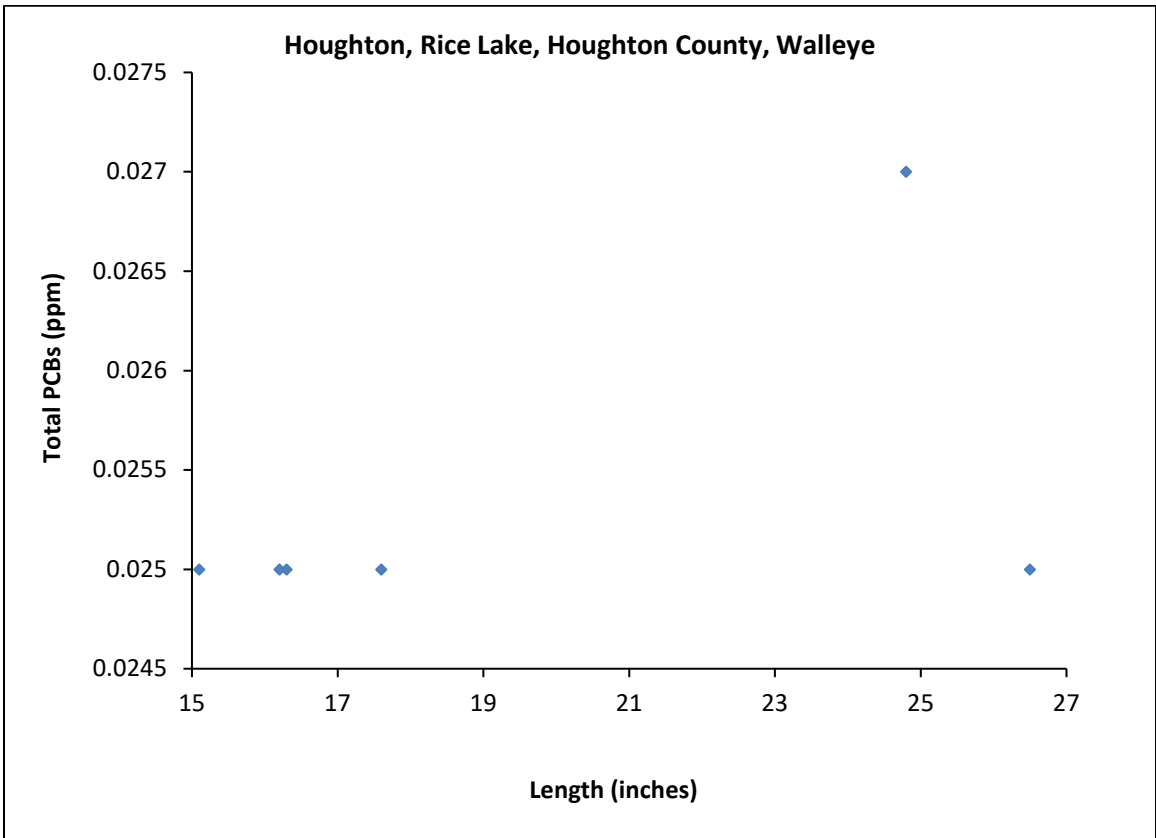
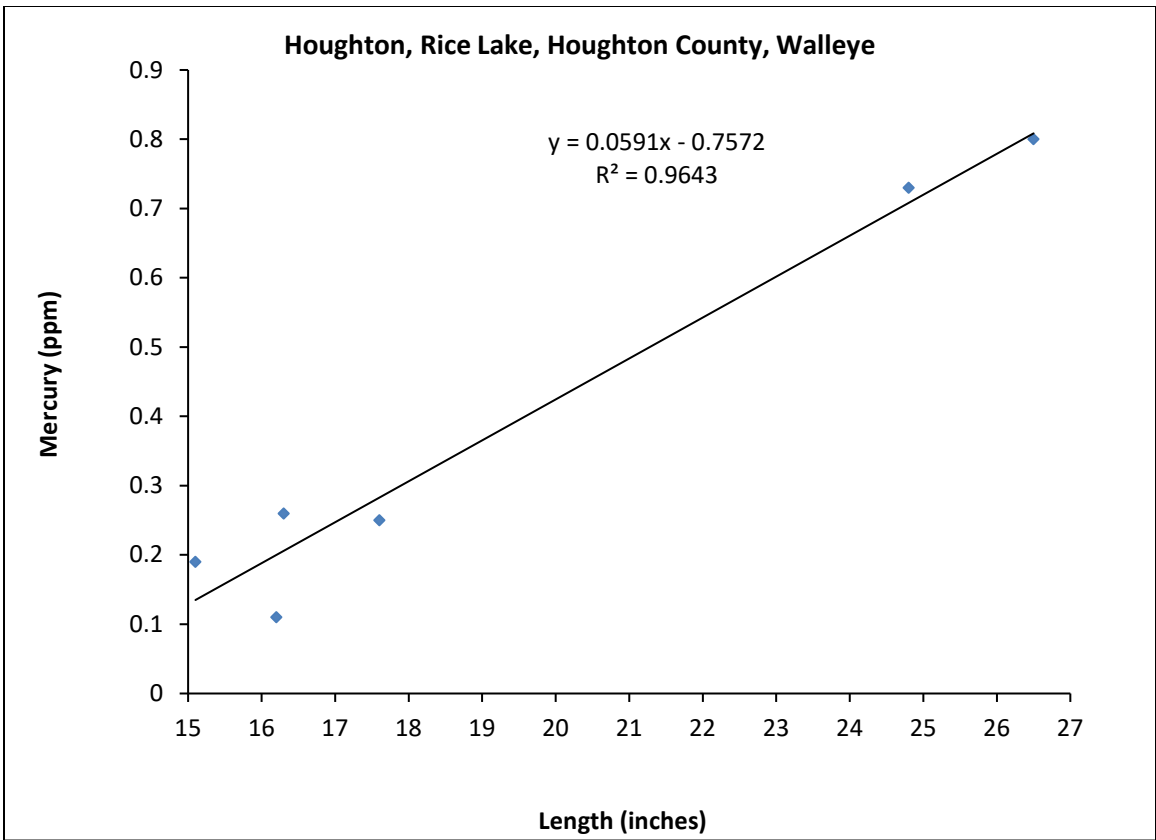
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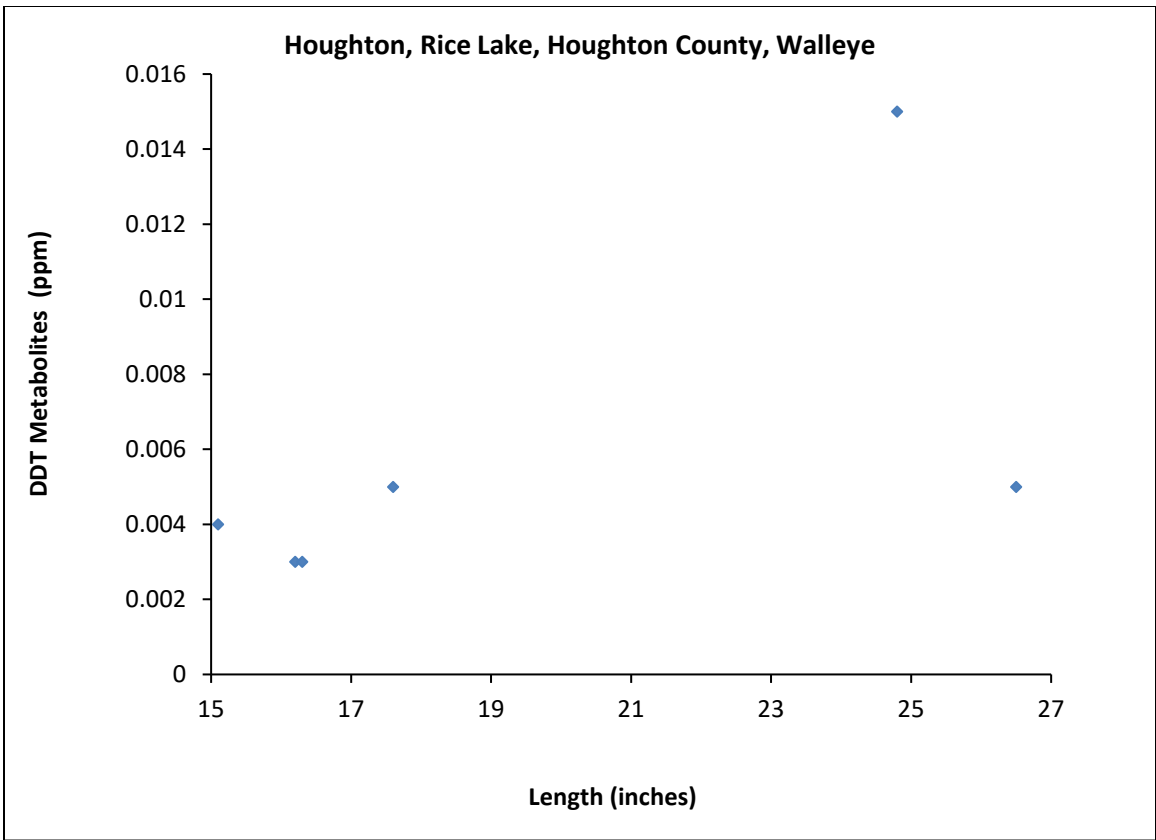
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1991	1991	6	15.1	15	15.1	26.5
Datasets available: 1991						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	6	0.025	0.025	0.027	0.03	8
DDT	6	0.006	0.003	0.015	0.01	16
Chlordane	6	ND	--	--	--	--
Toxaphene	6	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.287	0.287				
DDT	0.395	0.476				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Rice Lake walleye are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Rice Lake walleye smaller than 22 inches or more than 1 meal per month of those fish larger than 22 inches due to mercury. Organics data is limited due to the age of the data.

Length (Inches)	Regression Equation Estimate (ppm)	Meal Category
15	0.13	8
16	0.19	4
17	0.25	4
18	0.31	2
20	0.42	2
21	0.48	2
22	0.54	1
25	0.72	1
27	0.84	1
<i>Shaded area denotes extrapolated estimates</i>		





**Rock Bass**

**Roland Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	8	7.3	NA	7.3	8.3
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	8	0.26	0.17	0.48	0.37	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.739	0.779				

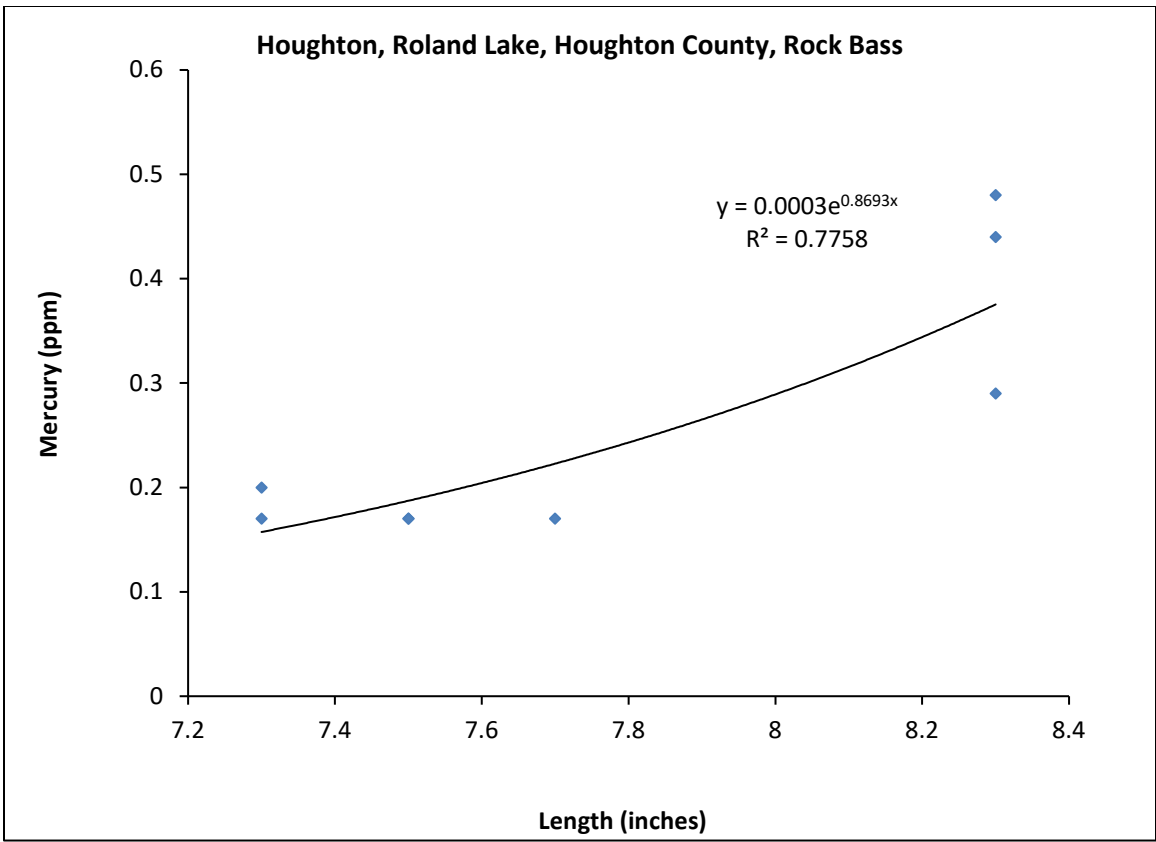
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Roland Lake rock bass are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Roland Lake rock bass smaller than 9 inches or more than 1 meal per month of those fish larger than 9 inches due to mercury. Length break was added based on the regression and due to the limited range of lengths.

Length (Inches)	Regression Equation Estimate (ppm)	Meal Category
7	0.13	4
8	0.31	2
9	0.75	1
<i>Shaded area denotes extrapolated estimates</i>		



**Smallmouth Bass**

**Roland Lake**

**Houghton County**

**Hg Analysis:**

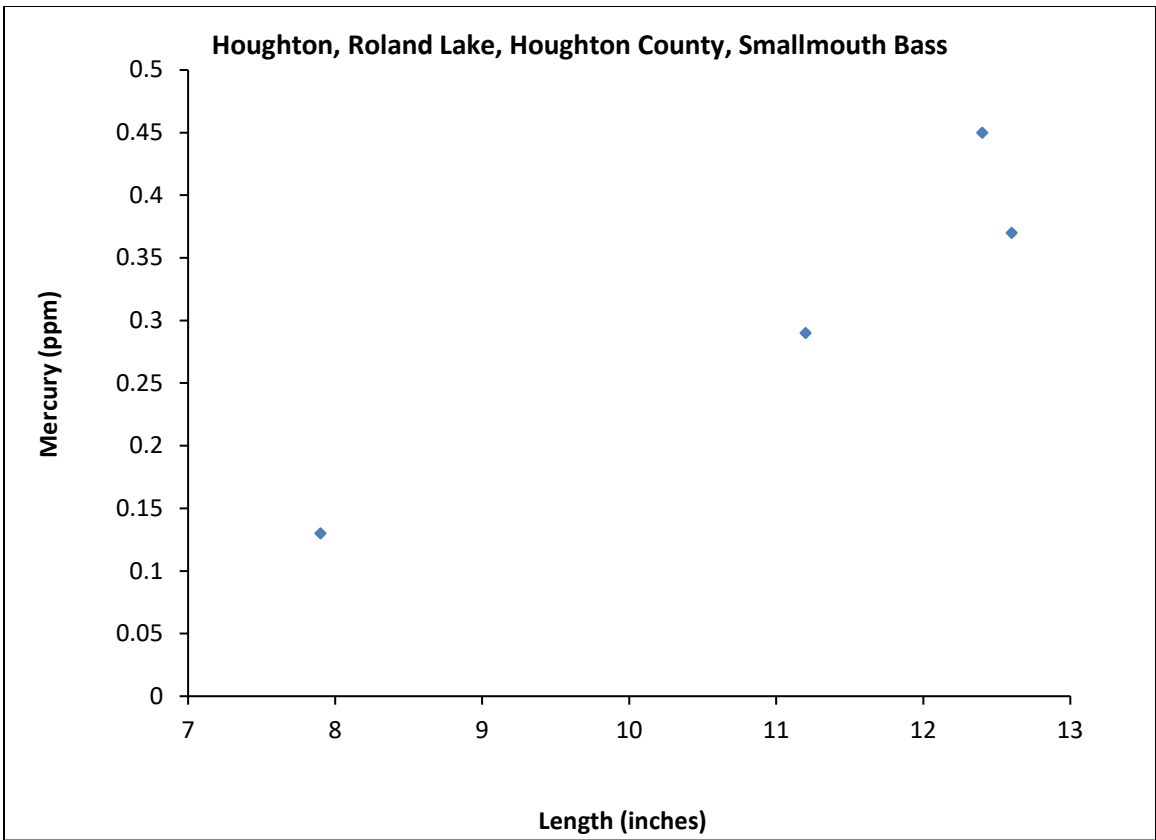
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of All Samples	
Earliest	Most Recent				Min	Max
1988	1988	4	7.9	14	7.9	12.6
Datasets available:		1988				
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	4	0.31	0.13	0.45	0.53	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.902	0.966				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	4	7.9	14	7.9	12.6
Datasets available:		1988				
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB						
DDT						
Chlordane						
Toxaphene						
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Roland Lake smallmouth bass are covered under the statewide mercury advisory.

**Recommendation:** The size range of fish in this sample set is limited. The statewide guidelines apply: No one should eat more than 2 meals per month of Roland Lake largemouth or smallmouth bass smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches.





**Bluegill**

**Six Mile Lake**

**Houghton & Ontonagon  
Counties**

**Hg Analysis:**

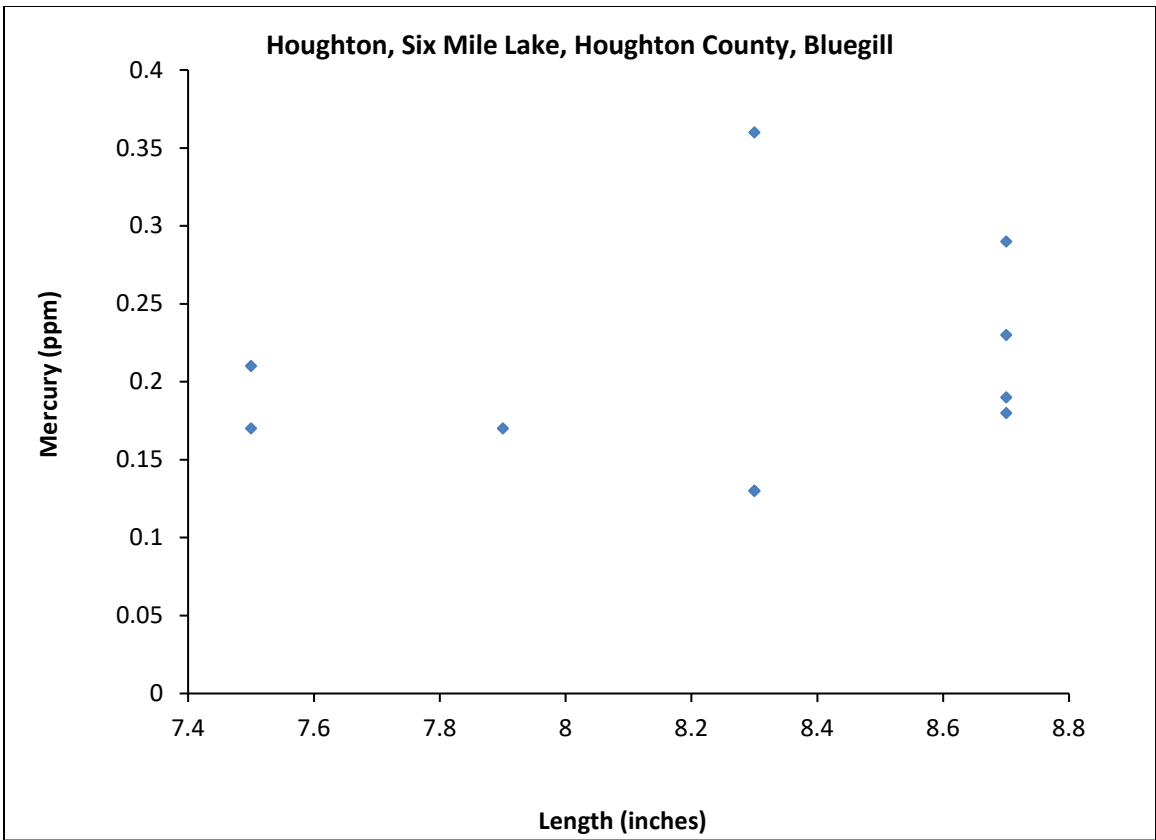
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1995	1995	10	7.5	NA	7.5	8.7
Datasets available: 1995						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.21	0.13	0.36	0.26	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.046	0.043				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

**Existing Advisory:** Six Mile Lake bluegill have no existing advisory.

**Recommendation:** No one should eat more than 4 meals per month of Six Mile Lake bluegill or other sunfish due to mercury.



**Walleye**

**Six Mile Lake**

**Houghton & Ontonagon  
Counties**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1995	1995	5	15.4	15	15.4	17.3
Datasets available: 1995						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	5	0.63	0.46	0.75	0.77	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.908	0.939				

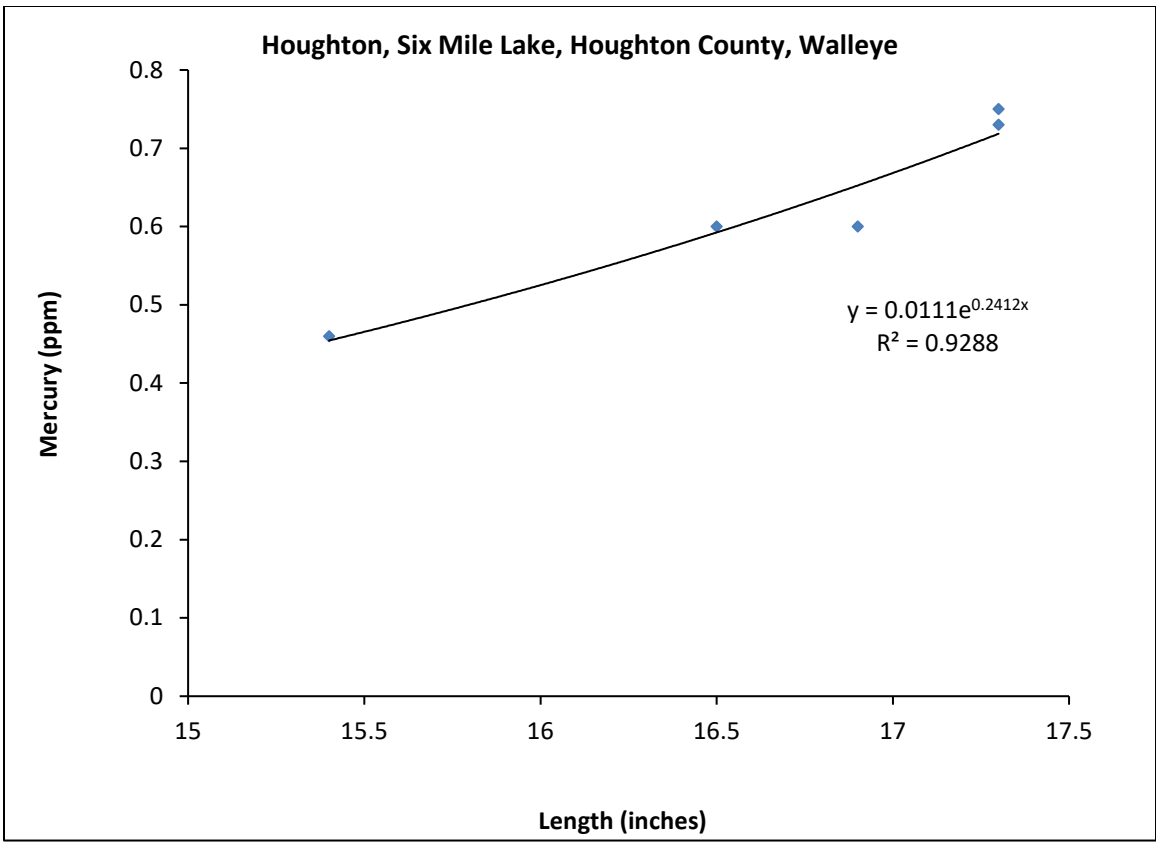
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Six Mile Lake walleye are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meals per month of Six Mile Lake walleye smaller than 20 inches or more than 6 meals per year of those fish larger than 20 inches. Statewide length break applied as size range and number of fish in this sample set is limited.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
15	0.41	2
16	0.53	2
17	0.67	1
18	0.85	1
<i>Shaded area denotes extrapolated estimates</i>		



**Northern Pike**

**Torch Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	2013	39	18	24	24	36.1
Datasets available: 1988, 2000, 2007, 2013						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	31	0.39	0.15	0.76	0.46	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.454	0.460				

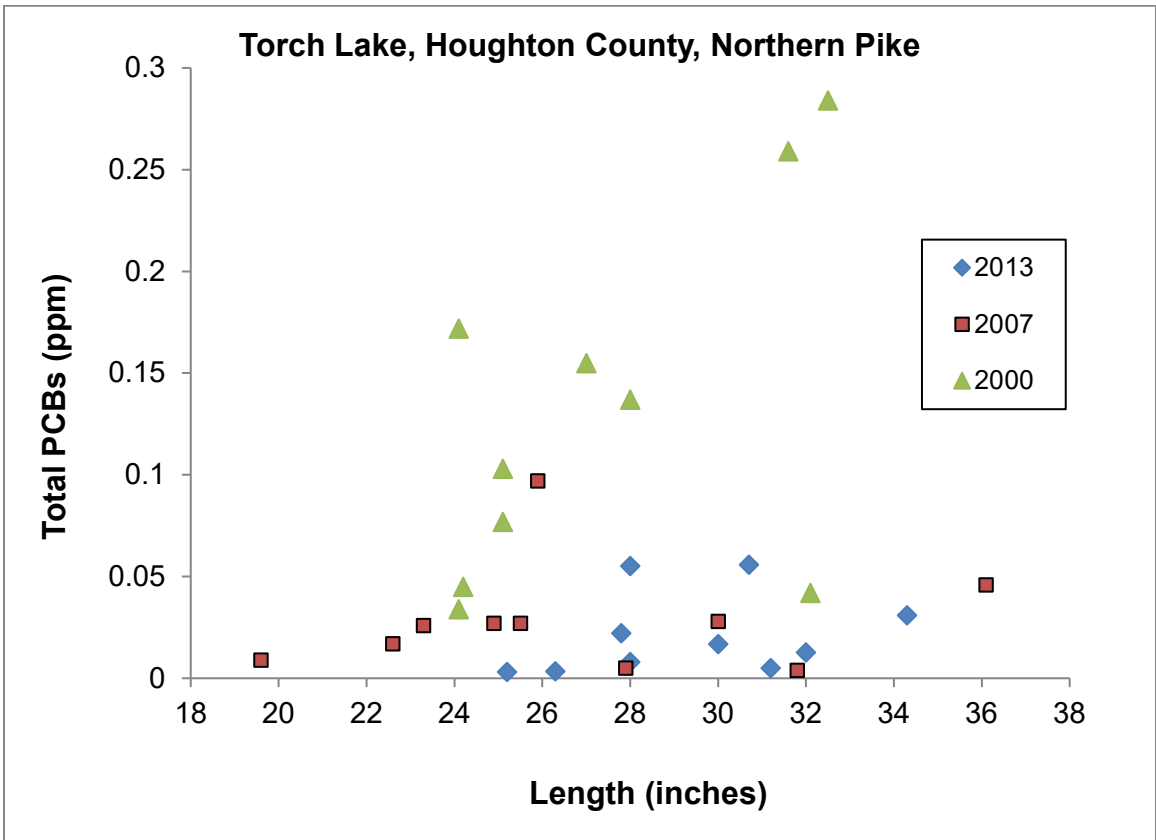
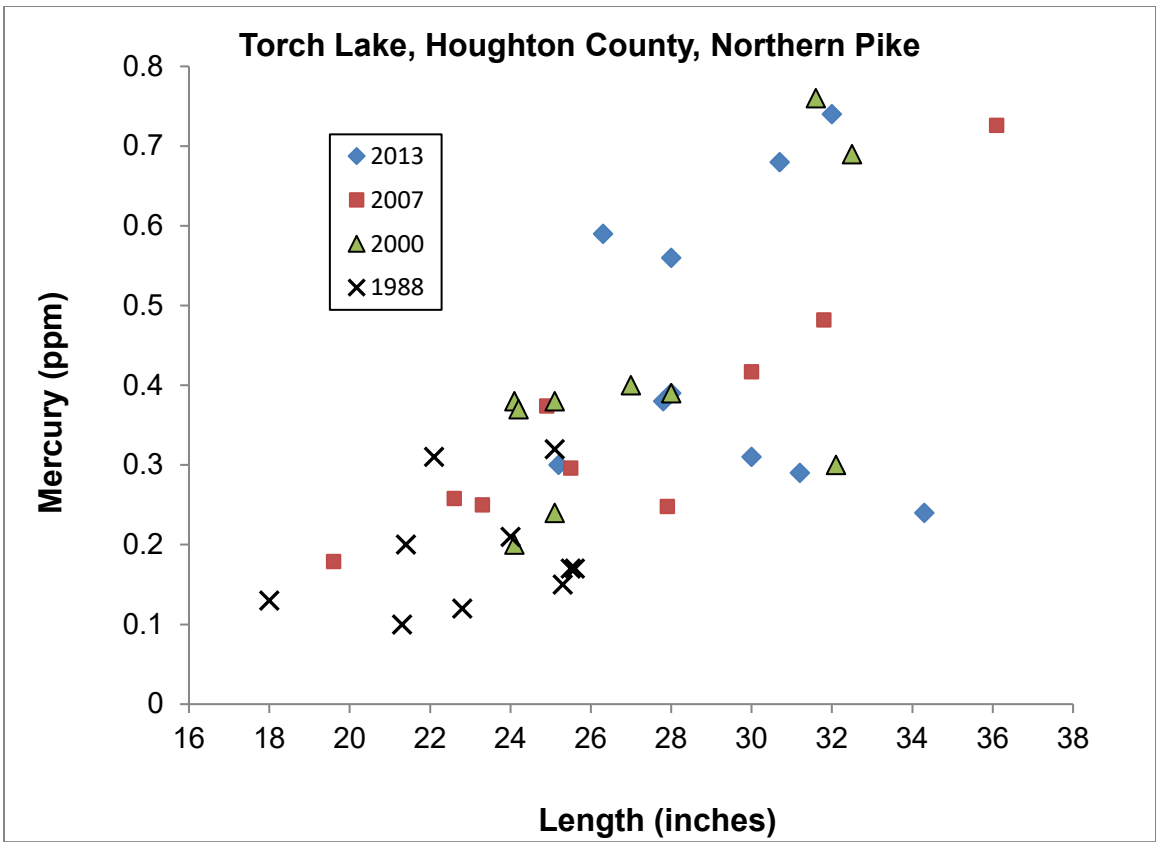
**Organics Analysis:**

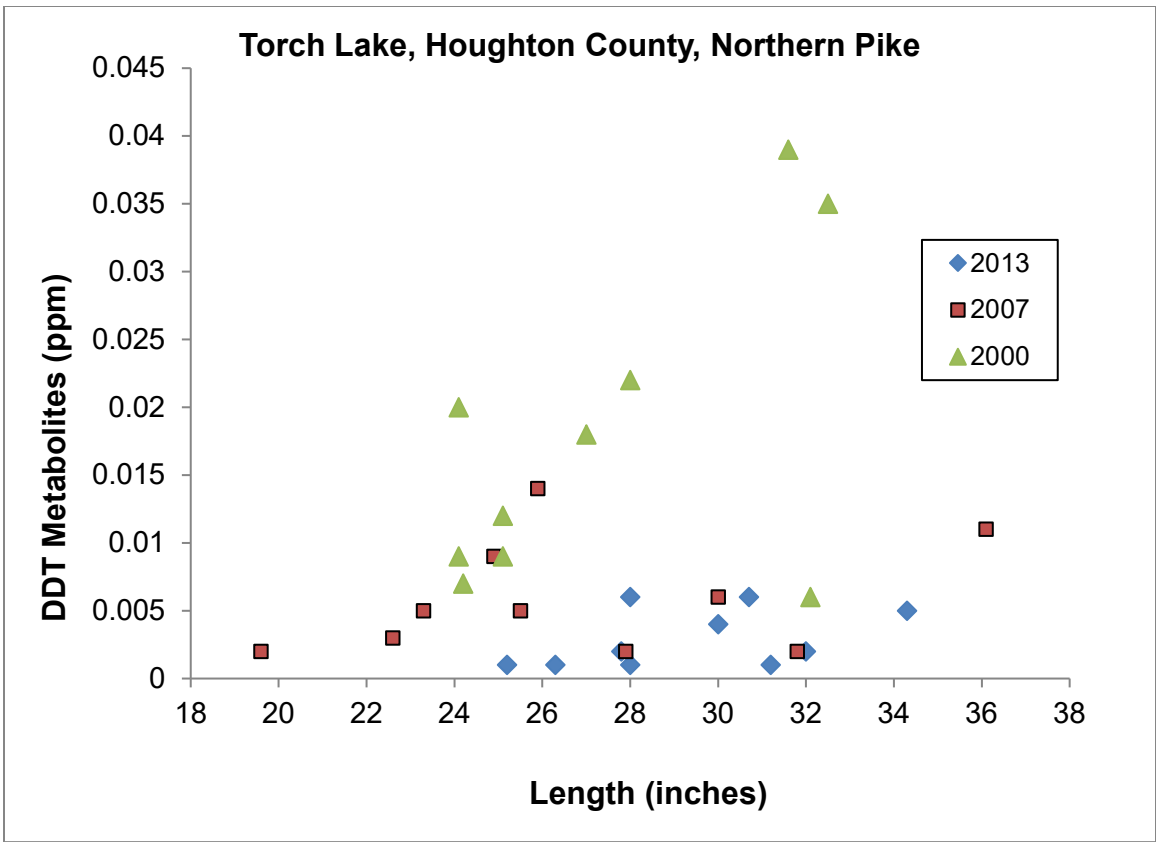
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2000	2013	30	19.6	24	24	36.1
Datasets available: 1988, 2000, 2007, 2013						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	27	0.065	0.003	0.28	0.10	2*
DDT	27	0.009	0.001	0.04	0.01	16
Chlordane	27	ND	--	--	--	--
Toxaphene	27	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.024	0.007				
DDT	0.033	0.009				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** No one should eat more than 1 meal per month of Torch Lake northern pike due to PCBs

**Recommendation:** No one should eat more than 2 meals per month of Torch Lake northern pike due to PCBs and mercury.

\* PCB concentrations have declined since 2000. Based only on 2007 and 2013 PCB results advice would be 4 meals per month.





**Smallmouth Bass**

**Torch Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	2013	32	12.9	14	13.7	18.9
Datasets available: 1988, 2000, 2013						
Chemical	Sample Size (Legal)	Mean Conc. (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	28	0.38	0.11	0.95	0.46	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.464	0.413				

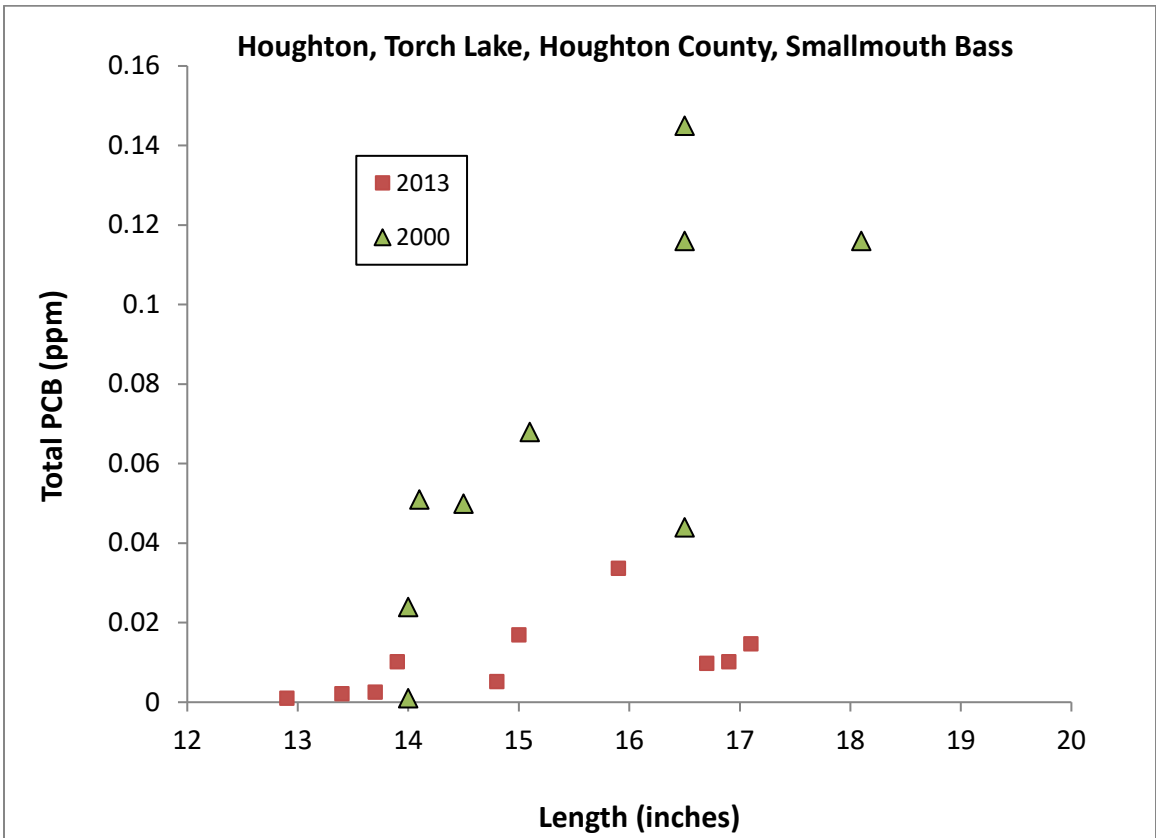
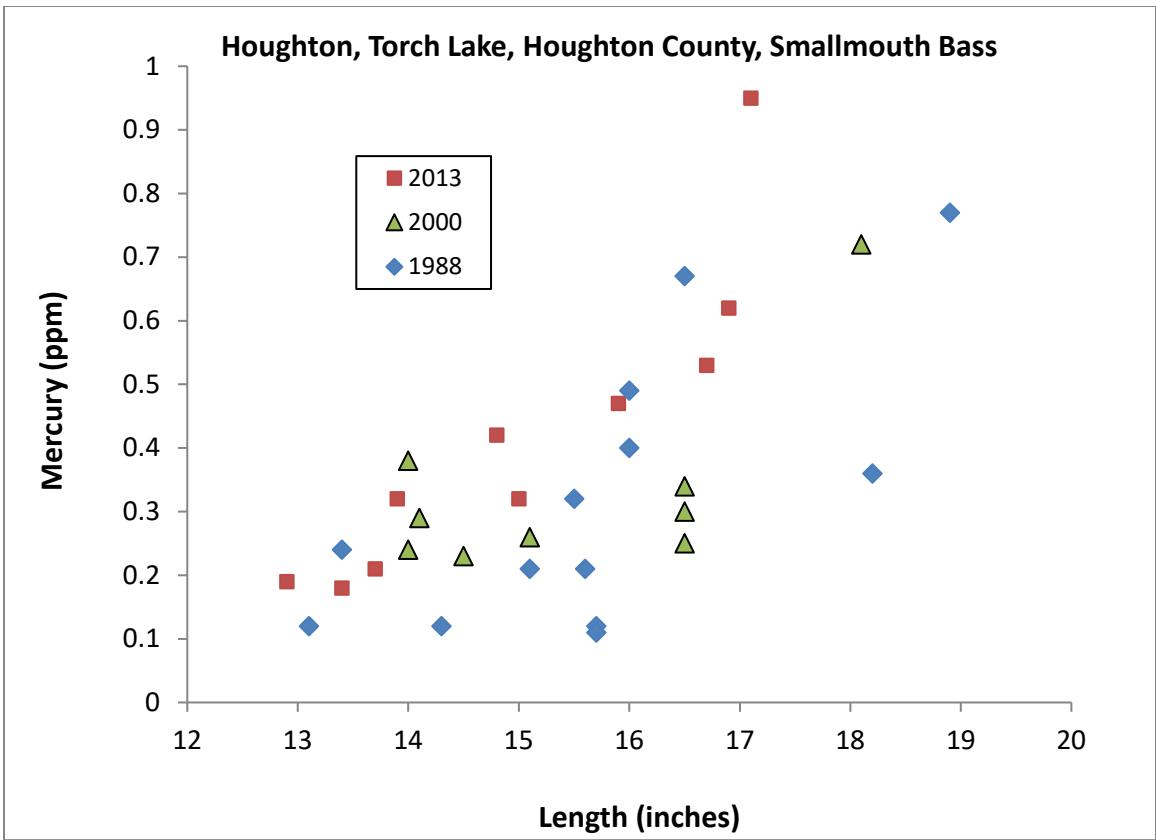
**Organics Analysis:**

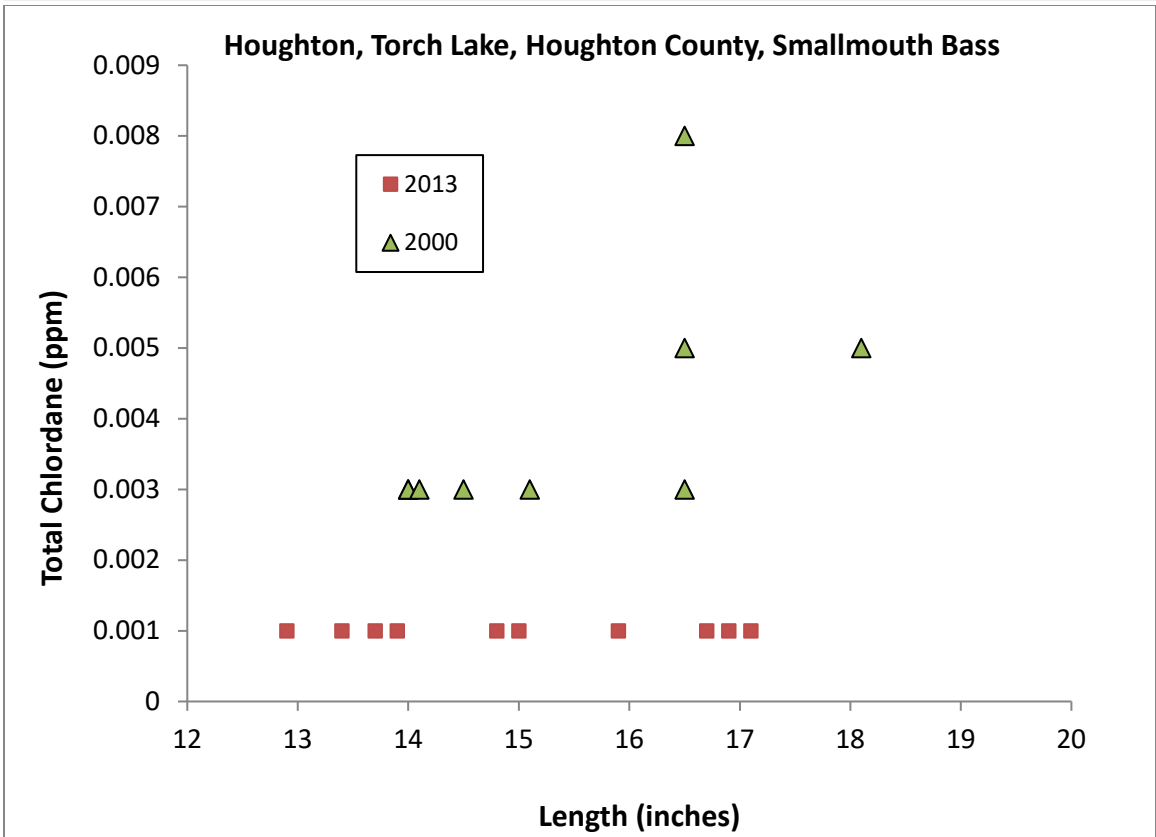
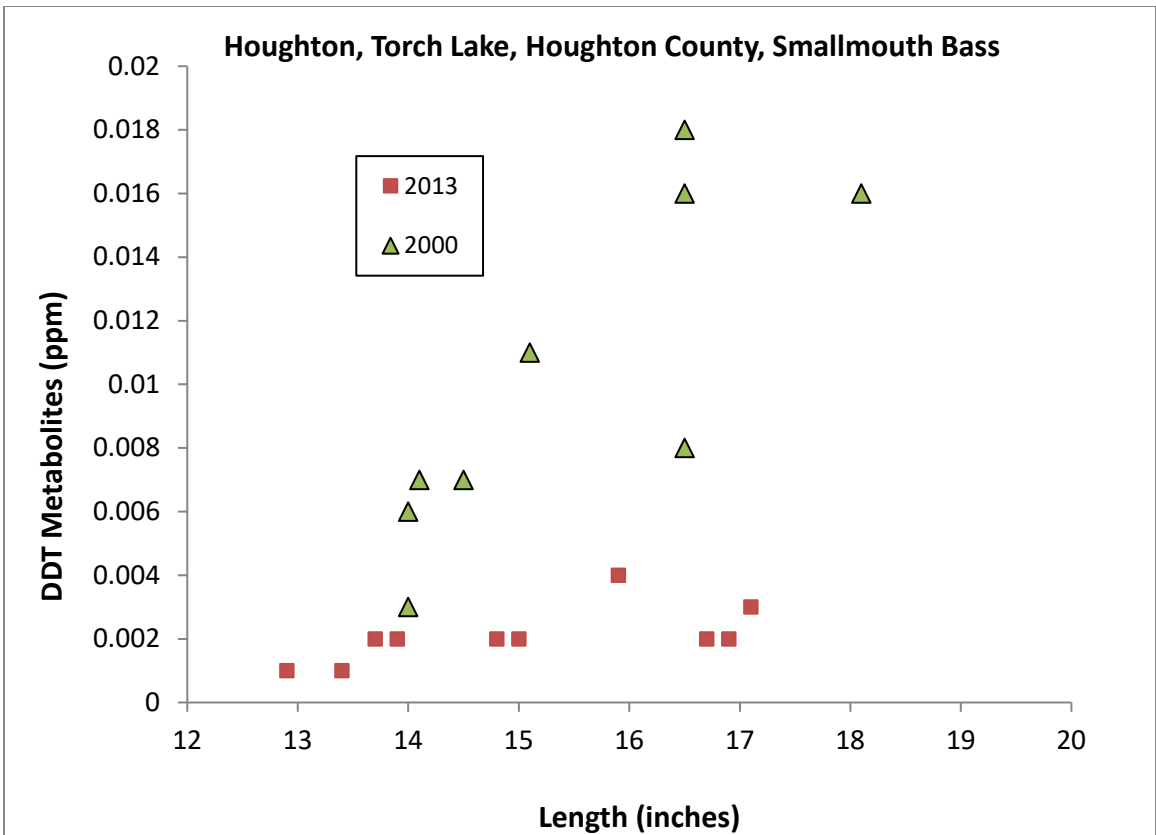
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2000	2013	19	12.9	14	13.7	18.1
Datasets available: 1988, 2000, 2013						
Chemical	Sample Size (Legal)	Mean Conc. (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	17	0.042	0.001	0.14	0.06	2
DDT	17	0.007	0.002	0.02	0.009	16
Chlordane	17	0.003	0.001	0.008	0.004	--
Toxaphene	17	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.285	0.377				
DDT	0.265	0.264				
Chlordane	0.132	0.086				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** No one should eat more than 2 meals per month of largemouth or smallmouth bass from Torch Lake due to PCBs & mercury.

**Recommendation:** No one should eat more than 2 meals per week of largemouth or smallmouth bass from Torch Lake smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches due to mercury and PCBs. The statewide length break was applied due to the limited length range in the sample.







**Walleye**

**Torch Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	2013	46	13.3	15	14.7	24.9
Datasets available: 1988, 2000, 2007, 2013						
Chemical	Sample Size (Legal)	Mean Conc. (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	45	0.66	0.13	2.38	0.81	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.675	0.819				

**Organics Analysis:**

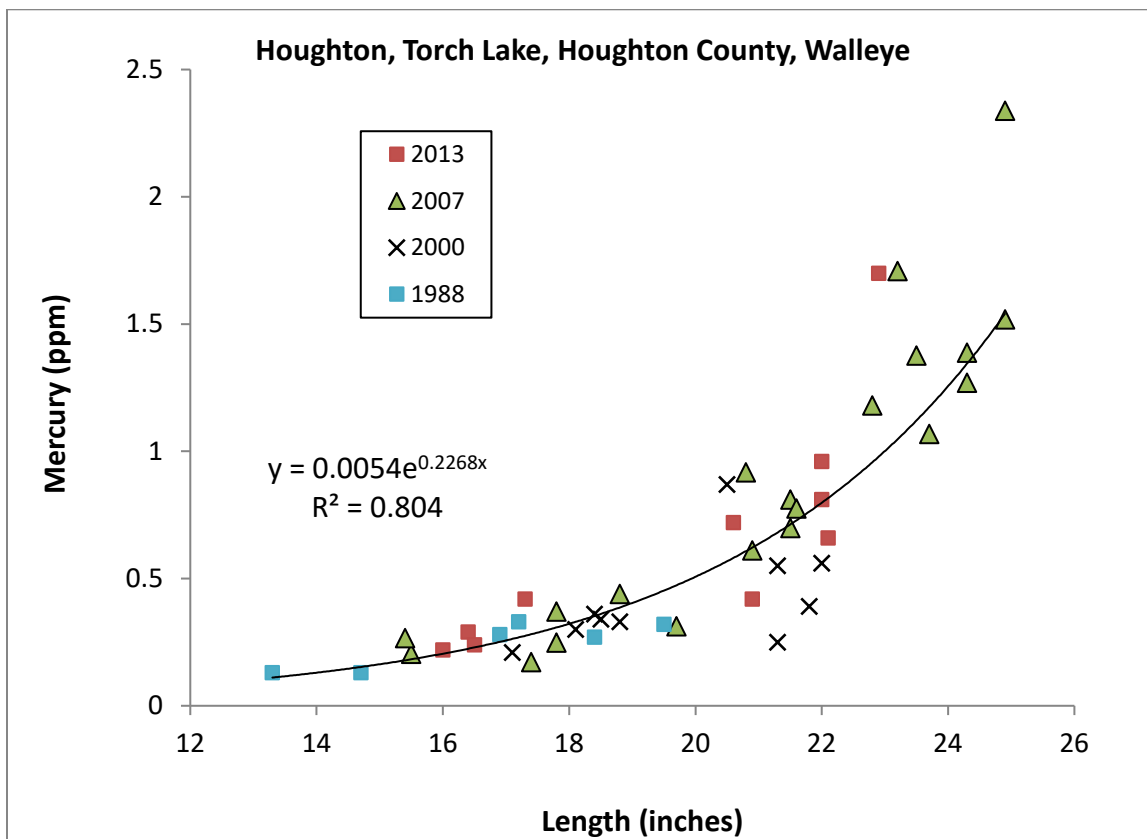
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2007	2013	30	15.4	15	15.4	24.9
Datasets available: 1988, 2000, 2007, 2013						
Chemical	Sample Size (Legal)	Mean Conc. (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	30	0.13	0.001	0.47	0.18	1
DDT	30	0.02	0.001	0.07	0.03	16
Chlordane	30	0.003	0.001	0.009	0.003	--
Toxaphene	30	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.518	0.642				
DDT	0.460	0.634				
Chlordane	0.294	0.381				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

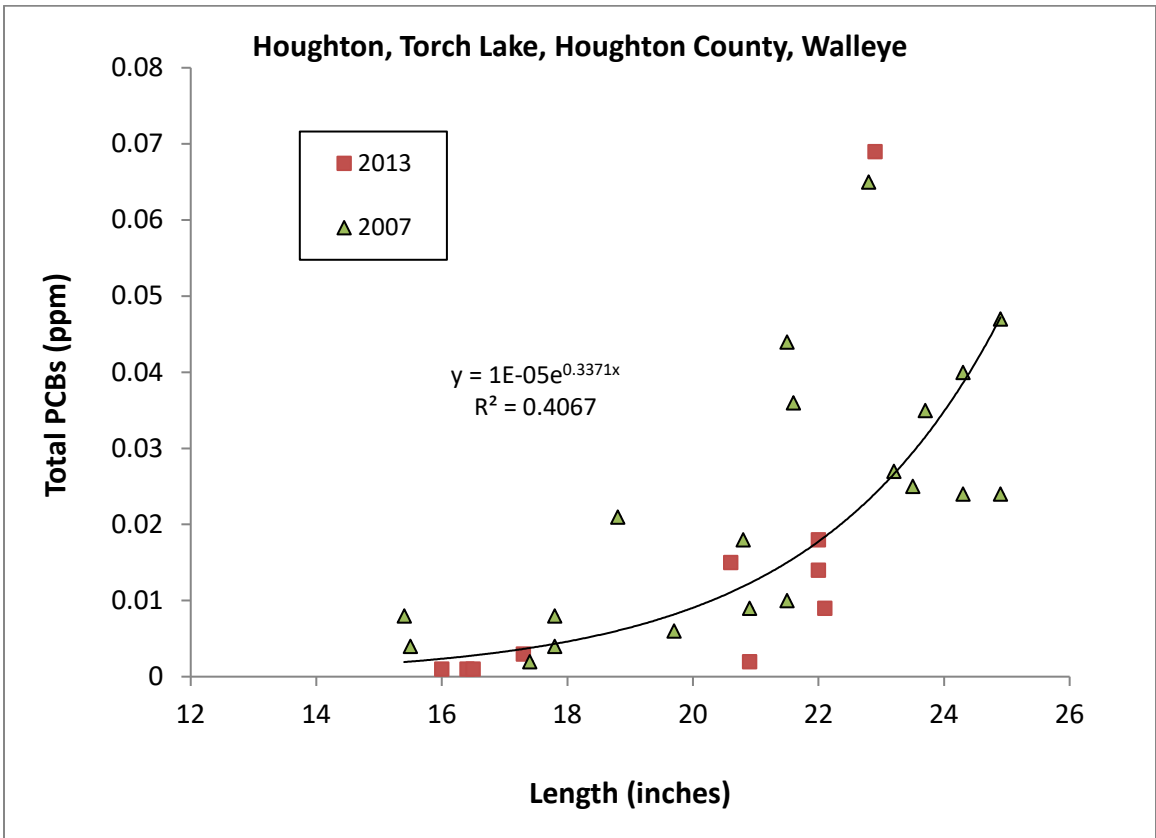
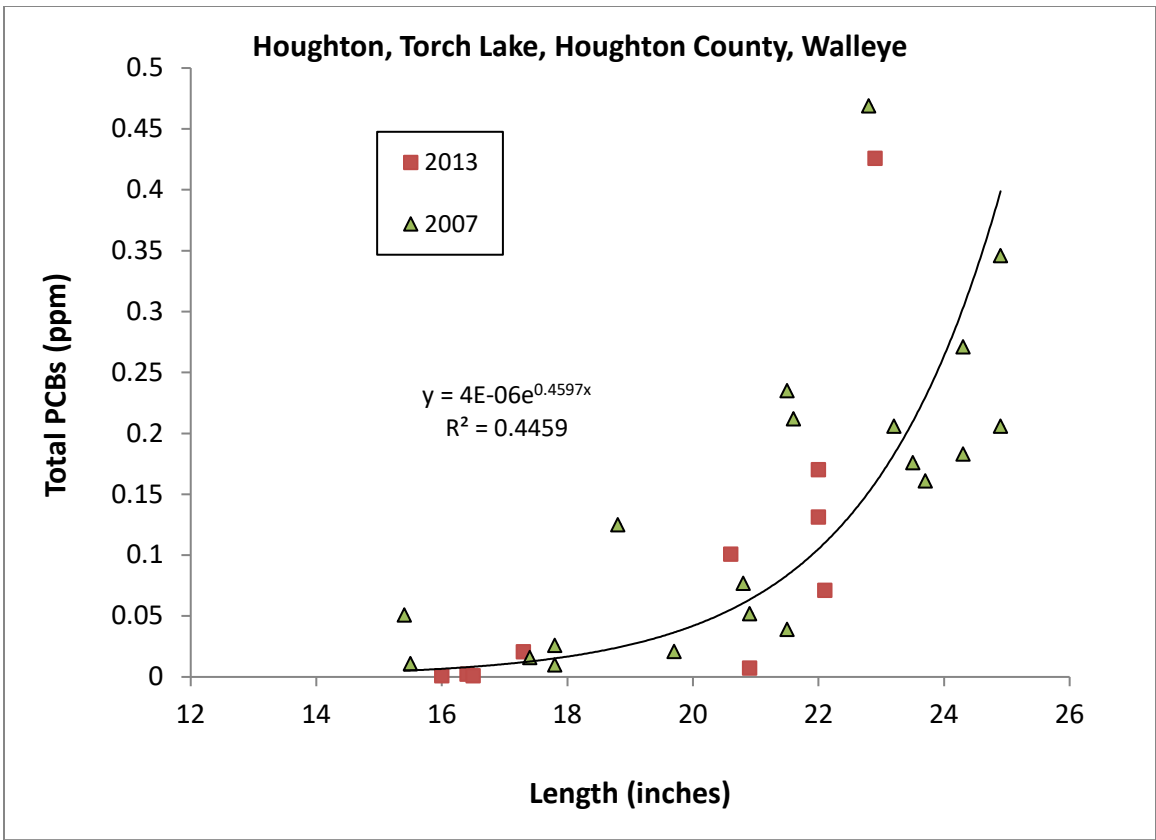
Length (Inches)	Hg	Meal Category	PCB	Meal Category	DDT	Meal Category
	Regression Equation Estimate (ppm)		Regression Equation Estimate (ppm)		Regression Equation Estimate (ppm)	
14	0.13	8	0	16	0	16
16	0.2	4	0.01	16	0	16
18	0.32	2	0.02	12	0	16
20	0.5	2	0.04	4	0.01	16
22	0.79	1	0.1	2	0.02	16
24	1.25	0.5	0.25	0.5	0.03	16
26	1.96	0.5	0.62	Limited	0.06	16
28	3.09	0	1.56	Limited	0.13	12

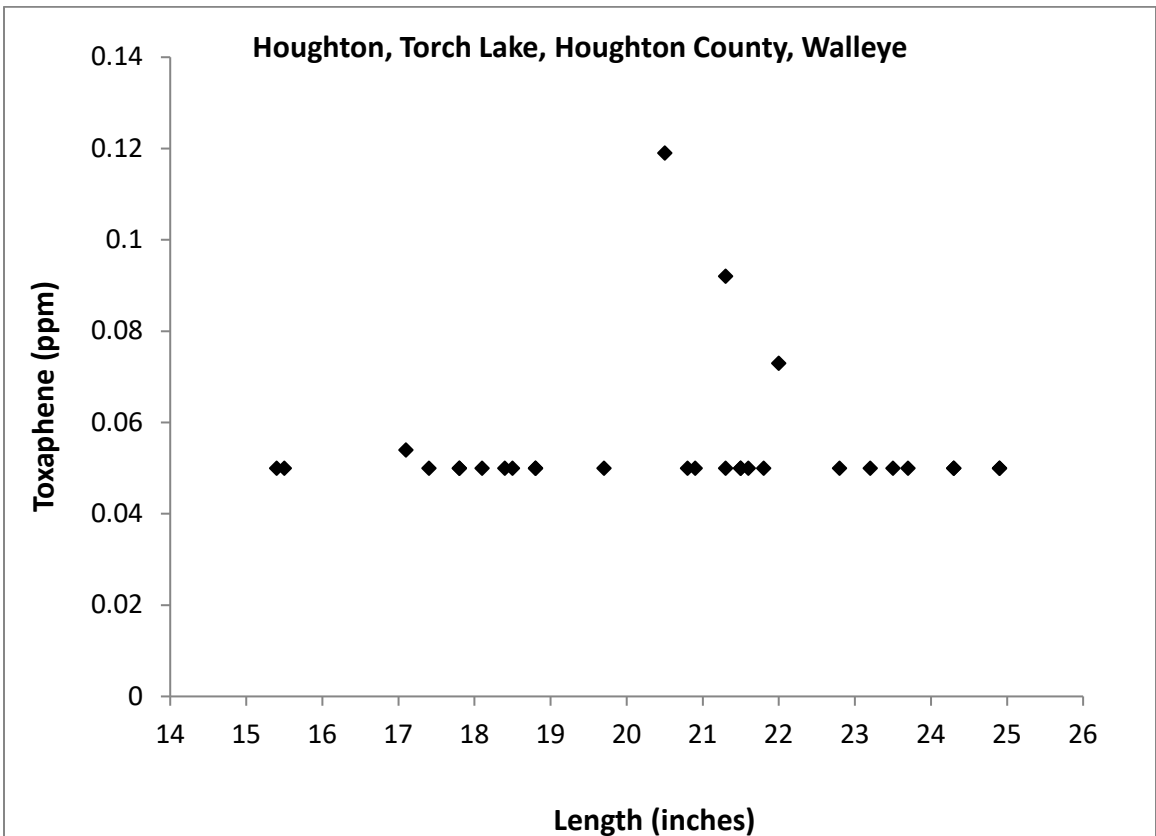
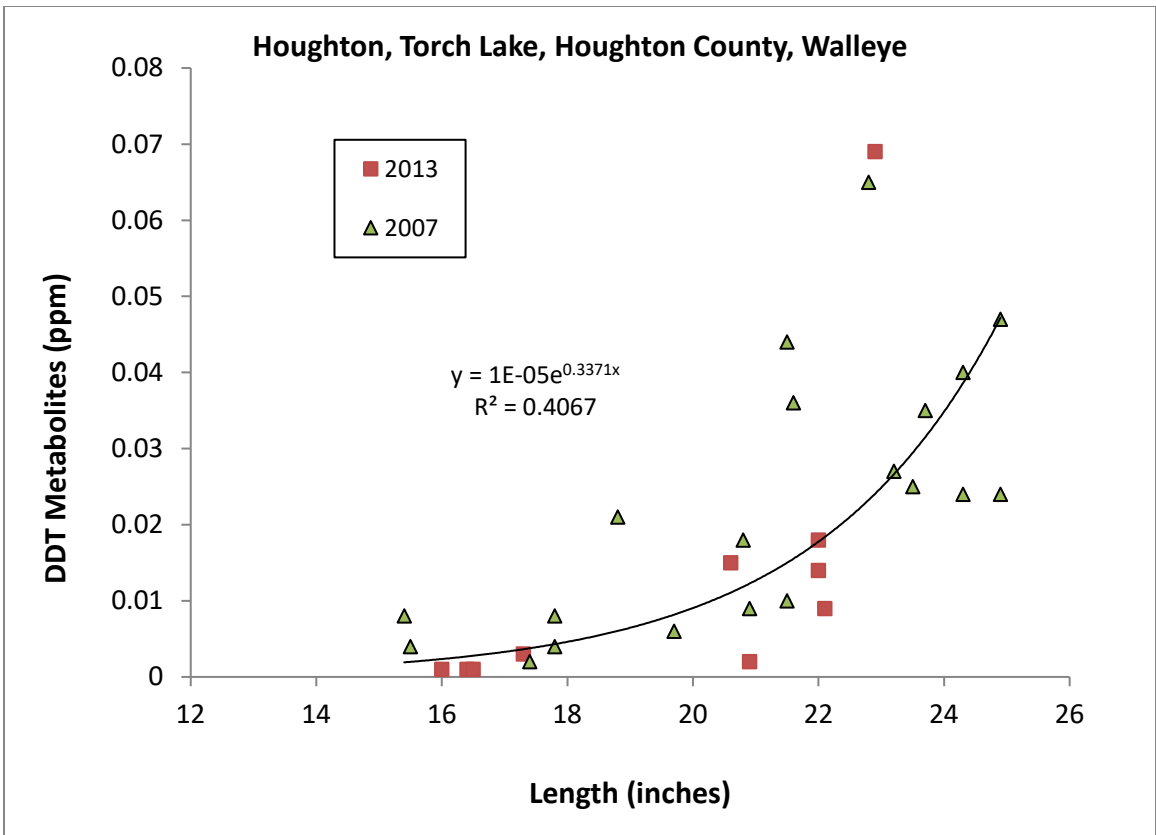
*Shaded area denotes extrapolated estimates*

**Existing Advisory:** No one should eat more than 1 meal per month of Torch Lake walleye smaller than 20 inches due to PCBs and no more than 1 meal a month of those greater than 20 inches due to mercury and PCBs. Toxaphene would cause advisories.

**Recommendation:** No one should eat more than 1 meal per month of Torch Lake walleye smaller than 22 inches and no more than 6 meals per year of walleye larger than 22 inches due to mercury and PCBs.







**White Sucker**

**Torch Lake**

**Houghton County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2007	2007	10	13.8	na	13.8	18.8
Datasets available: 2007						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.11	0.042	0.228	0.15	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.593	0.695				

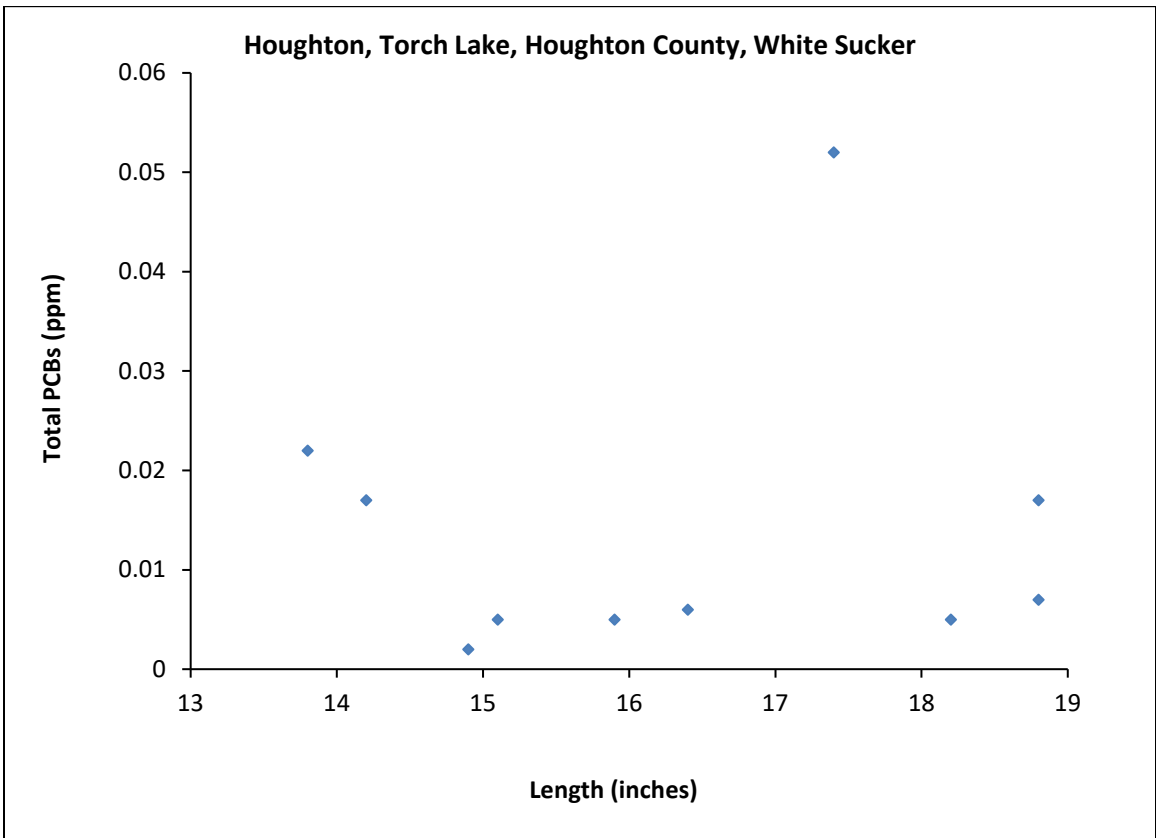
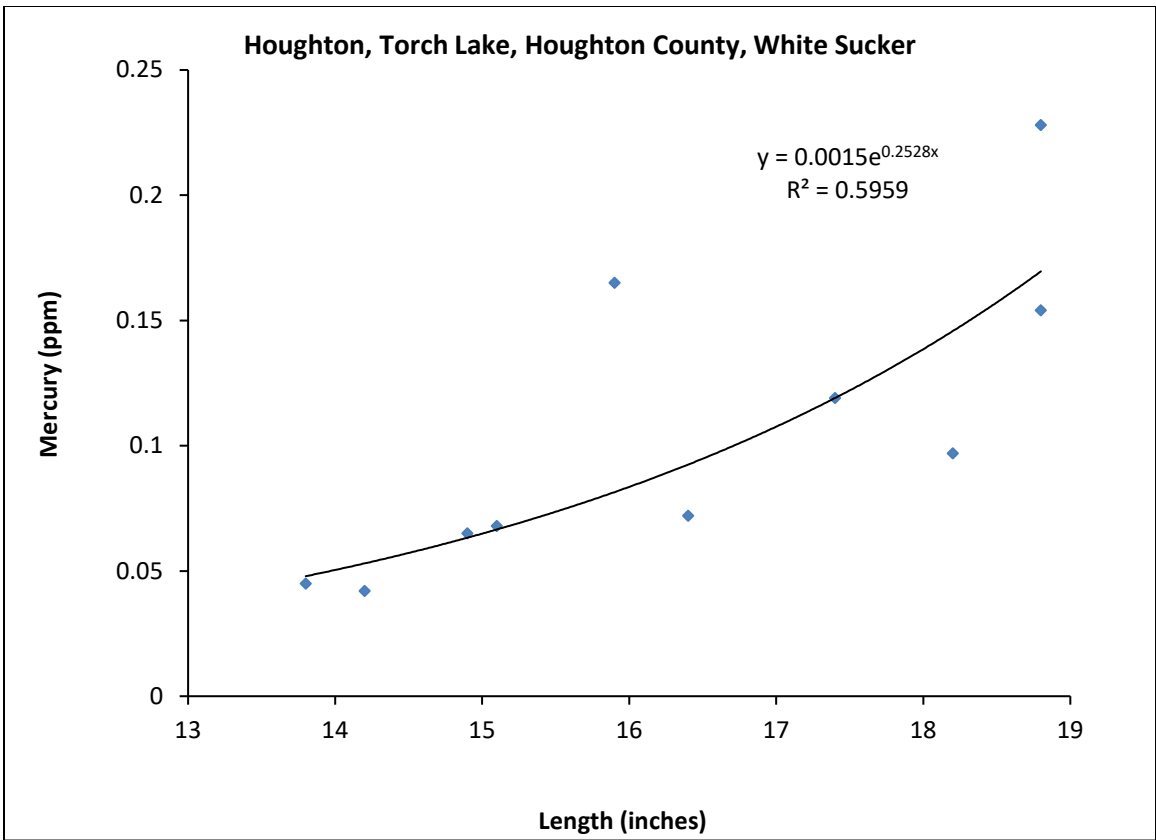
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2007	2007	10	13.8	NA	13.8	18.8
Datasets available: 2007						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	0.01	0.002	0.052	0.02	12
DDT	10	0.004	0.001	0.007	0.01	16
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.006	0.006				
DDT	0.093	0.034				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

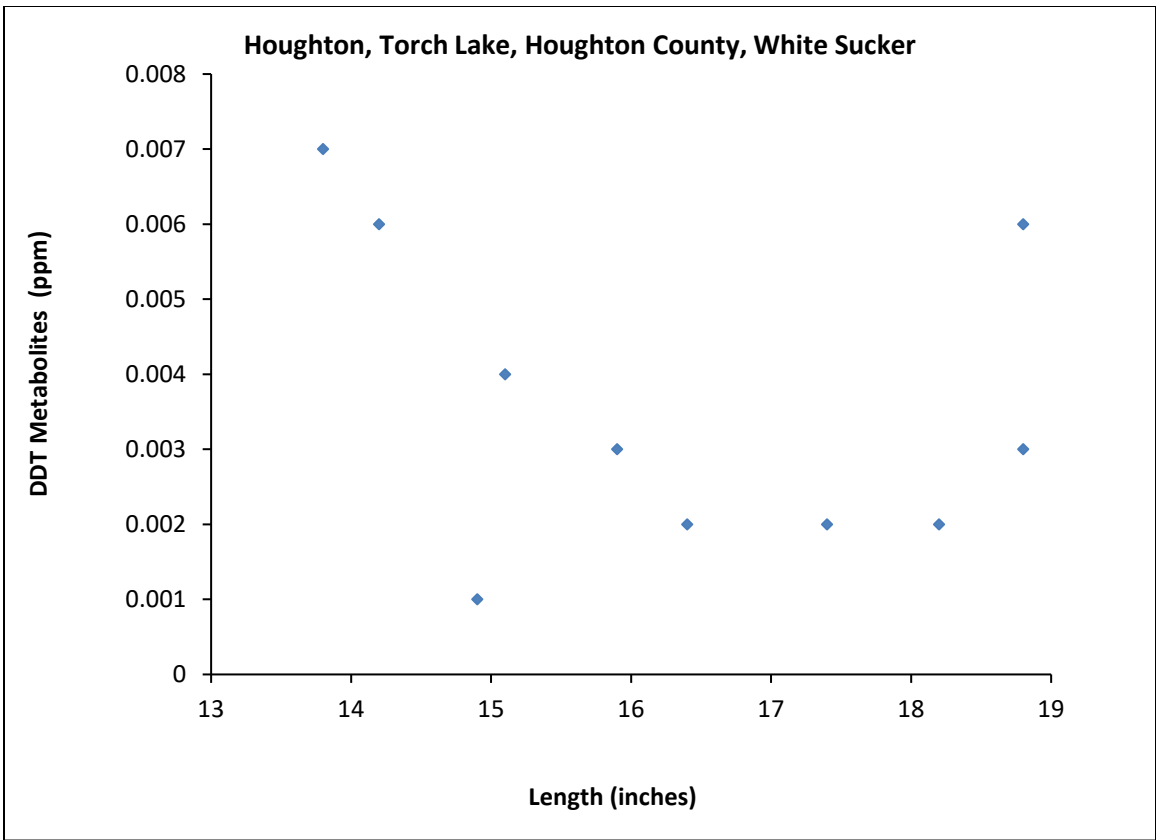
**Existing Advisory:** Torch Lake white sucker have no eating restrictions.

**Recommendation:** No one should eat more than 4 meals per month of Torch Lake sucker larger than 18 inches due to mercury or more than 12 meals per month of those fish smaller than 18 inches due to PCBs.

Length (Inches)	Regression Equation Estimate (ppm)	Meal Category
13	0.04	16
14	0.05	16
15	0.07	16
16	0.09	12
17	0.11	8
18	0.14	4
19	0.18	4
<i>Shaded area denotes extrapolated estimates</i>		







# Iron County

## Largemouth Bass

## Cable Lake

## Iron County

### Hg Analysis:

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	4	9.3	14	15.9	15.9
Datasets available: 1988						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	4	0.45	0.23	0.78	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.280	0.428				

### Organics Analysis:

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Cable Lake largemouth bass are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. Statewide guidelines apply. No one should eat more than 2 meals per month of largemouth or smallmouth bass smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches.

**Walleye**

**Cable Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	2020	20	13.4	15.0	14.8	18.9
Datasets available: 1988, 2020						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	16	0.748	0.240	1.300	0.928	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.071	0.018				

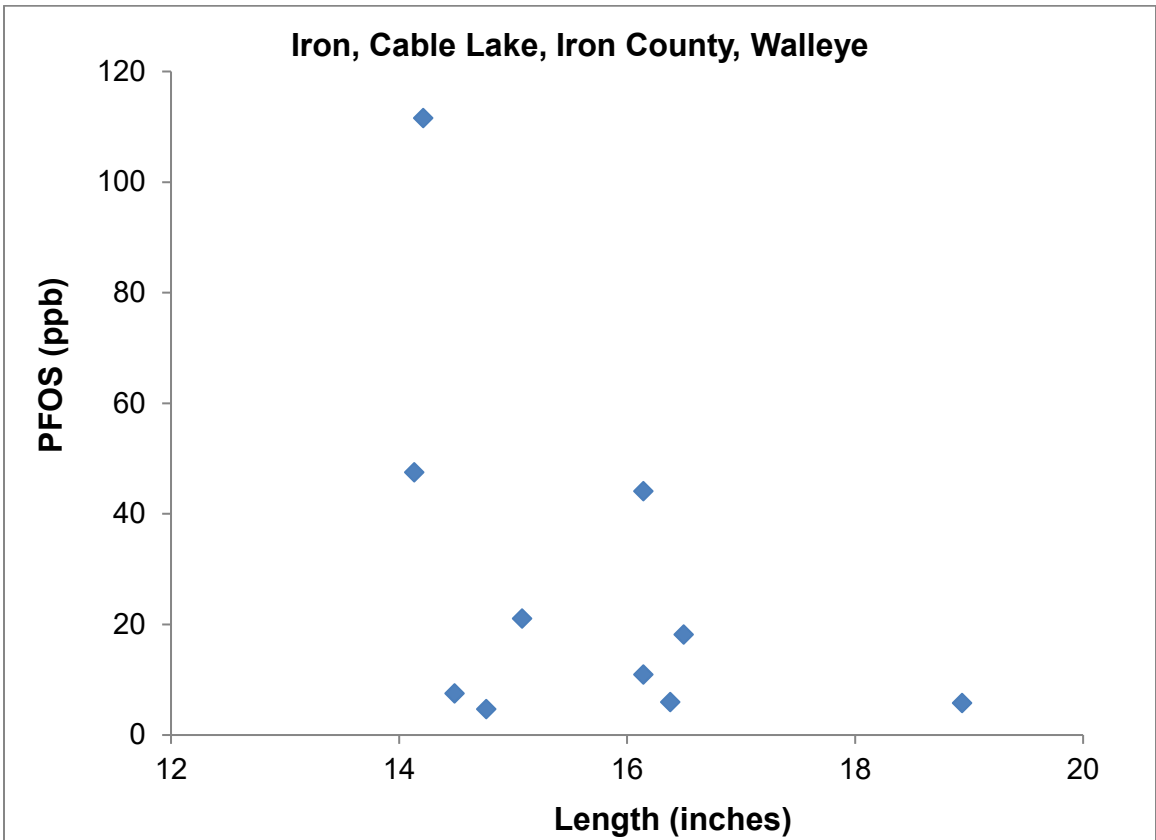
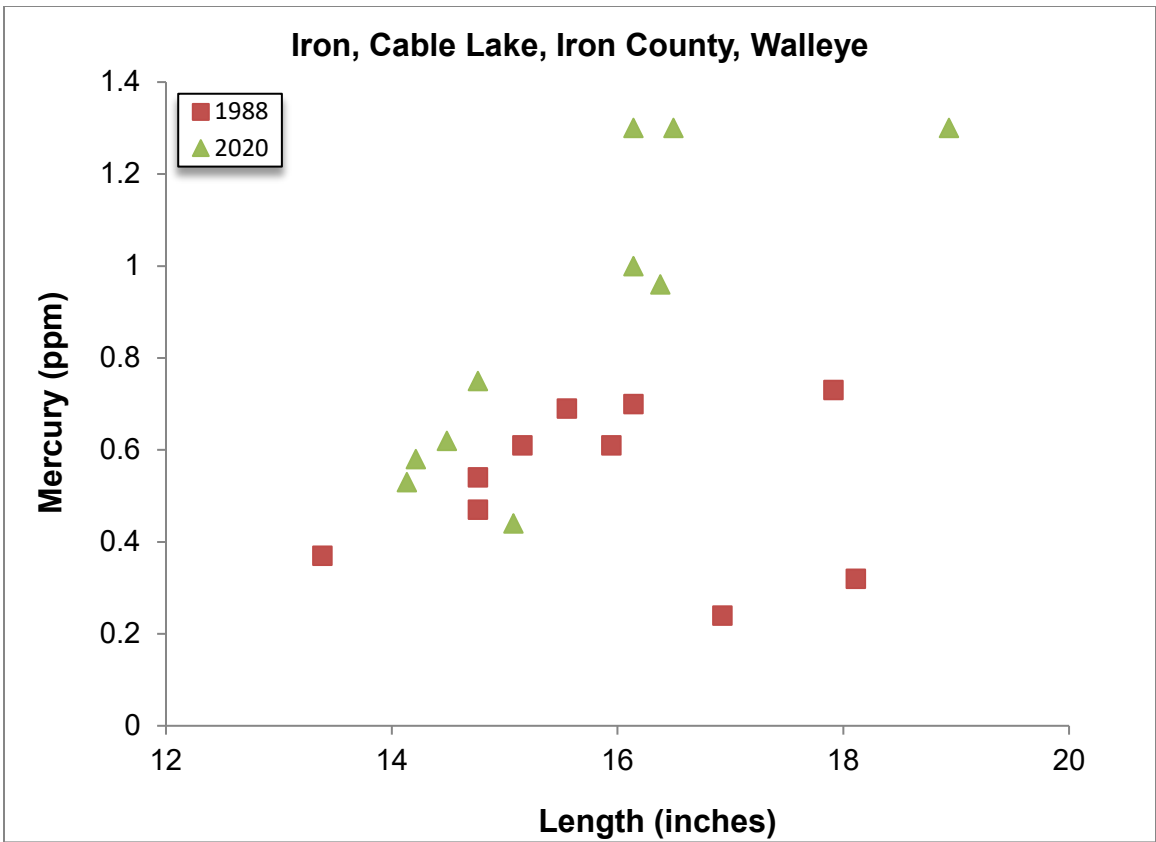
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2020	2020	10	14.2	15.0	14.8	18.9
Datasets available: 2020						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	7	ND	--	--	--	16
DDT	7	ND	--	--	--	16
Chlordane	7	ND	--	--	--	16
Toxaphene	7	ND	--	--	--	--
PFOS	10*	27.8 ppb	4.7 ppb	111.6 ppb	51.6 ppb	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	0.030	0.040				
<b>Final meal category based on UCL:</b>						<b>1</b>

\*Sub-legal sized individuals used in the PFOS analysis as no relationship between fish size and PFOS concentration has been observed in the statewide dataset.

**Existing MDHHS Advisory:** No one should eat more than 1 meal per month of walleye from Cable Lake in Iron County less than 20 inches due to mercury or no more than 6 meals per year of walleye from this water body larger than 20 inches due to mercury. Statewide length break was applied due to limited sample size and size range of fish used in the analysis

**Recommendation:** No change to the advisory is recommended. PFOS should be added to the list of contaminants that cause less restrictive advice.



## Lake Whitefish

## Chicagon Lake

## Iron County

### Hg Analysis:

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
2000	2000	10	16.1	na	16.1	23.7		
Datasets available: 2000								
Chemical	Sample Size (Legal)	Mean (ppm)		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
Mercury	10	0.11		0.08	0.26	0.15	4	
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
Mercury	0.539	0.506						

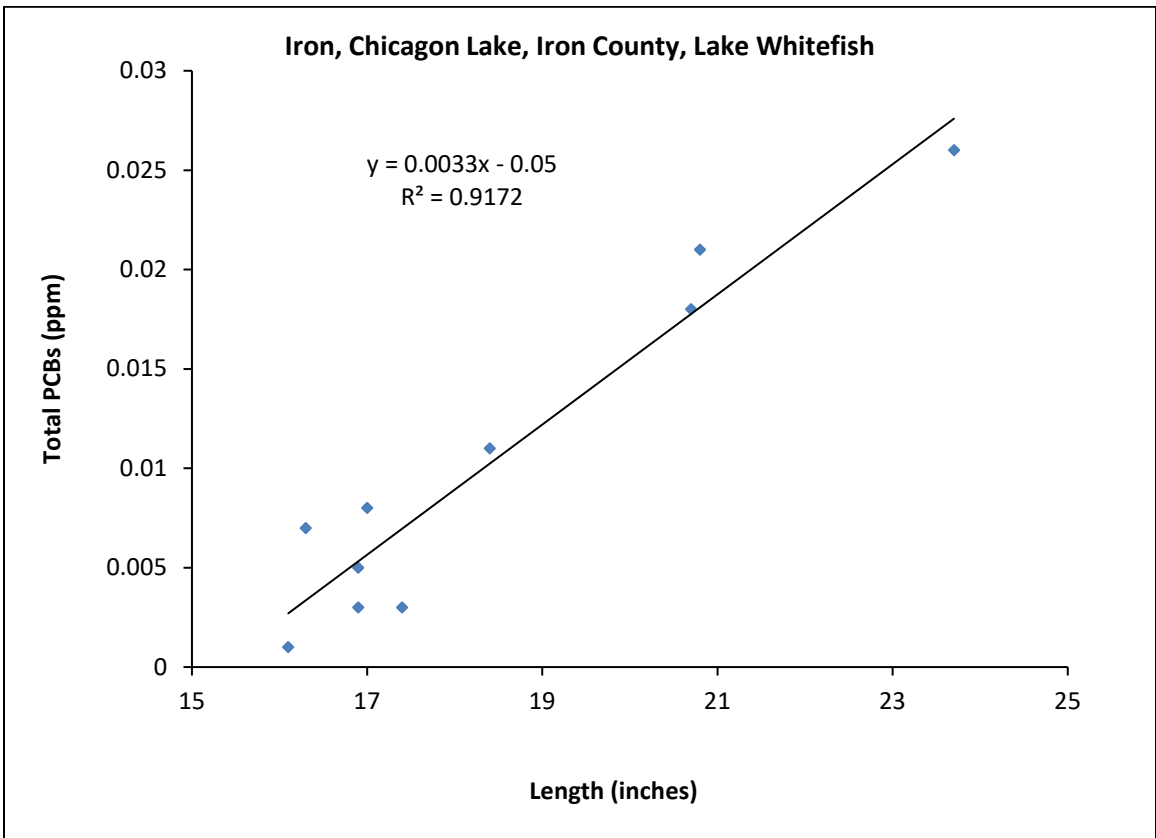
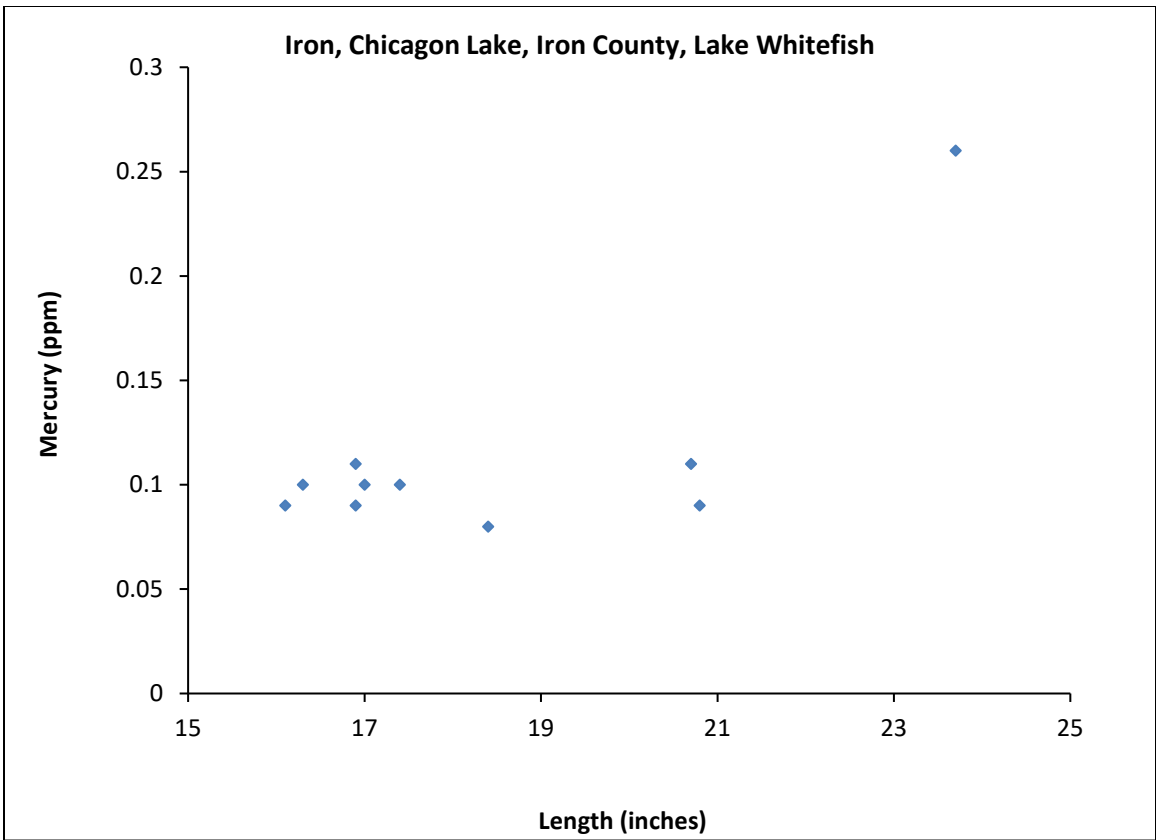
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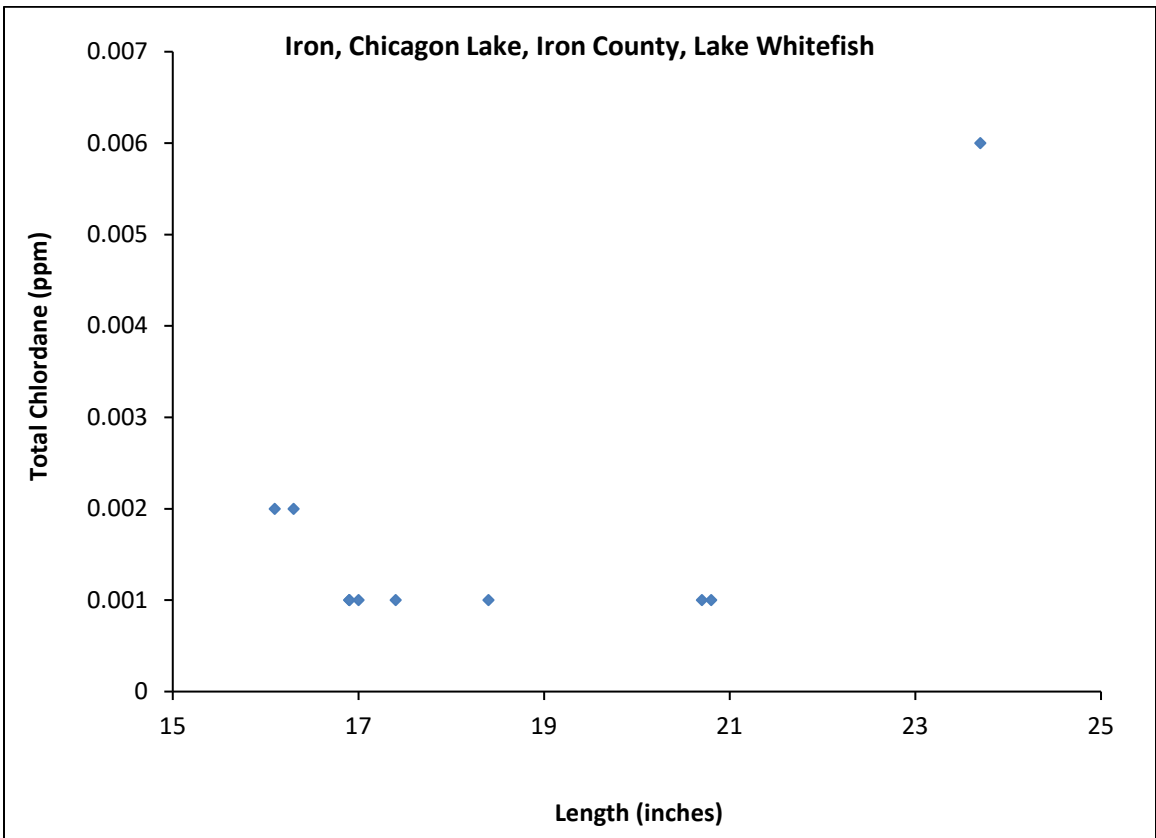
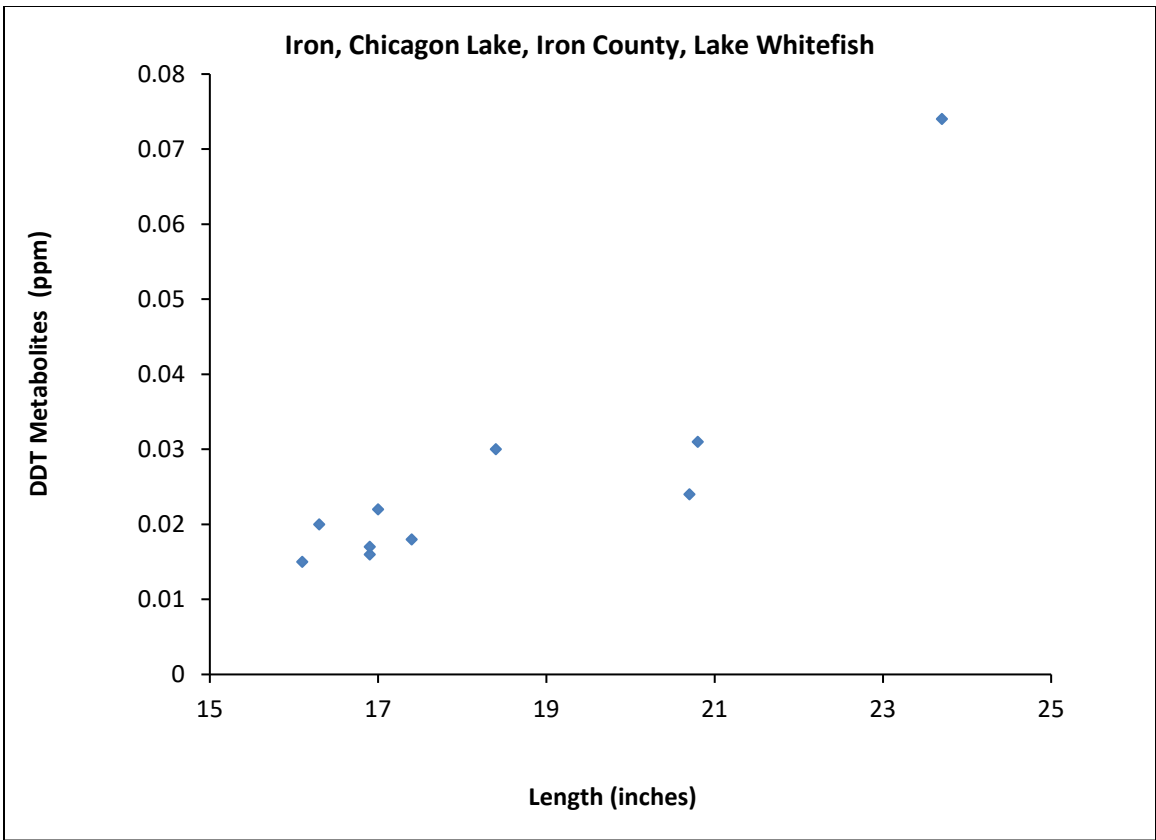
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
2000	2000	10	16.1	na	16.1	23.7		
Datasets available: 2000								
Chemical	Sample Size (Legal)	Mean (ppm)		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
PCB	10	0.01		0.001	0.03	0.02	12	
DDT	10	0.03		0.02	0.07	0.04	12	
Chlordane	10	0.003		0.001	0.006	0.004	--	
Toxaphene	10	ND		--	--			
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
PCB	0.917	0.661						
DDT	0.751	0.813						
Chlordane	0.388	0.229						
Toxaphene	--	--						
<b>Final meal category based on UCL:</b>							<b>4</b>	

**Existing Advisory:** Chicagon Lake lake whitefish have no existing advisory.

**Recommendation:** No one should eat more than 4 meals per month of Chicagon Lake lake whitefish due to mercury. PCBs and DDT would cause advisories.

Length (Inches)	PCB Regression Equation Estimate (ppm)	Meal Category
16	0.003	16
18	0.01	16
20	0.02	12
22	0.02	8
24	0.03	8
26	0.04	4
28	0.04	4
<i>Shaded area denotes extrapolated estimates</i>		







**Rock Bass**

**Chicagon Lake**

**Iron County**

**Hg Analysis:**

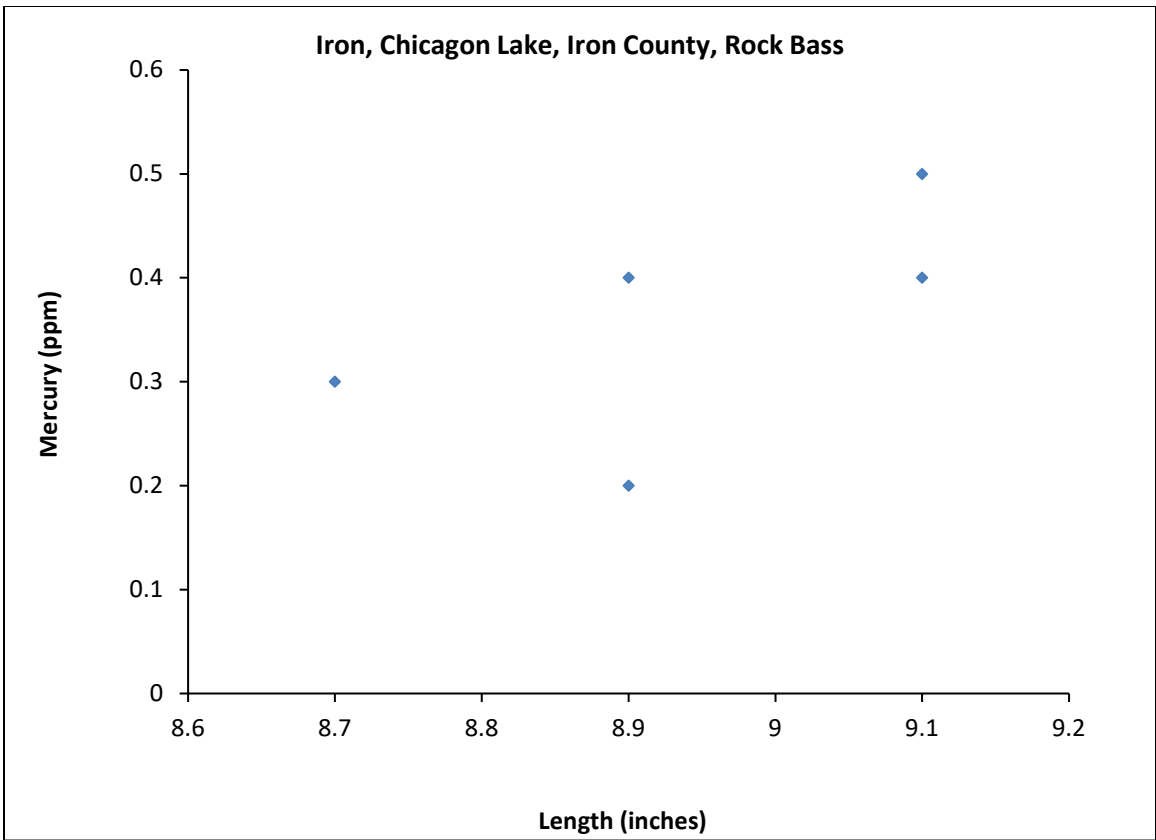
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	1986	5	8.7	na	8.7	9.1
Datasets available: 1986						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	5	0.36	0.2	0.5	0.50	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.396	0.315				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Chicagon Lake rock bass are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Chicagon Lake rock bass due to mercury.



**Walleye**

**Chicagon Lake**

**Iron County**

**Hg & Se Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	2014	31	14.9	15	14.9	25
Datasets available: 1986, 1994, 2008, 2014						
Chemical	Sample Size (Legal)	Mean	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	31	0.59	0.24	1.15	0.67	1
Selenium	10	0.657	0.570	0.790	0.710	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.633	0.621				
Selenium	0.088	0.065				

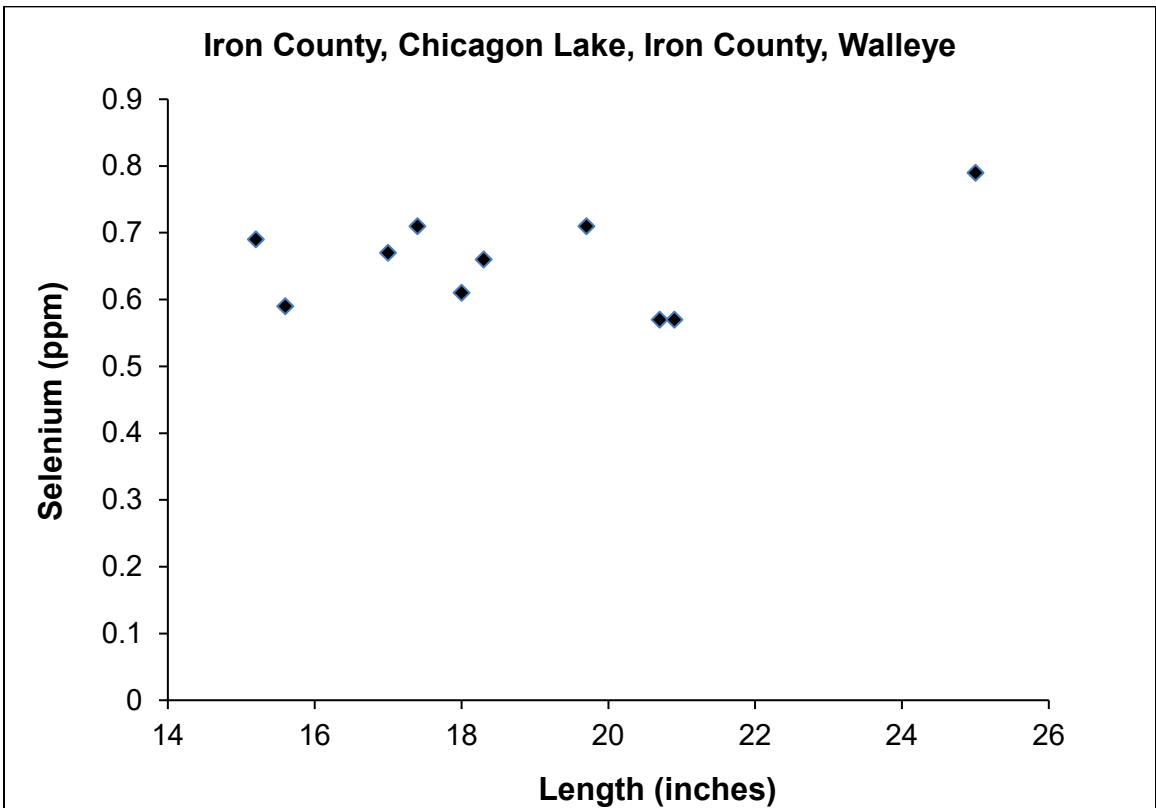
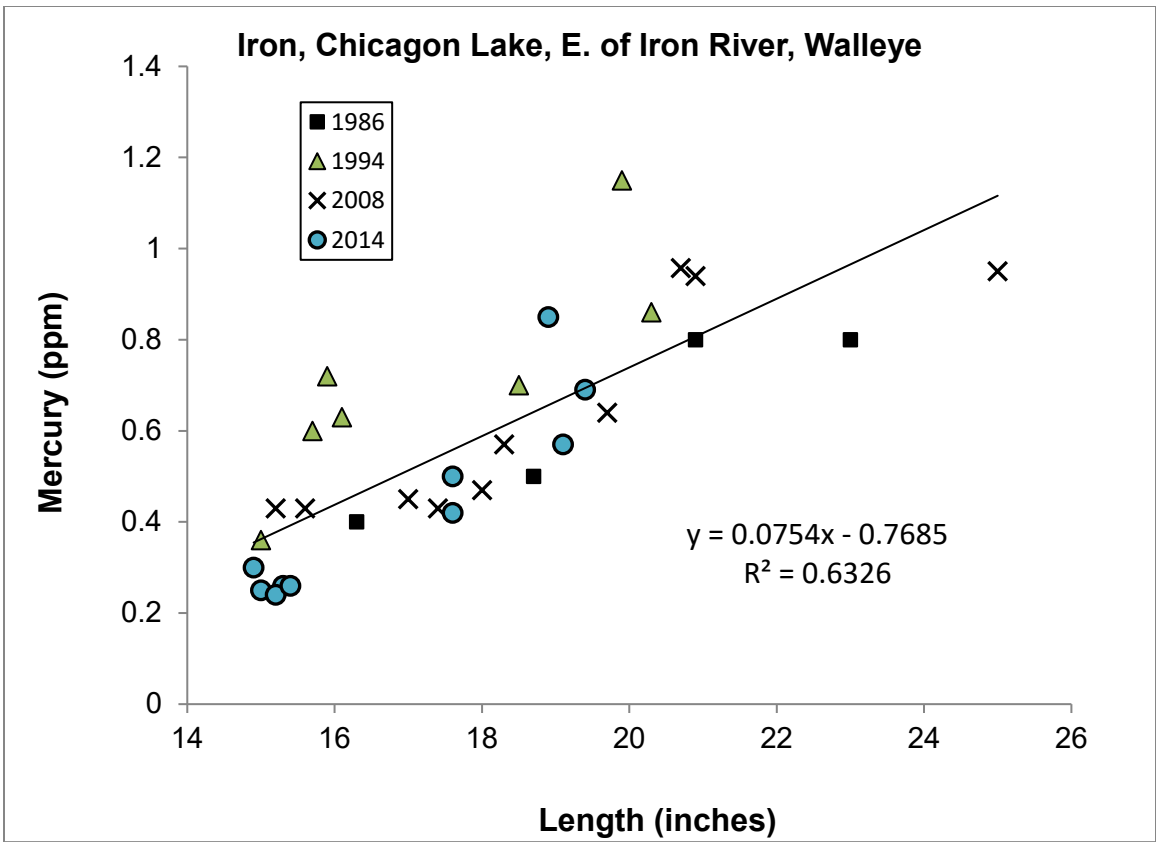
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	--	--	--	--	--	--
DDT	--	--	--	--	--	--
Chlordane	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--
TEQ	--	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
TEQ	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** No one should eat more than 1 meal per month of Chicagon Lake walleye due to mercury.

**Recommendation:** No one should eat more than 1 meal per month of Chicagon Lake walleye smaller than 24 inches or more than 6 meals per year of those fish larger than 24 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppt)	Meal Category
14	0.29	2
16	0.44	2
18	0.59	1
20	0.74	1
22	0.89	1
24	1.04	1
26	1.19	0.5
<i>Shaded area denotes extrapolated estimates</i>		



**Northern Pike**

**Deer Lake**

**Iron County**

**Hg & Se Analysis:**

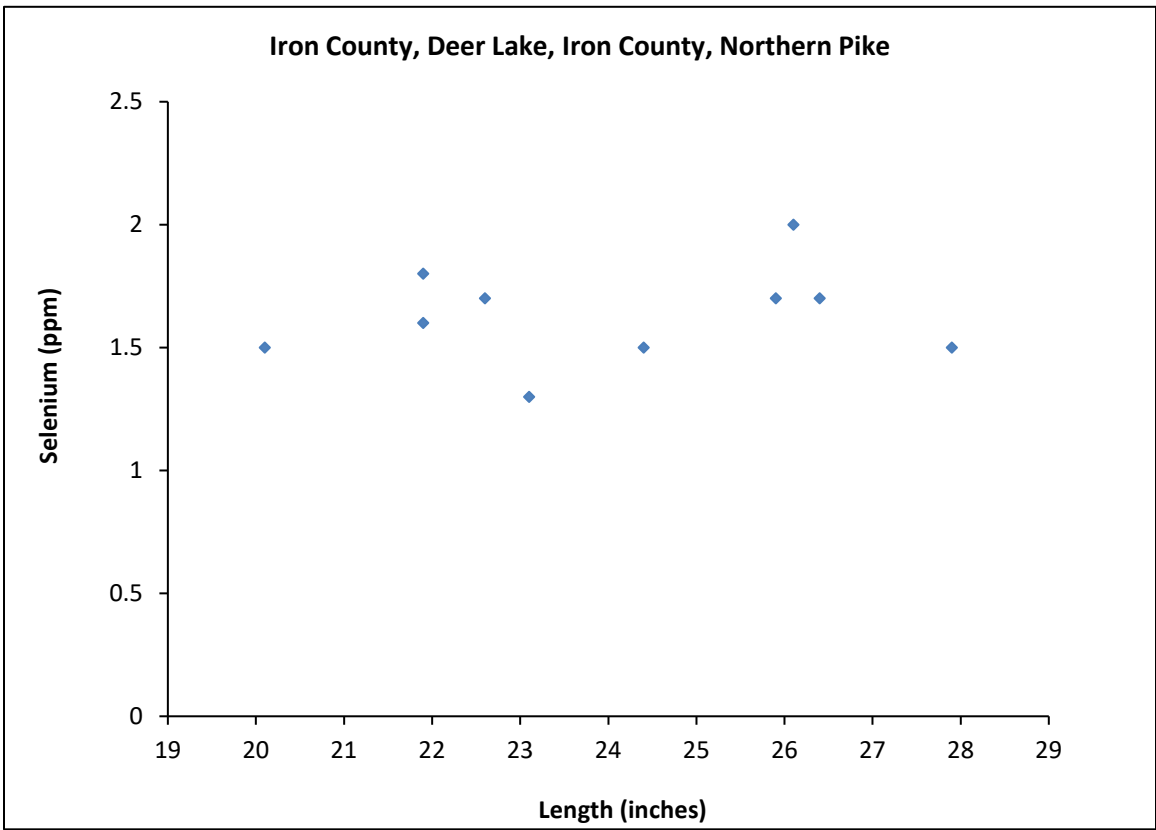
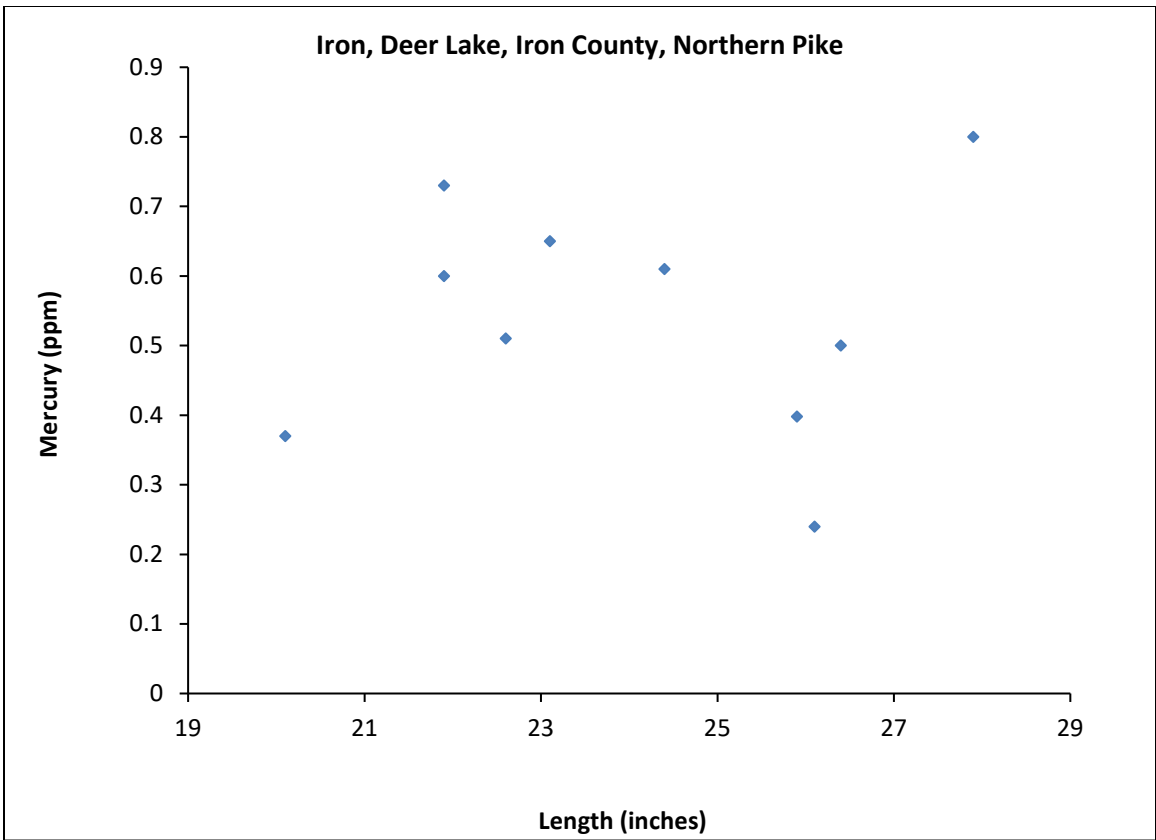
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2006	2006	10	20.1	24	24.4	27.9
Datasets available: 2006						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	5	0.51	0.24	0.8	0.77	1
Selenium	5	1.68	1.50	2.00	1.93	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.001	0.002				
Selenium	0.045	0.043				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	na	--	--	--	--
DDT	0	na	--	--	--	--
Chlordane	0	na	--	--	--	--
Toxaphene	0	na	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Deer Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Deer Lake northern pike smaller than 30 inches or more than 6 meals per year of those fish larger than 30 inches due to mercury. The statewide length break was applied as the size range of the fish was limited.



**Northern Pike**

**Fire Lake**

**Iron County**

**Hg & Se Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2007	2007	10	19.1	24	24.1	32.2
Datasets available: 2007						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	3	0.36	0.23	0.59	--	--
Selenium	10	0.36	0.29	0.45	0.39	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.845	0.810				
Selenium	0.455	0.527				

**Organics Analysis:**

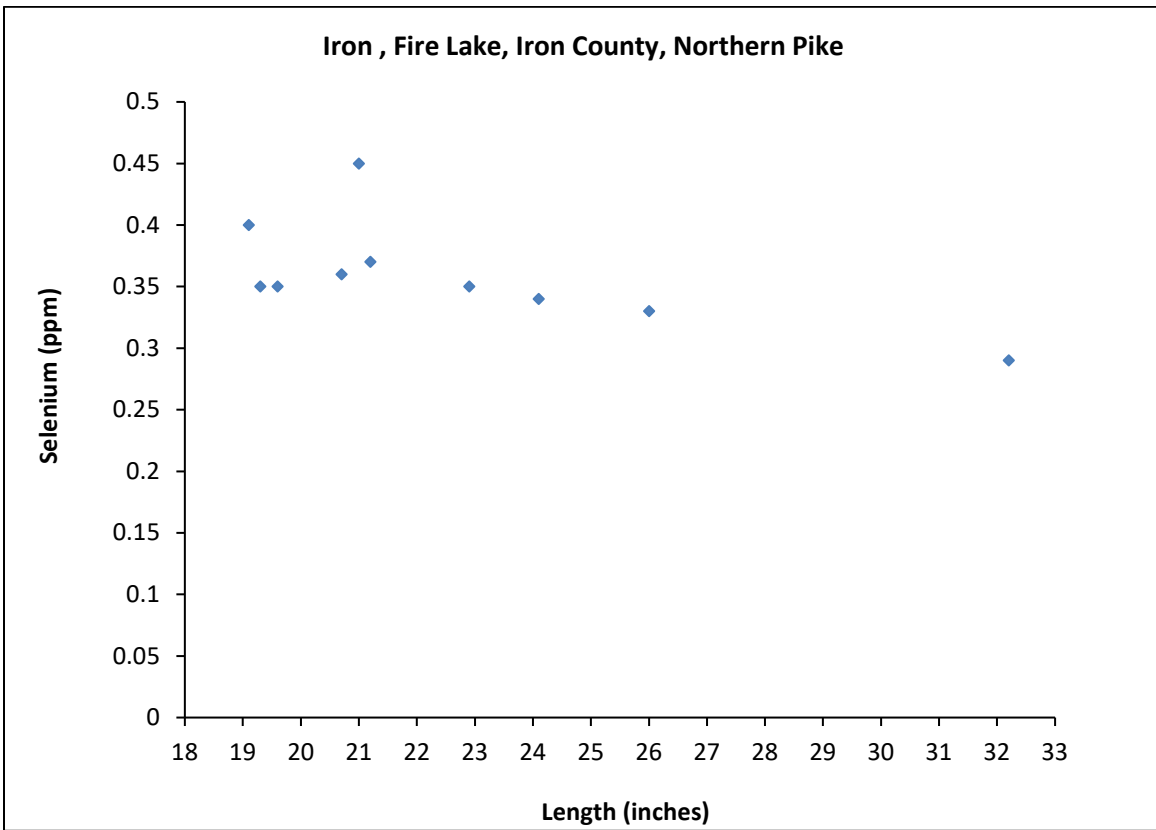
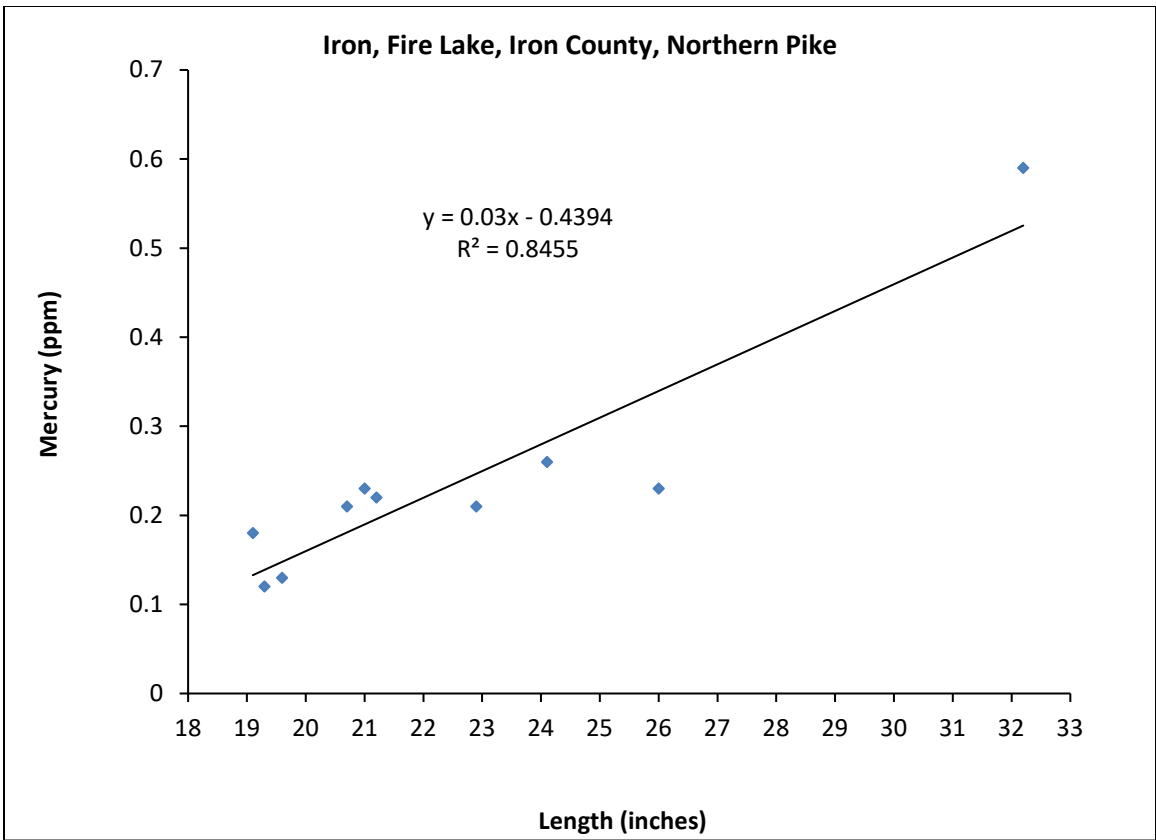
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	ND	--	--	--	--
DDT	0	ND	--	--	--	--
Chlordane	0	ND	--	--	--	--
Toxaphene	0	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>--</b>

**Existing Advisory:** Fire Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Fire Lake northern pike smaller than 30 inches or more than 1 meal per month of those fish larger than 30 inches due to mercury. The statewide length break was applied as the size range of the fish collected was limited.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
22	0.22	4
24	0.28	2
26	0.34	2
28	0.40	2
30	0.46	2
32	0.52	2
34	0.58	1
36	0.64	1
38	0.70	1
<i>Shaded area denotes extrapolated estimates</i>		





**Largemouth & Smallmouth Bass**

**Fortune Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1990	2019	18	12.2	14.0	13.6	18.9
Datasets available: 1990, 2019						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	14	0.541	0.260	0.890	0.648	1
Chemical	Linear Regression R <sup>2</sup>	Exponential Regression R <sup>2</sup>				
Mercury	0.574	0.442				

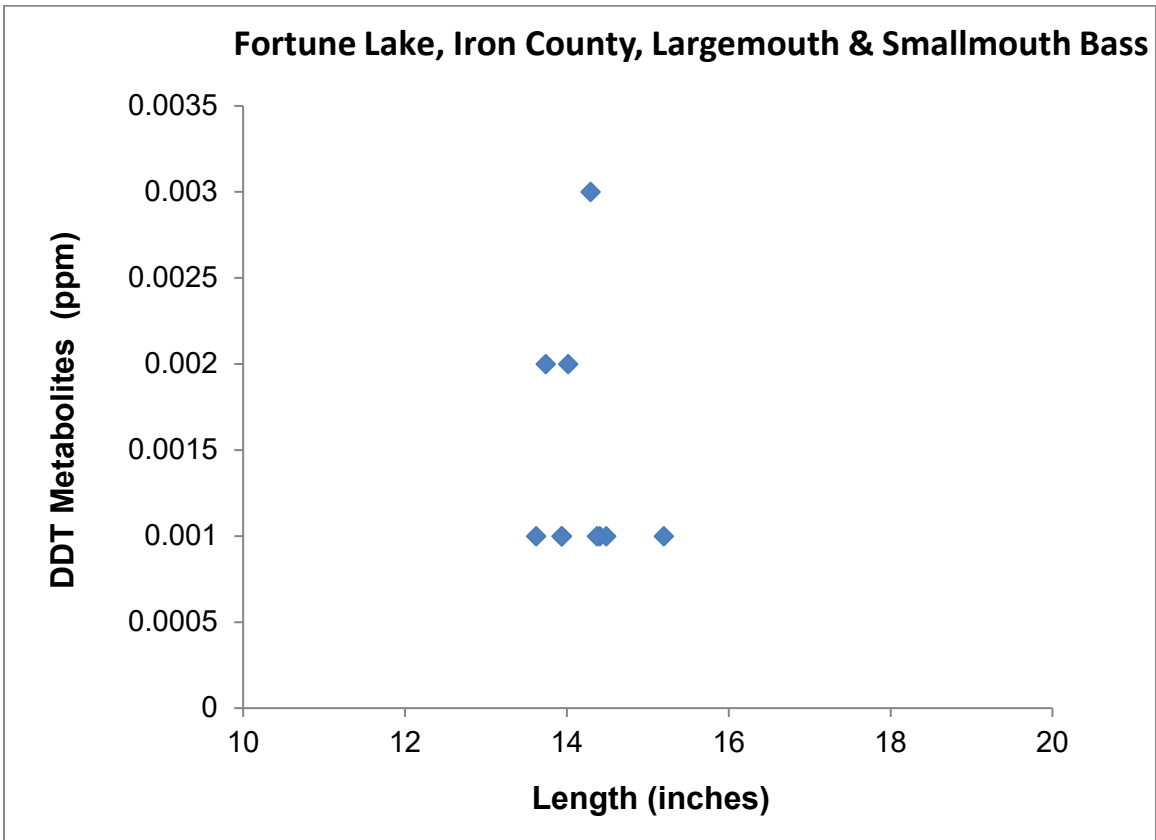
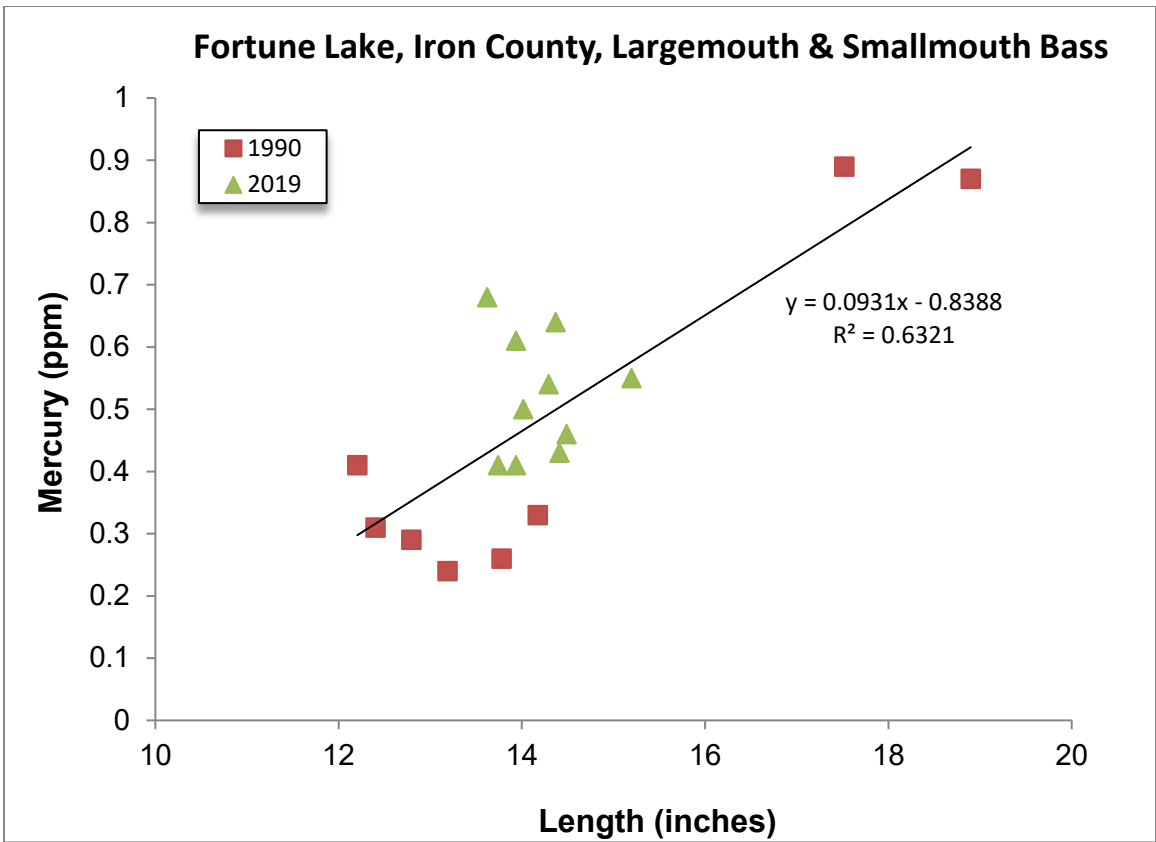
**Organics Analysis:**

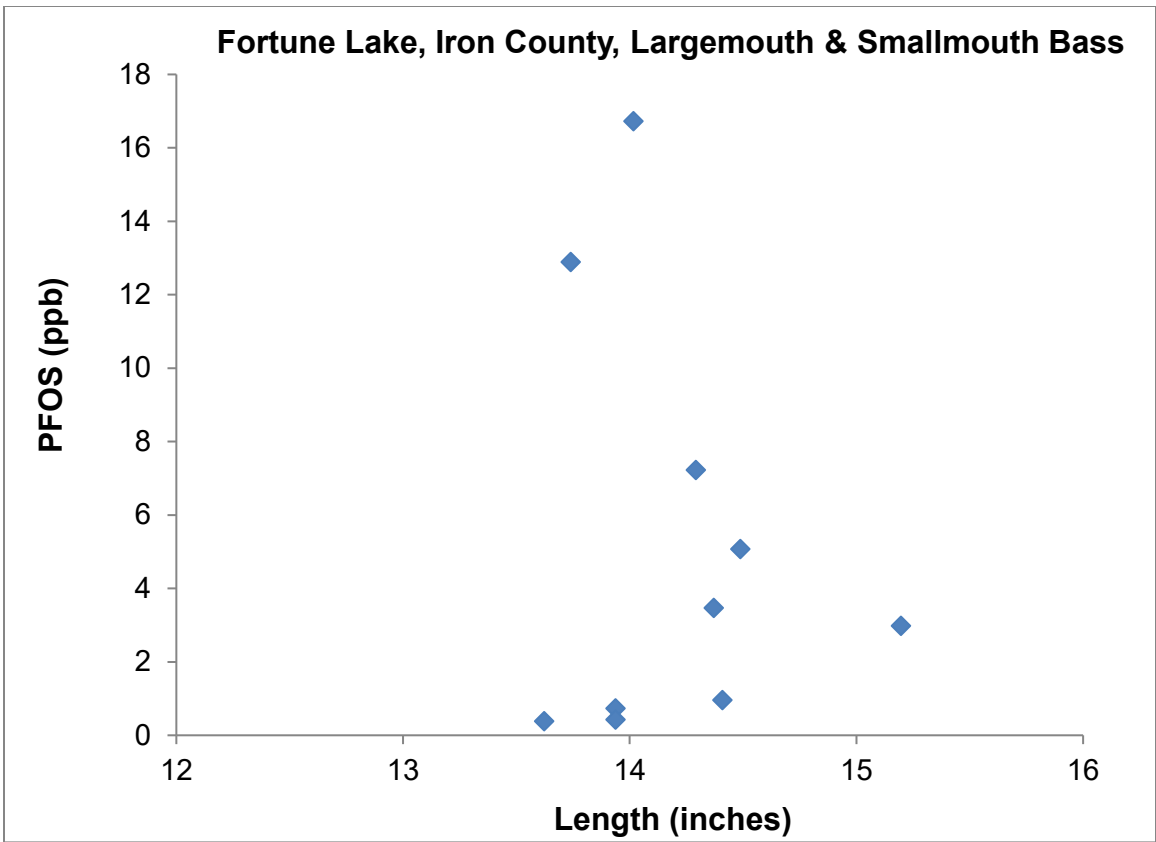
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2019	2019	10	13.6	14.0	13.6	18.9
Datasets available: 2019						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	ND	--	--	--	16
DDT	10	0.001	<0.001	0.003	0.002	16
Chlordane	10	ND	--	--	--	16
Toxaphene	10	ND	--	--	--	--
PFOS	10	5.1 ppb	0.4 ppb	16.7 ppb	9.1 ppb	12
Chemical	Linear Regression R <sup>2</sup>	Exponential Regression R <sup>2</sup>				
PCB	--	--				
DDT	0.026	0.042				
Chlordane	--	--				
Toxaphene	--	--				
PFOS	0.025	0.038				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing MDHHS Advisory:** No one should eat more than 1 meal per month of largemouth or smallmouth bass from Fortune Lake in Iron County smaller than 18 inches or no more than 6 meals per year of these fish larger than 18 inches due to mercury.

**Recommendation:** No change to the advisory is warranted. Statewide length break should continue to apply given the small sample size of larger fish used in the analysis. PFOS should be added to list of contaminants causing less restrictive guidance.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
14	0.465	2
16	0.651	1
18	0.837	1
20	1.023	1
22	1.210	0.5
24	1.140	0.5
<i>Shaded area denotes extrapolated estimates</i>		





**Smallmouth Bass**

**Hagerman Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of All Samples	
Earliest	Most Recent				Min	Max
1988	1988	4	12.2	14	12.2	13
Datasets available: 1988						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	4	0.11	0.1	0.11	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	4	12.2	14	12.2	13
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	4	ND	--	--	--	--
DDT	4	0.01	0.009	0.02	--	--
Chlordane	4	ND	--	--	--	--
Toxaphene	4	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Hagerman Lake smallmouth bass are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. Statewide guidelines apply. No one should eat more than 2 meals per month of largemouth or smallmouth bass smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches.

**Walleye**

**Hagerman Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	10	17.1	15	17.1	24.2
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.25	0.15	0.44	0.32	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.609	0.580				

**Organics Analysis:**

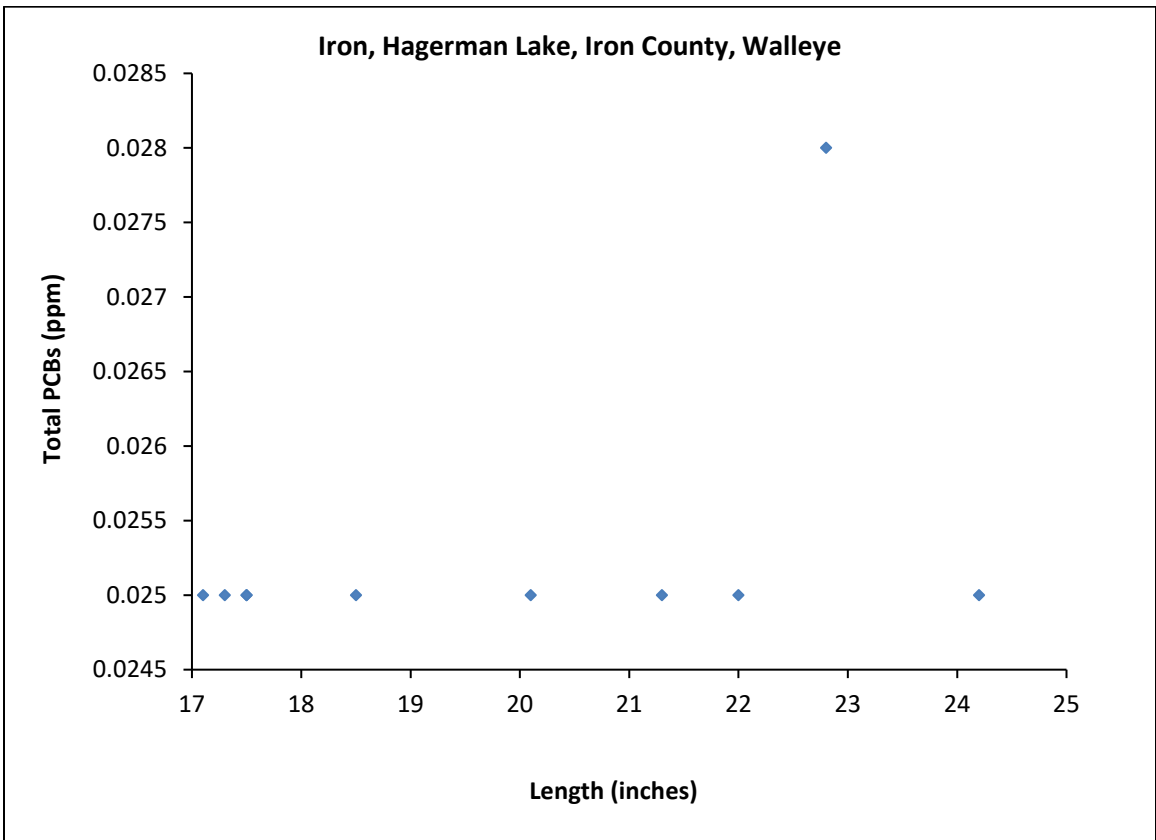
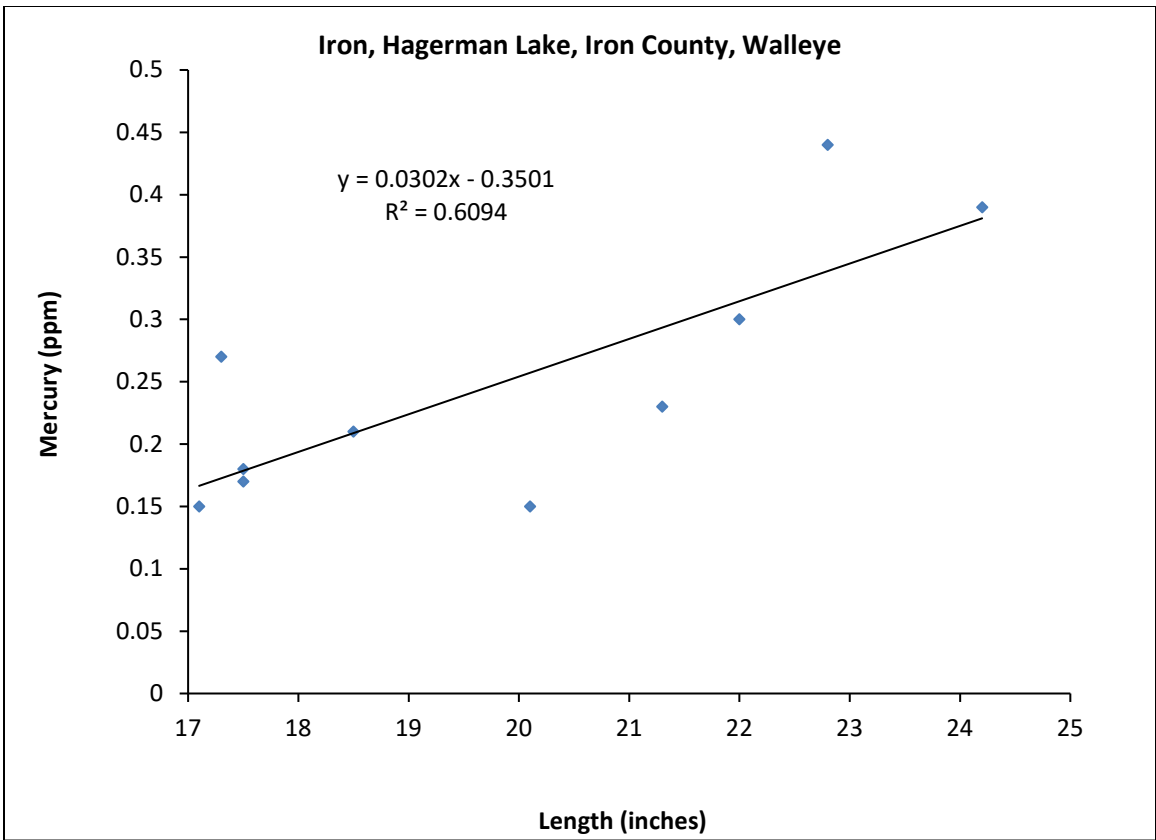
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	10	17.1	15	17.1	24.2
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	0.03	0.025	0.028	0.03	8
DDT	10	0.03	0.011	0.074	0.04	12
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.160	0.160				
DDT	0.439	0.439				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

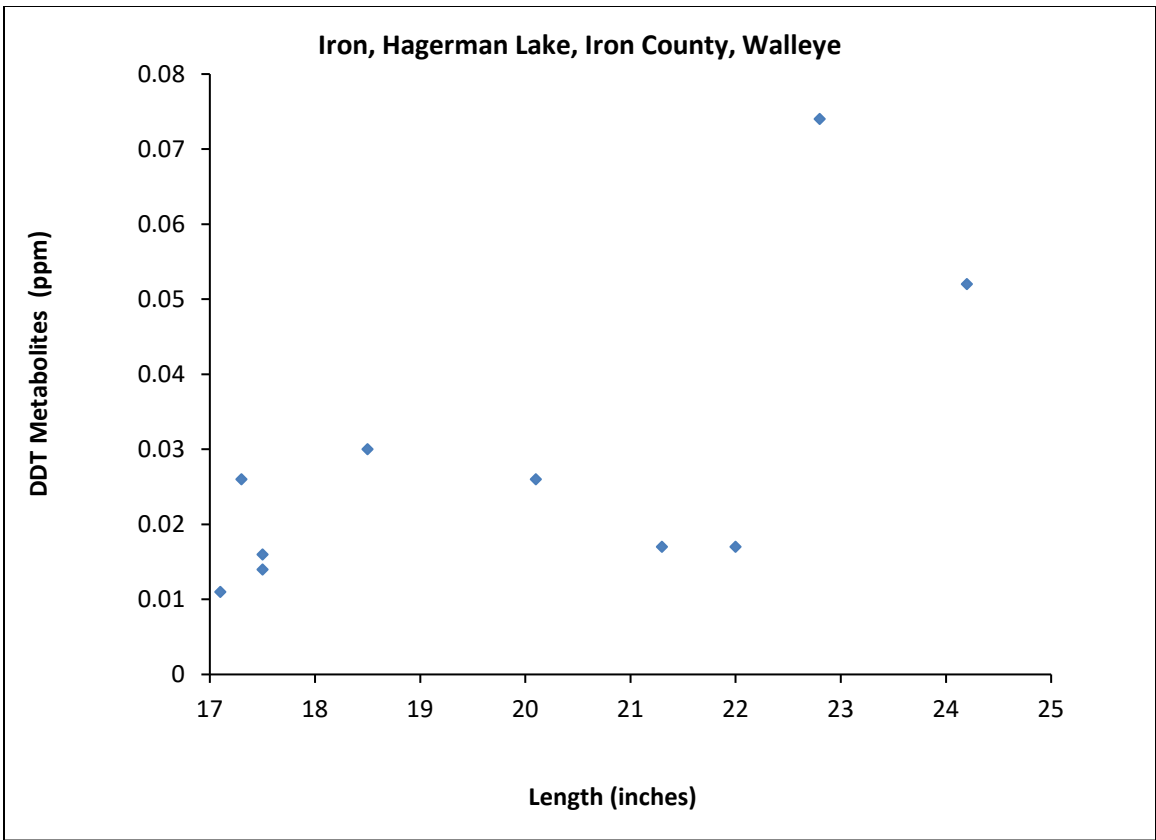
**Existing Advisory:** Hagerman Lake walleye are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 4 meals per month of Hagerman Lake walleye smaller than 20 inches or more than 2 meals per month of those fish larger than 20 inches due to mercury.

*Note: The potential for PCBs and DDT to cause advisories is discounted due to the age of the data.*

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
16	0.13	4
18	0.19	4
20	0.25	4
22	0.31	2
24	0.37	2
26	0.44	2
28	0.50	2
30	0.56	1
<i>Shaded area denotes extrapolated estimates</i>		







**Northern Pike**

**Indian Lake**

**Iron County**

**Hg & Se Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
2008	2008	10	14.2	na*	14.2	23.6		
Datasets available: 2008								
Chemical	Sample Size (Legal)	Mean (ppm)		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
Mercury	10	0.23		0.10	0.87	0.39	2	
Selenium	10	0.29		0.26	0.37	0.32	16	
Chemical	Linear Regression	Exponential Regression	*There is no size limit for Indian Lake (Iron County) northern pike.					
	R <sup>2</sup>	R <sup>2</sup>						
Mercury	0.821	0.879						
Selenium	0.479	0.448						

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
--	--	--	--	--	--	--		
Datasets available: --								
Chemical	Sample Size (Legal)	Mean (ppm)		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
PCB	0	--		--	--	--	--	
DDT	0	--		--	--	--	--	
Chlordane	0	--		--	--	--	--	
Toxaphene	0	--		--	--	--	--	
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
PCB	--	--						
DDT	--	--						
Chlordane	--	--						
Toxaphene	--	--						
<b>Final meal category based on UCL:</b>							<b>2</b>	

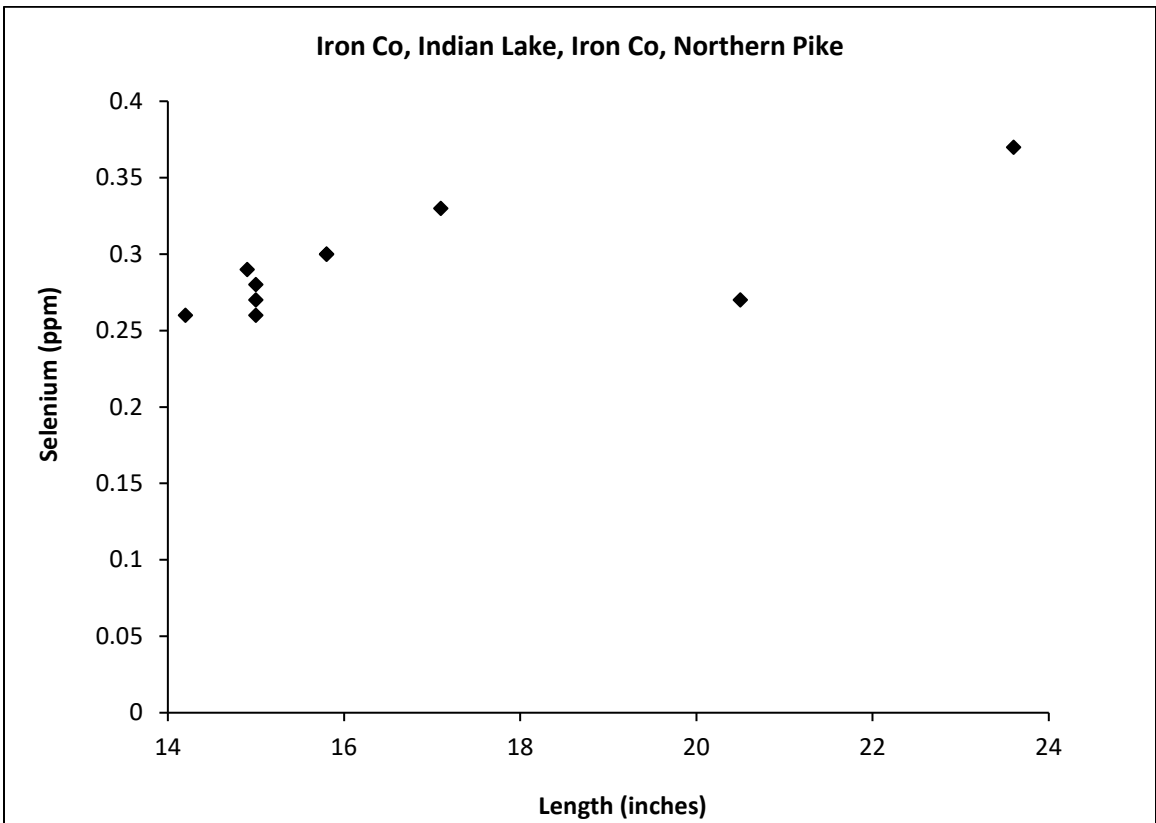
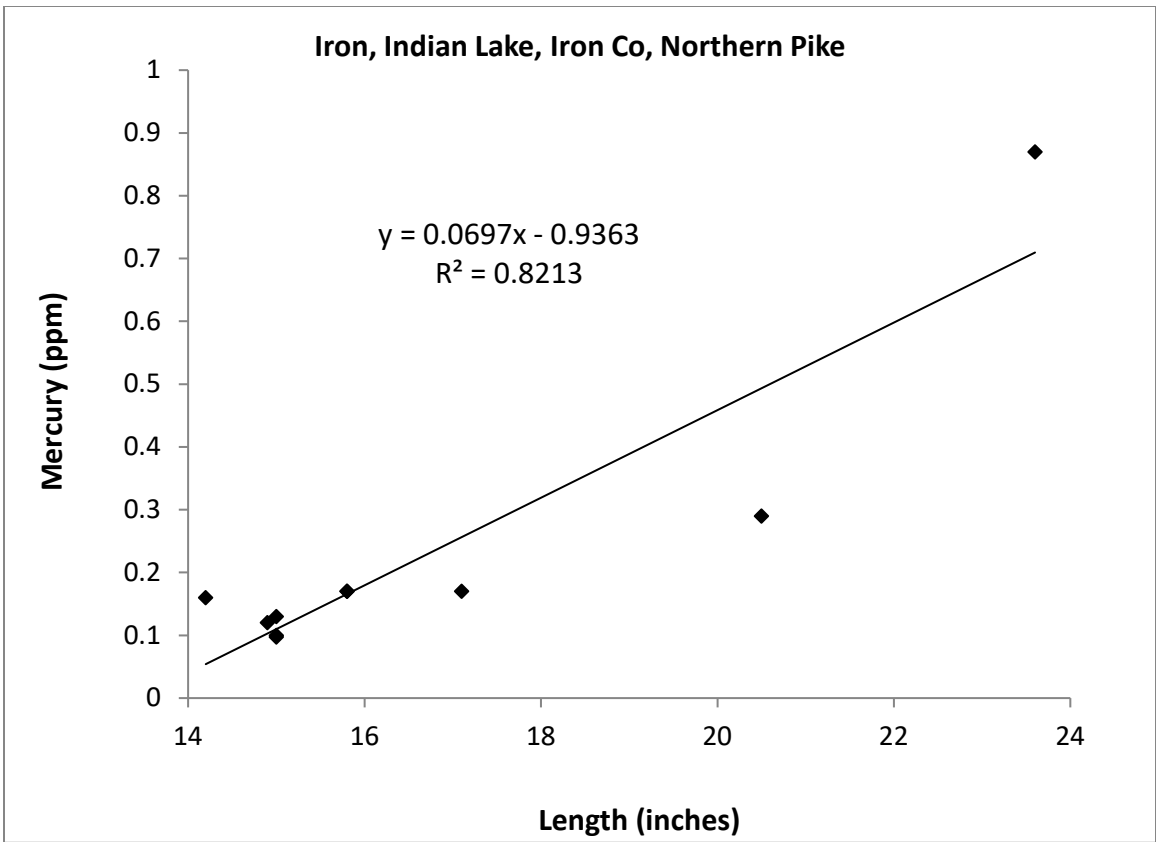
**Existing Advisory:** Indian Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Indian Lake northern pike smaller than 20 inches or more than 1 meal per month of those fish larger than 20 inches due to mercury.

*Note: Linear regression was used to generate meal categories; exponential regression line appeared less realistic for larger fish.*

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
16	0.18	4
18	0.32	2
20	0.46	2
22	0.60	1
24	0.74	1
26	0.88	1
28	1.02	1
30	1.15	0.5

*Shaded area denotes extrapolated estimates*



**Brown Trout**

**Iron River  
Above Wild River Road**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1998	1998	10	6.9	8	7.5	8.7
Datasets available: 1998						
Chemical	Sample Size (All)*	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	2	0.085	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1998	1998	10	6.9	8	7.5	8.7
Datasets available: 1998						
Chemical	Sample Size (All)*	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	2	ND	--	--	--	--
DDT	2	0.003	--	--	--	--
Chlordane	2	ND	--	--	--	--
Toxaphene	2	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--	<b>Final meal category based on UCL:</b>			

\* - 2 composite samples of 5 fillets each

**Existing Advisory:** Iron River brown trout are not covered by an advisory.

**Recommendation:** There are insufficient data available to develop specific advice for Iron River brown trout.

## Largemouth Bass

## Lake Emily

## Iron County

### Hg Analysis:

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	10	11.2	14	13.8	16.9
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	5	0.61	0.45	0.80	0.77	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.908	0.940				

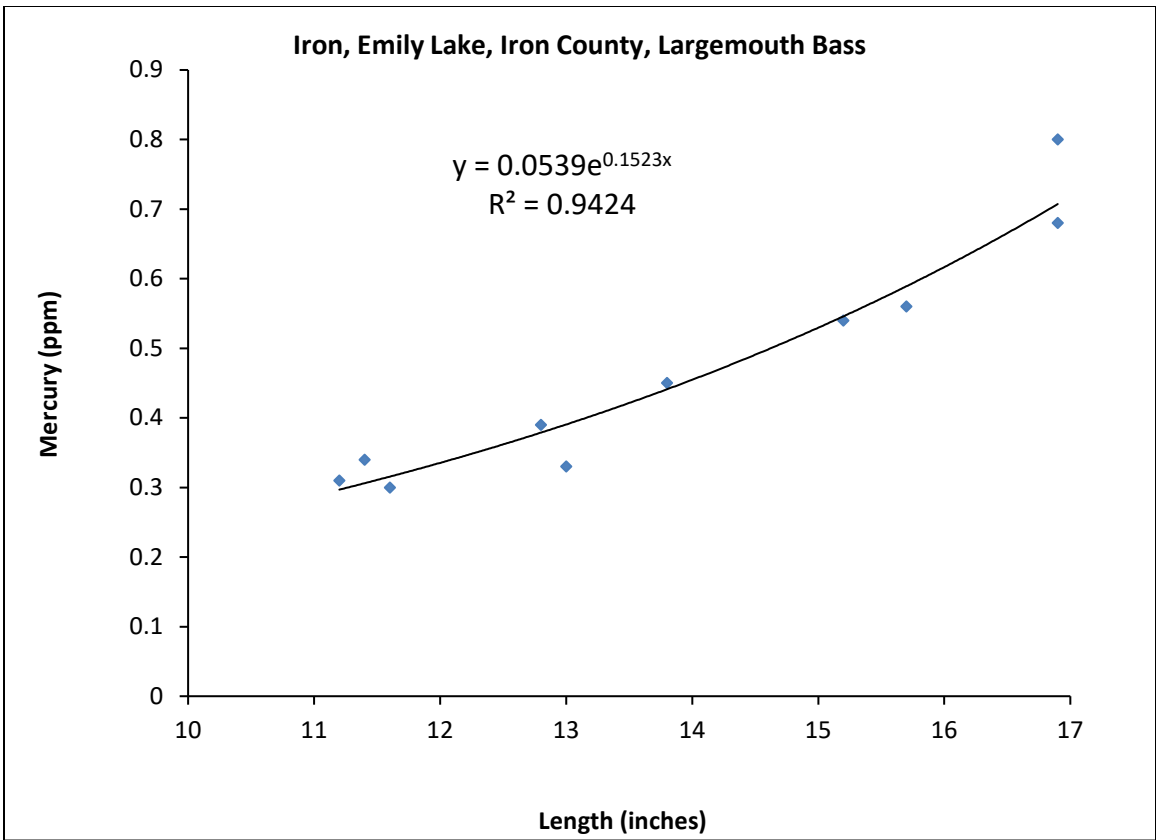
### Organics Analysis:

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Emily Lake largemouth bass are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Emily Lake largemouth or smallmouth bass smaller than 18 inches or more than 6 meals per year of those fish larger than 18 inches due to mercury. The statewide length break was applied as the size range of the fish collected was limited.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
12	0.34	2
14	0.45	2
16	0.62	1
18	0.84	1
20	1.13	0.5
22	1.54	0.5
24	2.08	0.5
<i>Shaded area denotes extrapolated estimates</i>		



**Walleye**

**Lake Emily**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	2014	20	12	15		24.9
Datasets available: 1988, 2014						
Chemical	Sample Size (Legal)	Mean	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	18	0.63	0.26	1.17	0.77	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.632	0.667				

**Organics Analysis:**

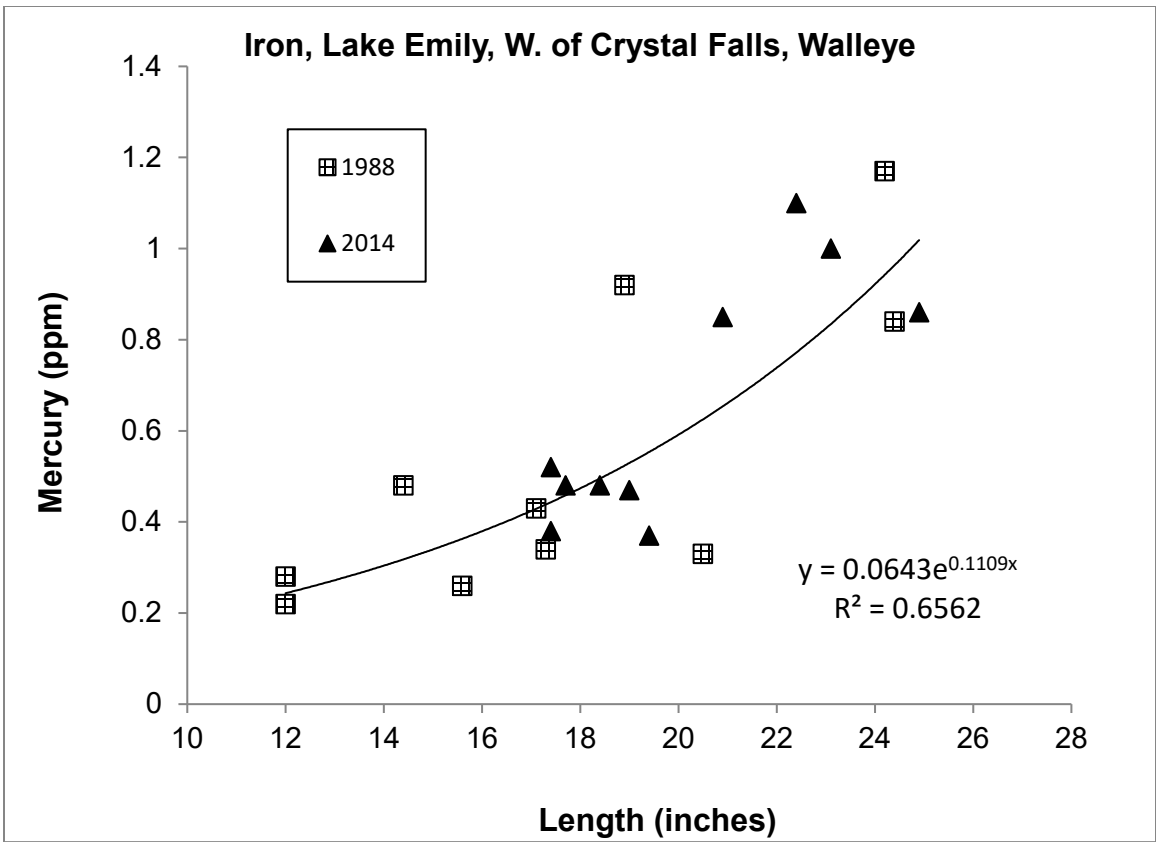
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	NA	--	--	--	--
DDT	0	NA	--	--	--	--
Chlordane	0	NA	--	--	--	--
Toxaphene	0	NA	--	--	--	--
TEQ	0	NA	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
TEQ	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** No one should eat more than 2 meals per month of Emily Lake walleye smaller than 20 inches or more than 1 meal per month of those fish larger than 20 inches due to mercury.

**Recommendation:** No change is recommended.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
14	0.3	2
16	0.38	2
18	0.47	2
20	0.59	1
22	0.74	1
24	0.92	1
26	1.15	0.5
28	1.43	0.5

*Shaded area denotes extrapolated estimates*



**Largemouth Bass**

**Lake Mary**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
2018	2018	10	12.4	14.0	13.6	16.2	
Datasets available: 2018							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
Mercury	7	0.469	0.400	0.540	0.513	2	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	0.043	0.049					

**Organics Analysis:**

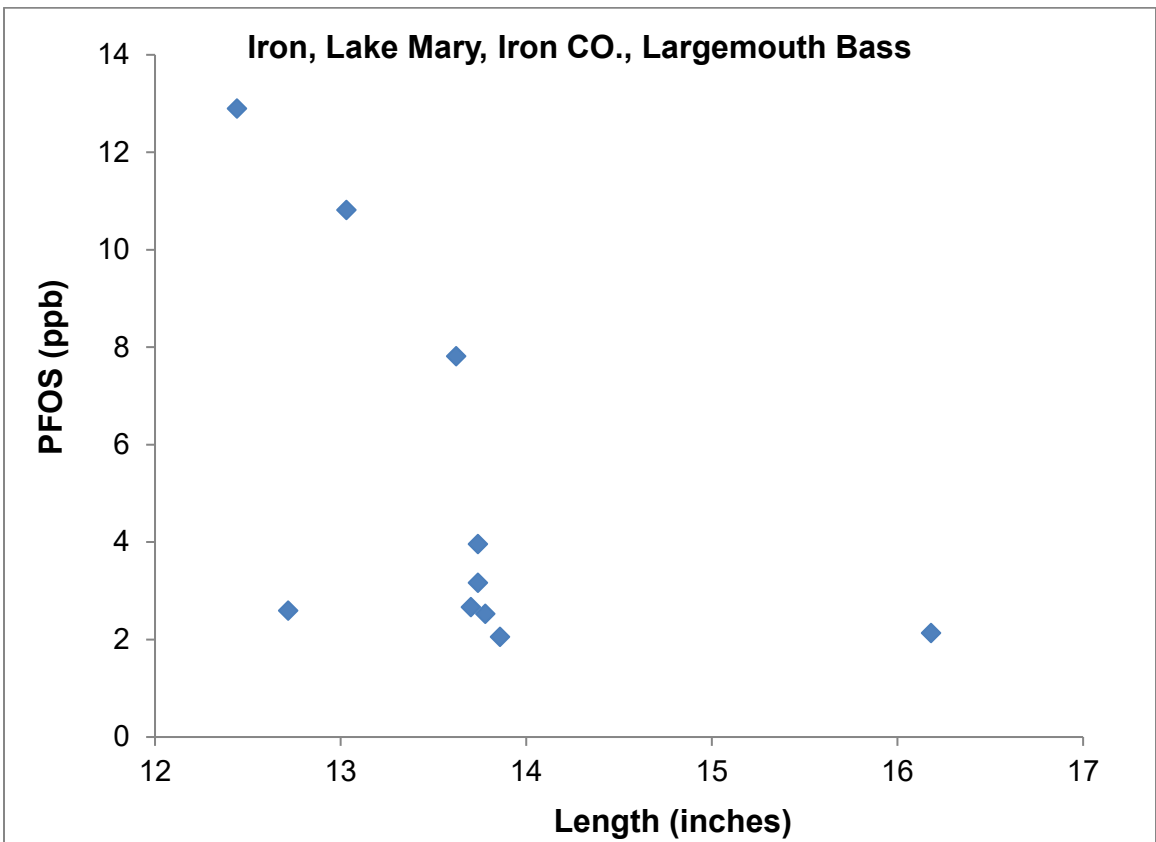
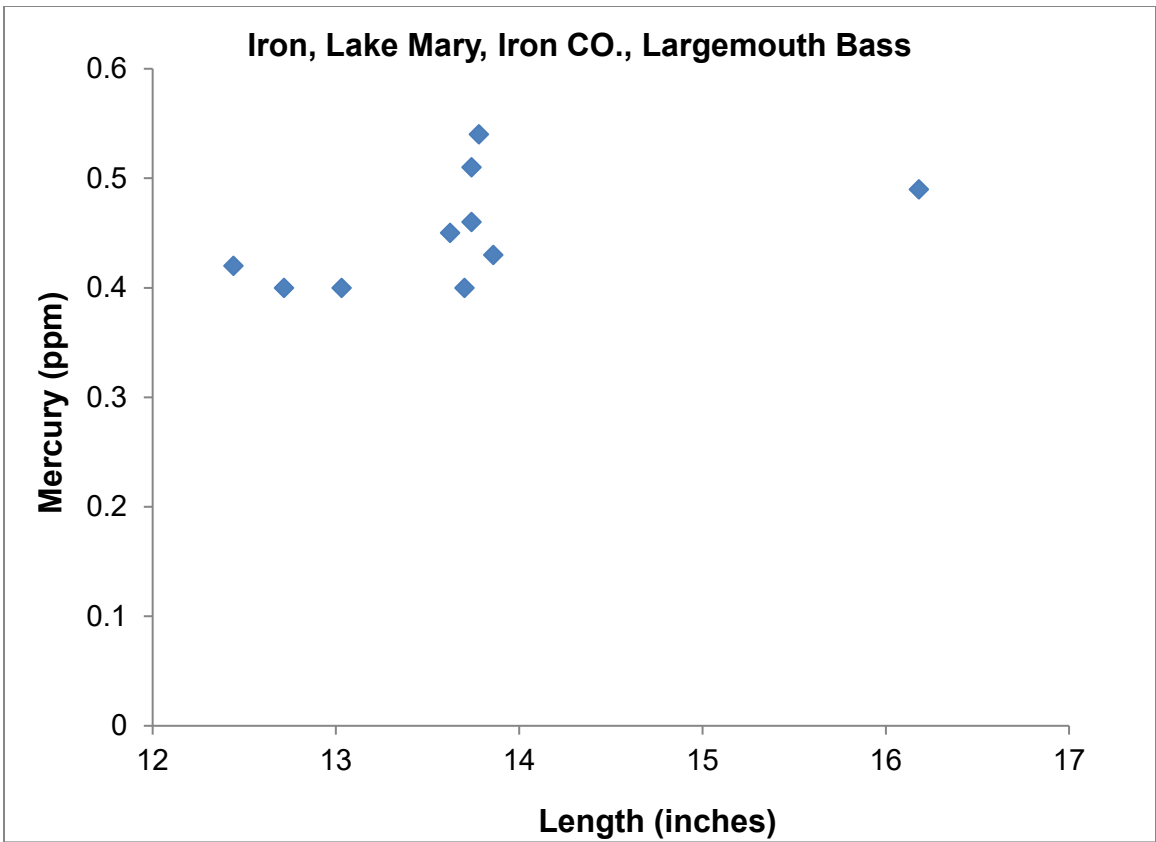
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
2018	2018	10	12.4	14.0	13.6	16.2	
Datasets available: 2018							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
PCB	7	ND	--	--	--	16	
DDT	7	ND	--	--	--	16	
Chlordane	7	ND	--	--	--	16	
Toxaphene	7	ND	--	--	--	--	
PFOS	10*	5.1 ppb	2.1 ppb	12.9 ppb	7.9 ppb	16	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
PFOS	0.292	0.308	<b>Final meal category based on UCL:</b>				<b>2</b>

\*Sub-legal fish used in the analysis as no correlation between fish size and PFOS concentration has been observed in the statewide data set.

**Existing MDHHS Advisory:** Largemouth and smallmouth bass from Lake Mary in Iron County are currently covered under the statewide mercury guidance. No one should eat more than 2 meals per month of largemouth or smallmouth bass smaller than 18 inches or no more than 1 meal per month of these fish larger than 18 inches.

**Recommendation:** No one should eat more than 2 meals per month of largemouth or smallmouth bass smaller than 18 inches from Lake Mary in Iron County or no more than 1 meal per month of these fish larger than 18 inches due to mercury. Statewide length break was applied due to limited size range of fish used in the analysis.





**Brown Bullhead**

**Marten Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1985	1985	2	11.7	na	11.7	14.5
Datasets available:		1985				
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	2	0.5	0.2	0.8	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available:		--				
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Marten Lake brown bullhead have no existing advisory.

**Recommendation:** There are insufficient data available to develop specific advice for Marten Lake bullhead due to mercury.

*Note: Limited evidence from this lake suggests elevated relatively high Hg concentrations; results for northern pike from this lake are high relative to the statewide median.*

**Northern Pike**

**Marten Lake**

**Iron County**

**Hg Analysis:**

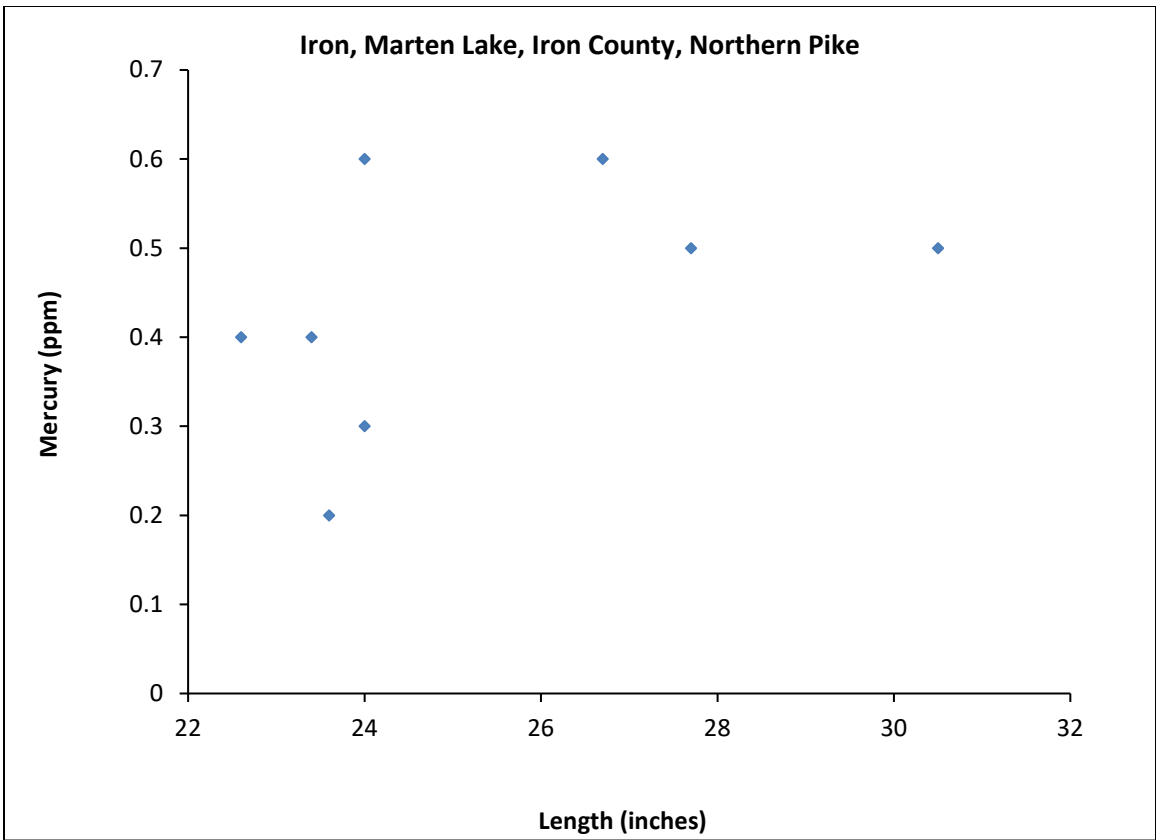
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1985	1985	8	22.6	24	23.6	30.5
Datasets available: 1985						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	0.45	0.2	0.6	0.62	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.216	0.212				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Marten Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Marten Lake northern pike smaller than 30 inches or more than 6 meals per year of those fish larger than 30 inches due to mercury. The statewide length break was applied as the size range of the fish collected was limited.



**Northern Pike**

**Net River  
Iron County, The Wide Waters**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1989	1989	10	19.5	na*	19	25
Datasets available: 1989						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.42	0.24	0.65	0.52	2
Chemical	Linear Regression	Exponential Regression	* - there is no size limit for Net River northern pike			
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.648	0.623				

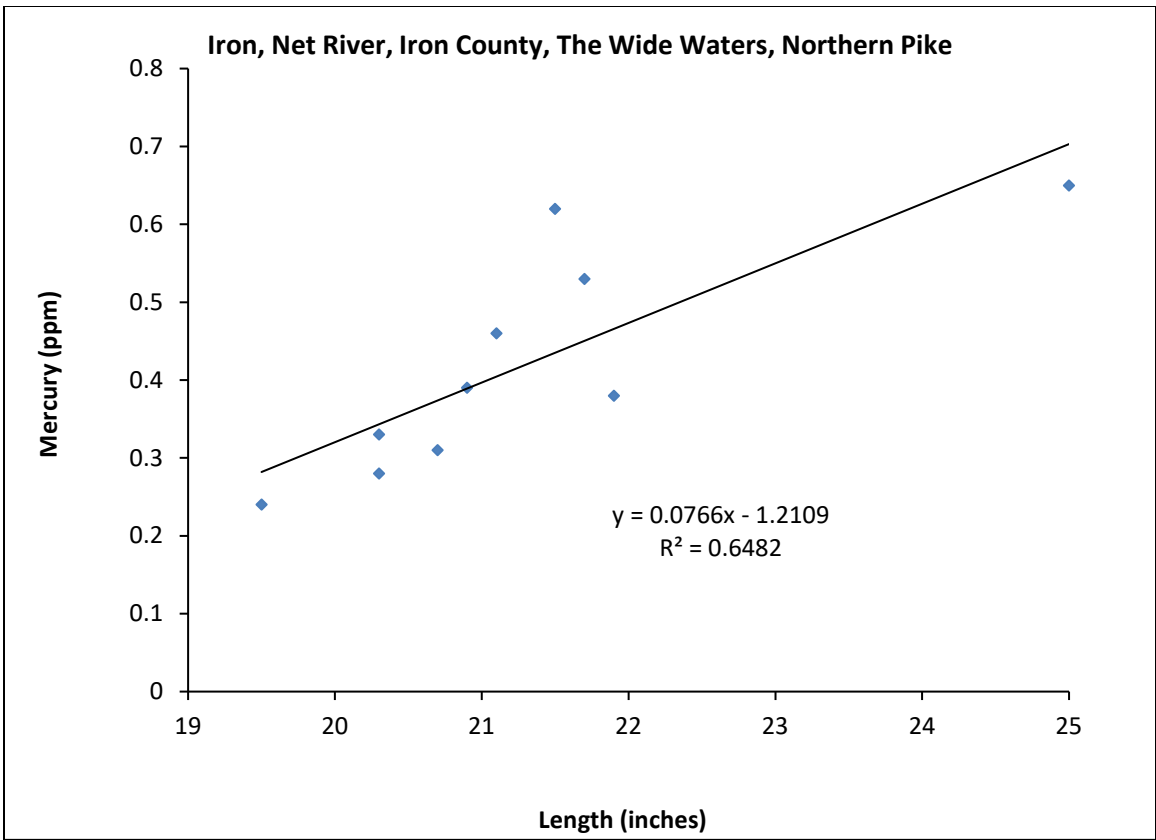
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1989	1989	10	19.5	na*	19	25
Datasets available: 1989						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	ND	--	--	--	--
DDT	10	ND	--	--	--	--
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Women and children should eat no more than one meal per month of Net River northern pike.

**Recommendation:** No one should eat more than 1 meals per month of Net River northern pike smaller than 30 inches or more than 6 meal per year of those fish larger than 30 inches due to mercury. The statewide length break was applied as the size range of the collected fish was limited.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
19	0.24	4
21	0.40	2
23	0.55	1
25	0.70	1
27	0.86	1
29	1.01	1
31	1.16	0.5
33	1.32	0.5
35	1.47	0.5
<i>Shaded area denotes extrapolated estimates</i>		



**Walleye**

**Net River  
Iron, The Wide Waters**

**Iron County**

**Hg Analysis:**

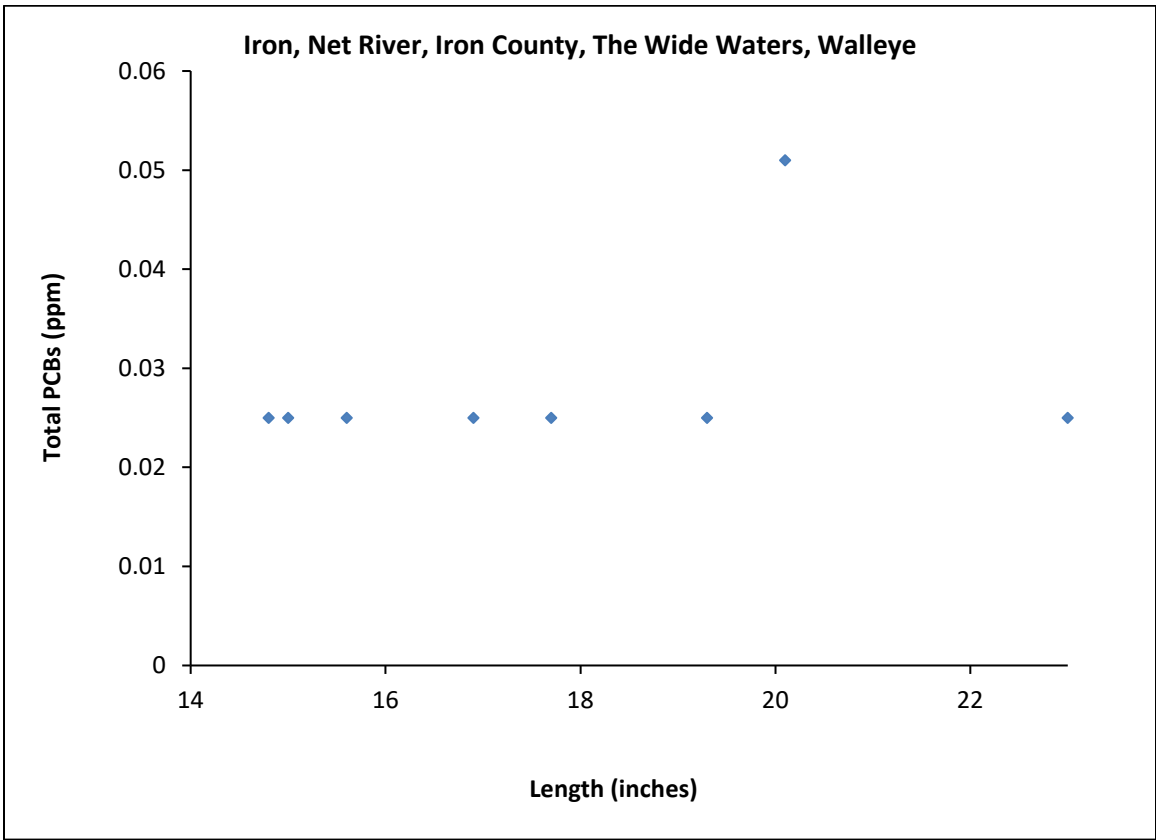
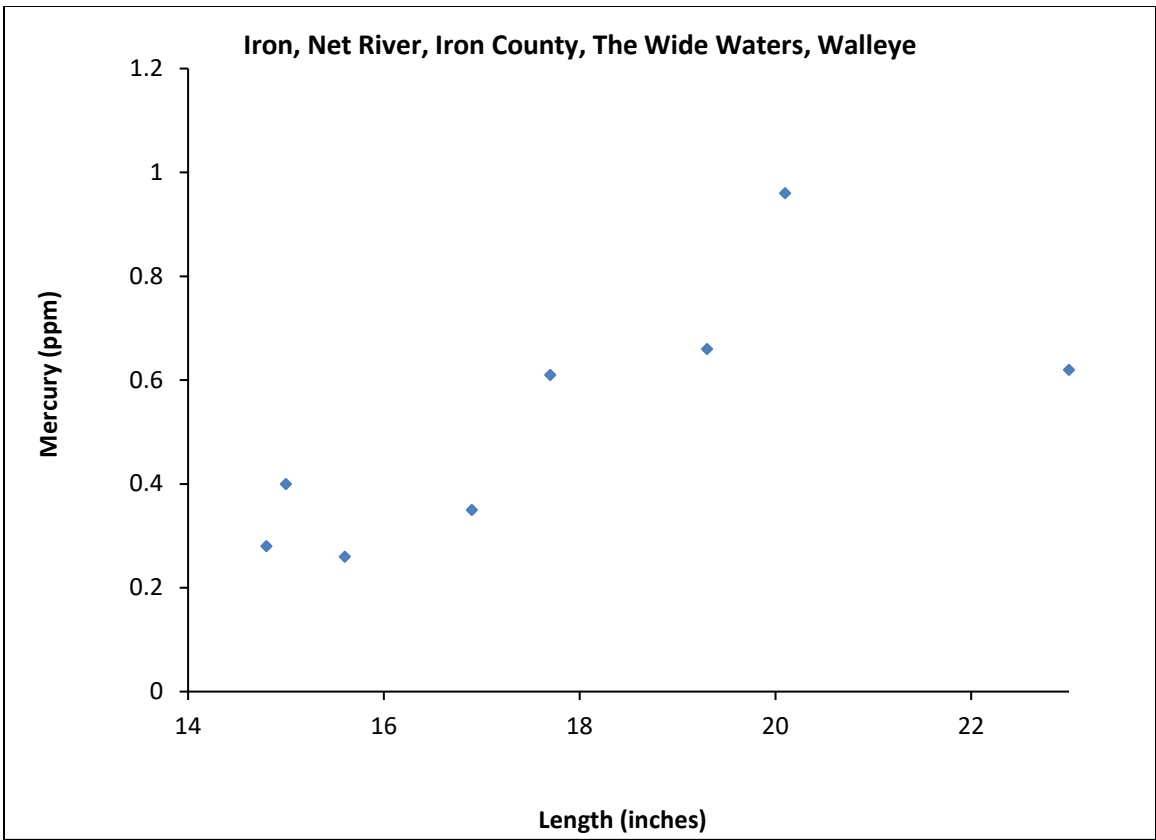
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1989	1989	8	14.8	15	14.8	23
Datasets available: 1989						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	8	0.52	0.26	0.96	0.72	1
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.541	0.595				

**Organics Analysis:**

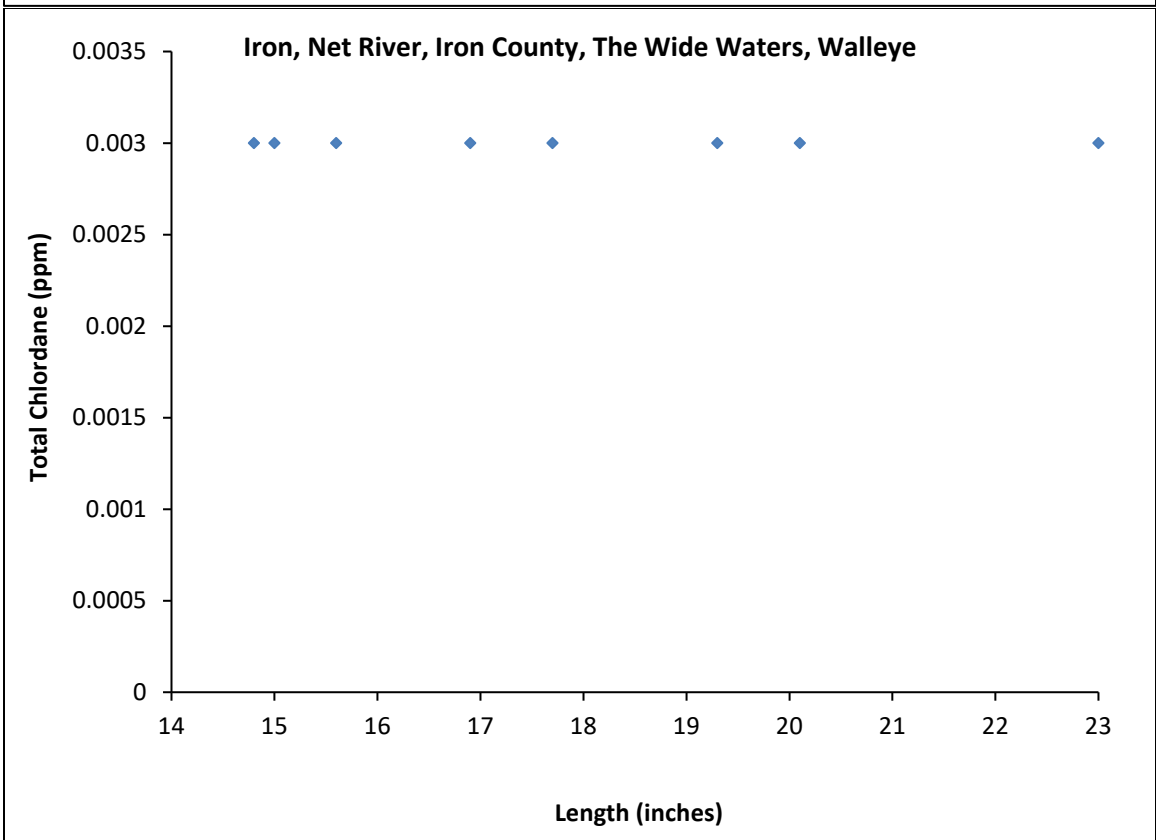
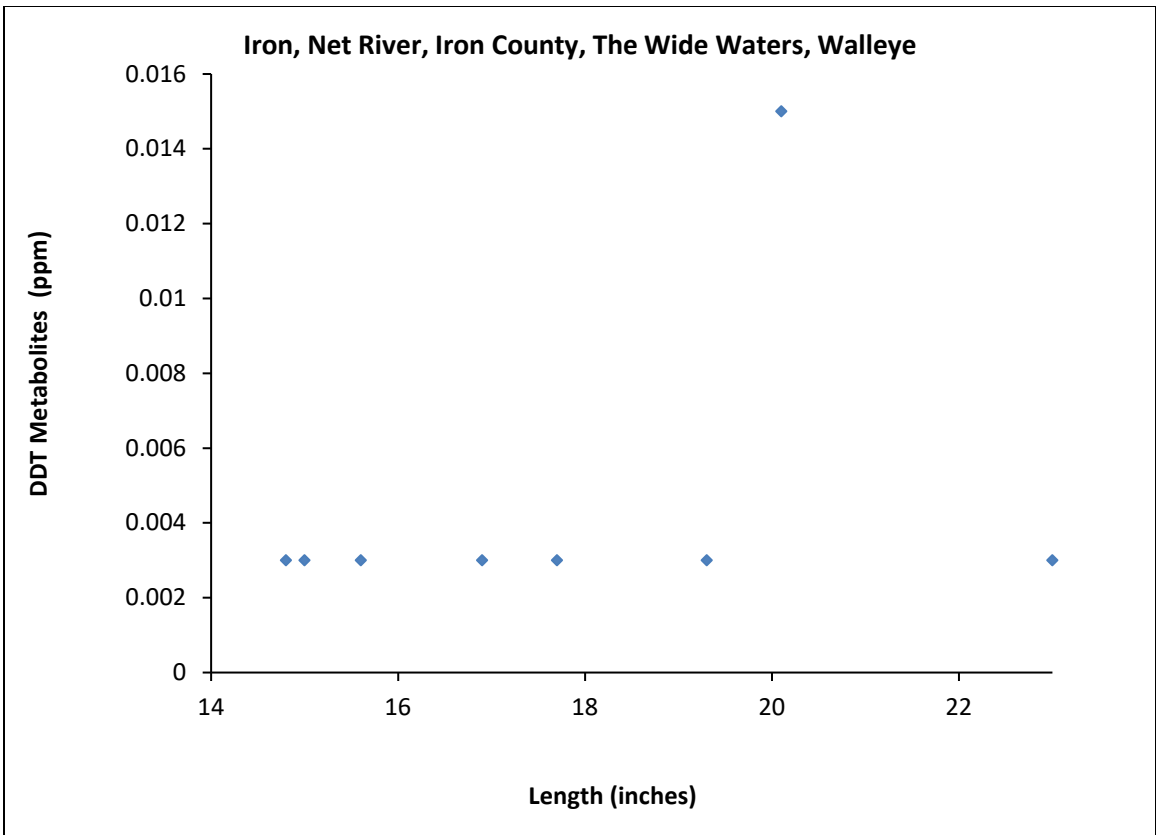
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1989	1989	8	14.8	15	14.8	23
Datasets available: 1989						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	8	0.03	0.02	0.05	0.04	4
DDT	8	0.005	0.003	0.02	0.01	16
Chlordane	8	0.003	0.003	0.003	0.003	--
Toxaphene	8	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	0.106	0.106				
DDT	0.106	0.106				
Chlordane	0.000	0.000				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Women and children should not eat more than one meal per month of Net River walleye.

**Recommendation:** No one should eat more than 1 meal per month of Net River walleye smaller than 20 inches or more than 6 meals per year of those fish larger than 20 inches due to mercury. The statewide length break was applied as the size range of the collected fish was limited. PCBs would cause an advisory.







**Northern Pike**

**Ottawa Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	1986	5	21.9	24	23.8	27.6
Datasets available: 1986						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	3	0.37	0.3	0.4	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.836	0.792				

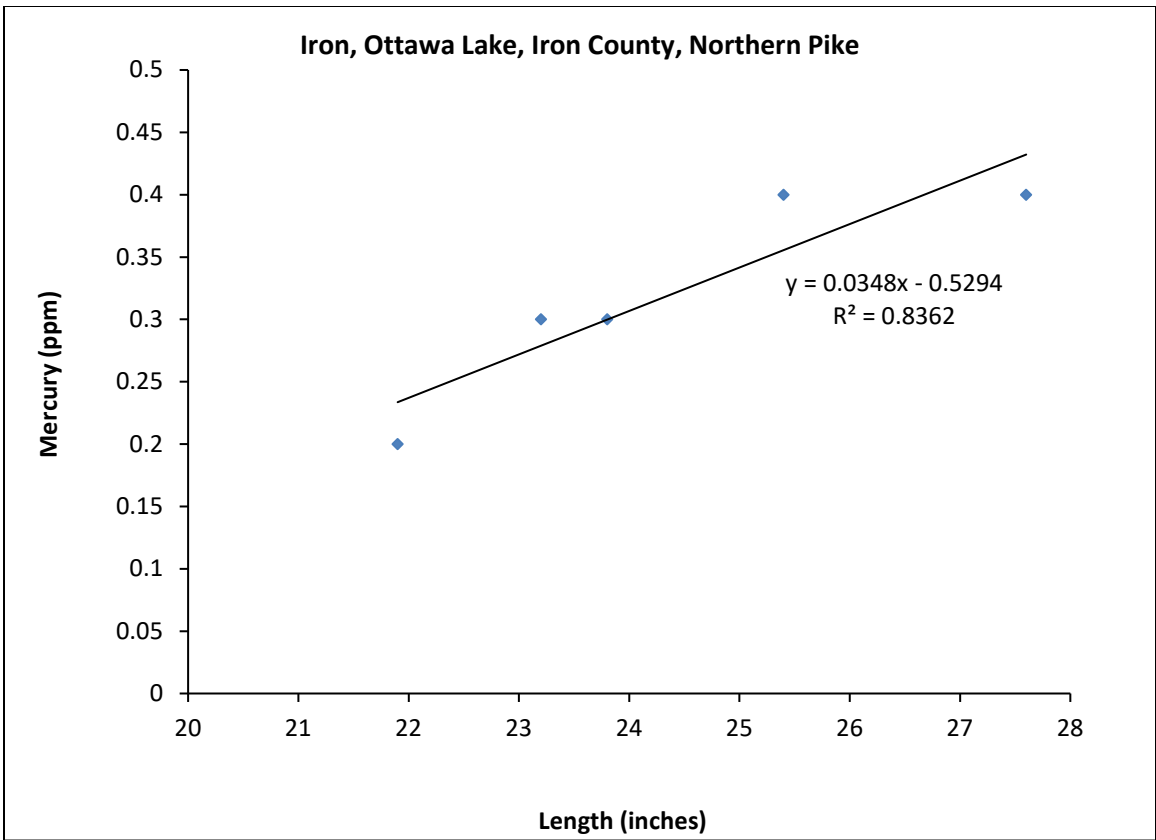
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Ottawa Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals of Ottawa Lake northern pike smaller than 30 inches or more than 1 meal per month of those fish larger than 30 inches due to mercury. Statewide length break applied as the size range was limited.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
22	0.24	4
24	0.31	2
26	0.38	2
28	0.45	2
30	0.51	2
32	0.58	1
34	0.65	1
36	0.72	1
<i>Shaded area denotes extrapolated estimates</i>		



**Rock Bass**

**Ottawa Lake**

**Iron County**

**Hg Analysis:**

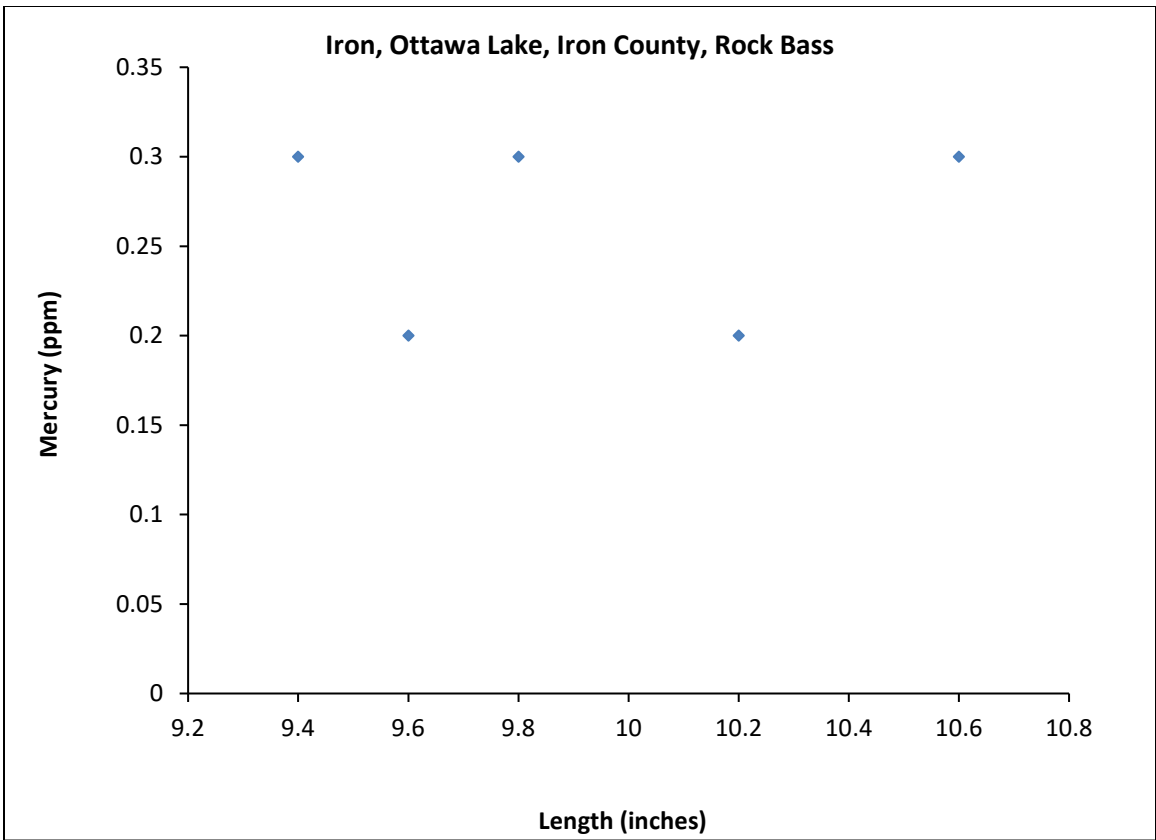
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	1986	5	9.4	na	9.4	10.6
Datasets available: 1986						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	5	0.26	0.2	0.3	0.33	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.001	0.001				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Ottawa Lake rock bass are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Ottawa Lake rock bass due to mercury.



**Northern Pike**

**Paint Lake**

**Iron County**

**Hg Analysis:**

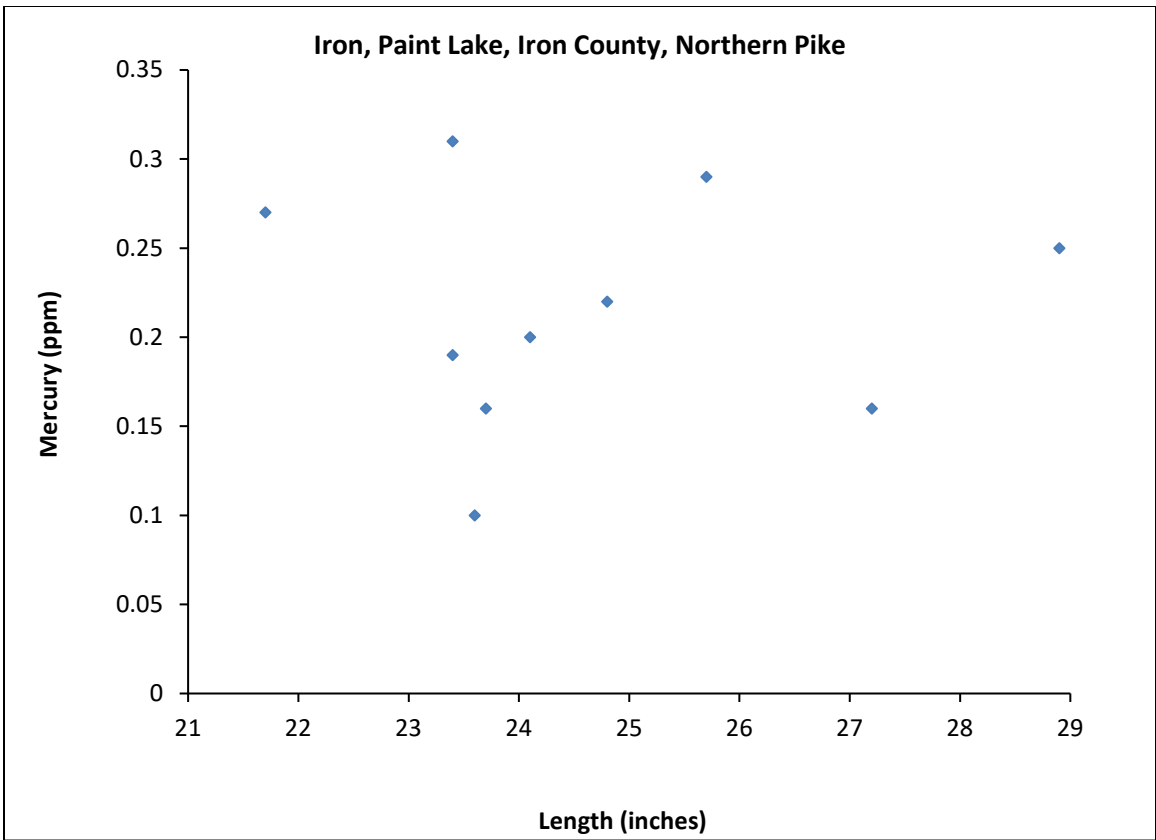
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2003	2003	10	21.7	24	23.6	28.9
Datasets available: 2003						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	7	0.20	0.1	0.29	0.26	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.000	0.003				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	0				
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

**Existing Advisory:** Women and children should not eat more than one meal per week of Paint Lake northern pike smaller than 30 inches and no more than one meal per month of northern pike larger than 30 inches due to mercury.

**Recommendation:** No one should eat more than 4 meals per month of Paint Lake northern pike smaller than 30 inches or more than 2 meals per month of those fish larger than 30 inches due to mercury. The statewide length break was applied as the size range of the fish was limited.



**Muskellunge**

**Paint River  
Paint River Pond**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of All Samples		
Earliest	Most Recent				Min	Max	
1984	1984	3	21.4	42	21.4	27.3	
Datasets available: 1984							
Chemical	Sample Size (All)	Mean		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL	Meal Category
Mercury	3	0.57		0.4	0.4	1.1	1
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	0.814	0.871					

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		
Earliest	Most Recent				Min	Max	
--	--	--	--	--	--	--	
Datasets available: --							
Chemical	Sample Size (Legal)	Mean		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL	Meal Category
PCB	0	--		--	--	--	--
DDT	0	--		--	--	--	--
Chlordane	0	--		--	--	--	--
Toxaphene	0	--		--	--	--	--
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
<b>Final meal category based on UCL:</b>							<b>1</b>

**Existing Advisory:** Paint River Pond, in the Paint River, muskellunge are covered under the statewide mercury advisory.

**Recommendation:** Statewide guidelines apply. Data are insufficient to calculate a waterbody-species specific guideline.



**Rock Bass**

**Paint River  
Paint River Pond**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
1984	1984	1	8.3	--	--	--		
Datasets available: 1984								
Chemical	Sample Size (Legal)	Mean	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL	Meal Category		
Mercury	--	--	--	--	--	--		
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
Mercury	--	--						

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
--	--	--	--	--	--	--		
Datasets available: --								
Chemical	Sample Size (Legal)	Mean	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL	Meal Category		
PCB	0	--	--	--	--	--		
DDT	0	--	--	--	--	--		
Chlordane	0	--	--	--	--	--		
Toxaphene	0	--	--	--	--	--		
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
PCB	--	--						
DDT	--	--						
Chlordane	--	--						
Toxaphene	--	--						
						<b>Final meal category based on UCL:</b>	--	

**Existing Advisory:** Rock bass from Paint River Pond are covered by the statewide mercury advisory.

**Recommendation:** Statewide guidelines apply. Data are insufficient to calculate a waterbody-species specific guideline.

**Walleye**

**Paint River  
Paint River Pond**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
1984	1984	4	13.1	15	17.2	19.7		
Datasets available:		1984						
Chemical	Sample Size (All)	Mean		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL	Meal Category	
Mercury	4	0.83		0.7	1	1.06	1	
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
Mercury	0.073	0.072						

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
--	--	--	--	--	--	--		
Datasets available:		--						
Chemical	Sample Size (Legal)	Mean		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL	Meal Category	
PCB	0	--		--	--	--	--	
DDT	0	--		--	--	--	--	
Chlordane	0	--		--	--	--	--	
Toxaphene	0	--		--	--	--	--	
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
PCB	--	--						
DDT	--	--						
Chlordane	--	--						
Toxaphene	--	--						
							<b>Final meal category based on UCL:</b>	<b>1</b>

**Existing Advisory:** Women and children should eat no more than one meal per month of 14 to 18 inch walleye and no one should eat walleye over 18 inches from the Michigamme River System.

**Recommendation:** Statewide guidelines apply. Data are insufficient to calculate a waterbody-species specific guideline.

**Yellow Perch**

**Paint River  
Paint River Pond**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
1984	1984	2	6.8	NA	6.8	7.2		
Datasets available:		1984						
Chemical	Sample Size (Legal)	Mean	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL	Meal Category		
Mercury	2	--	0.1	0.1	--	--		
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
Mercury	--	--						

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
--	--	--	--	--	--	--		
Datasets available:								
Chemical	Sample Size (Legal)	Mean	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL	Meal Category		
PCB	0	--	--	--	--	--		
DDT	0	--	--	--	--	--		
Chlordane	0	--	--	--	--	--		
Toxaphene	0	--	--	--	--	--		
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
PCB	--	--						
DDT	--	--						
Chlordane	--	--						
Toxaphene	--	--						
							<b>Final meal category based on UCL:</b>	

**Existing Advisory:** Paint River Pond, in the Paint River, yellow perch are covered under the statewide mercury advisory.

**Recommendation:** Statewide guidelines apply. Data are insufficient to calculate a waterbody-species specific guideline.

**Northern Pike**

**Perch Lake**

**Iron County**

**Hg & Se Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	2006	16	16.5	24	23.6	31.6
Datasets available: 1988, 2006						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	9	0.45	0.28	0.92	0.60	1
Selenium	8	0.26	0.21	0.37	0.30	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.623	0.715				
Selenium	0.025	0.011				

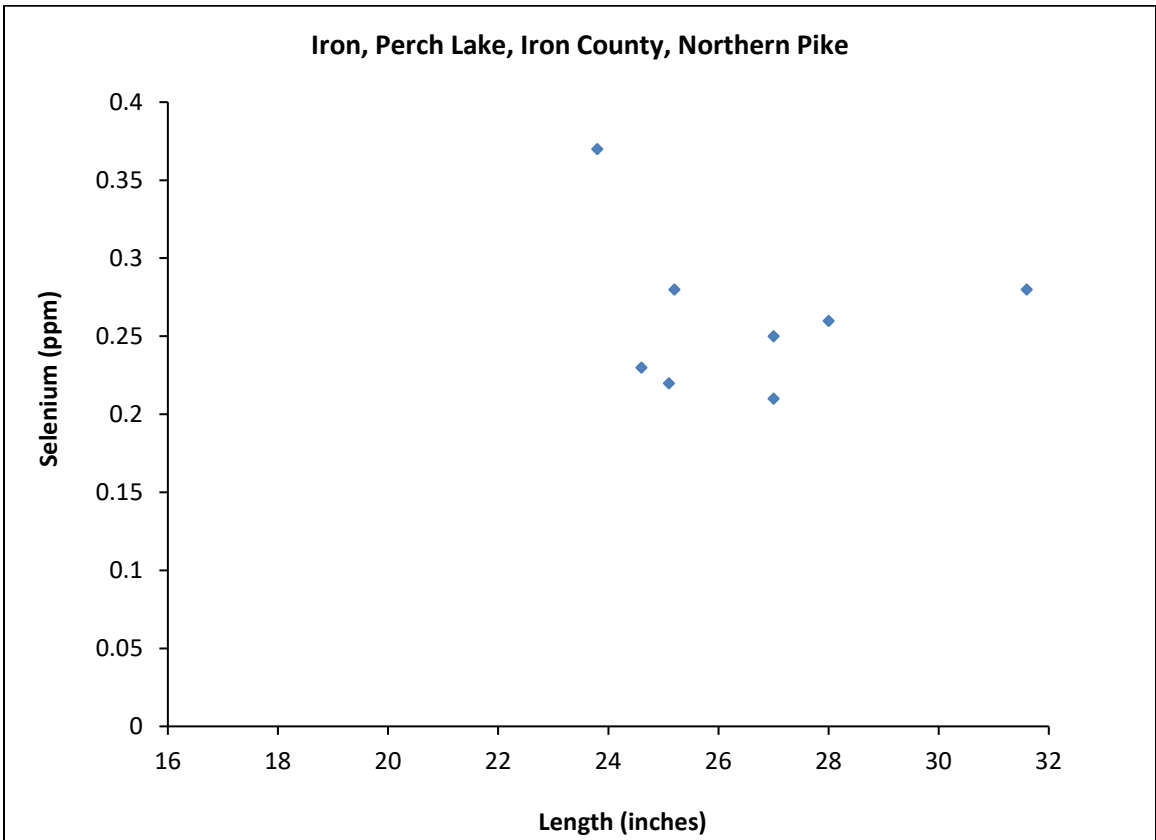
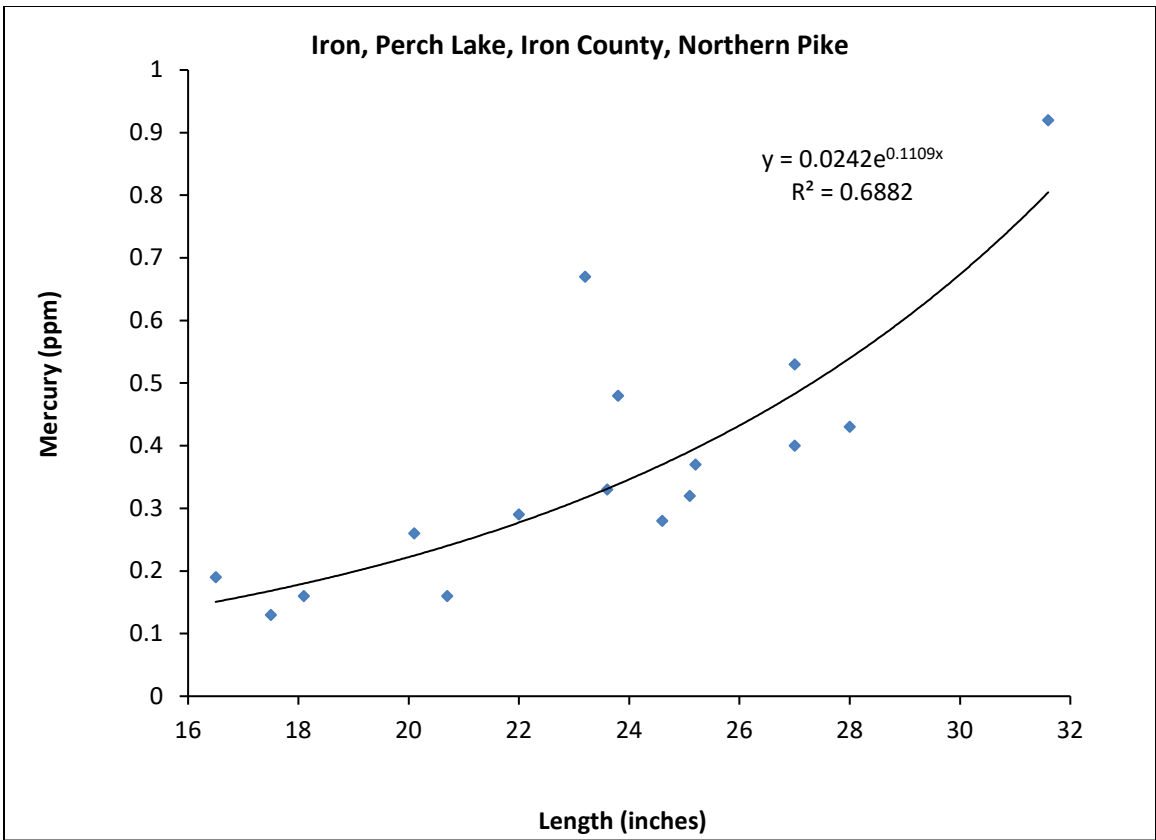
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Perch Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Perch Lake northern pike smaller than 28 inches or more than 1 meal per month of those fish larger than 28 inches due to mercury.

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
22	0.28	2
24	0.35	2
26	0.43	2
28	0.54	1
30	0.67	1
32	0.84	1
34	1.05	1
36	1.31	0.5
<i>Shaded area denotes extrapolated estimates</i>		



**Walleye**

**Perch Lake**

**Iron County**

**Hg & Se Analysis:**

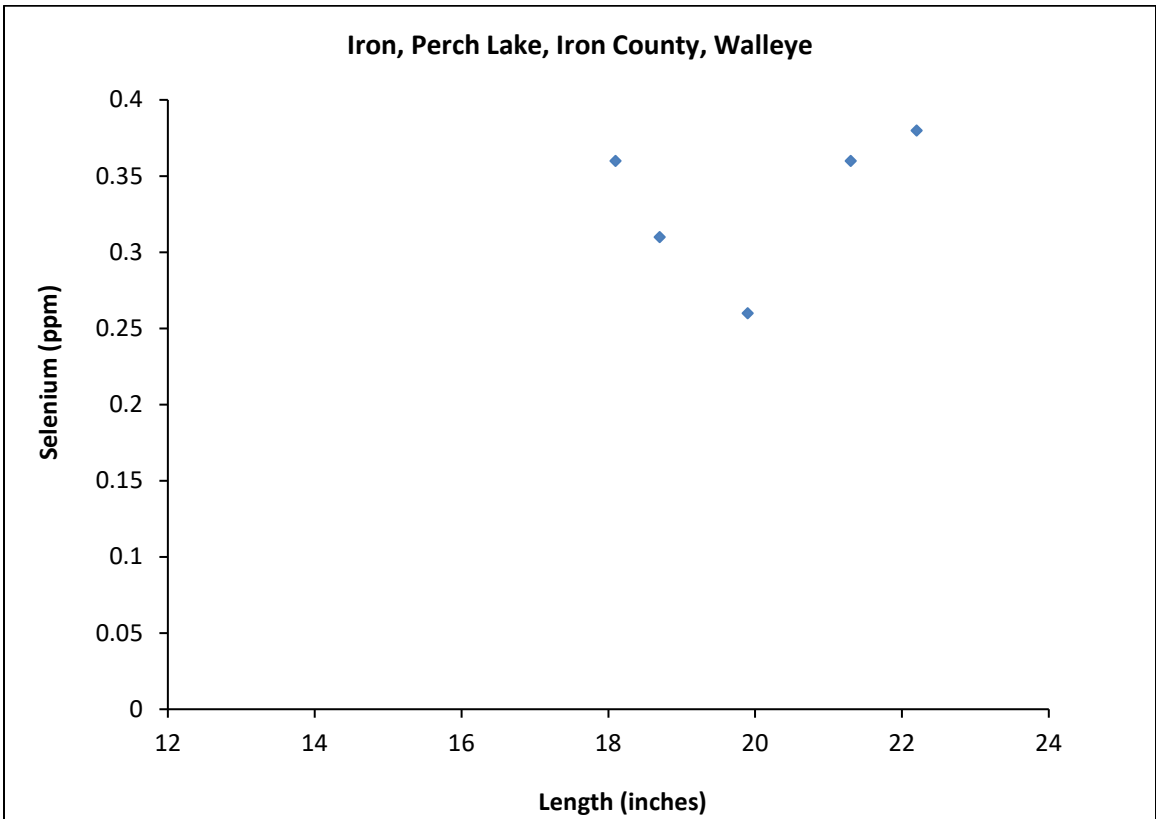
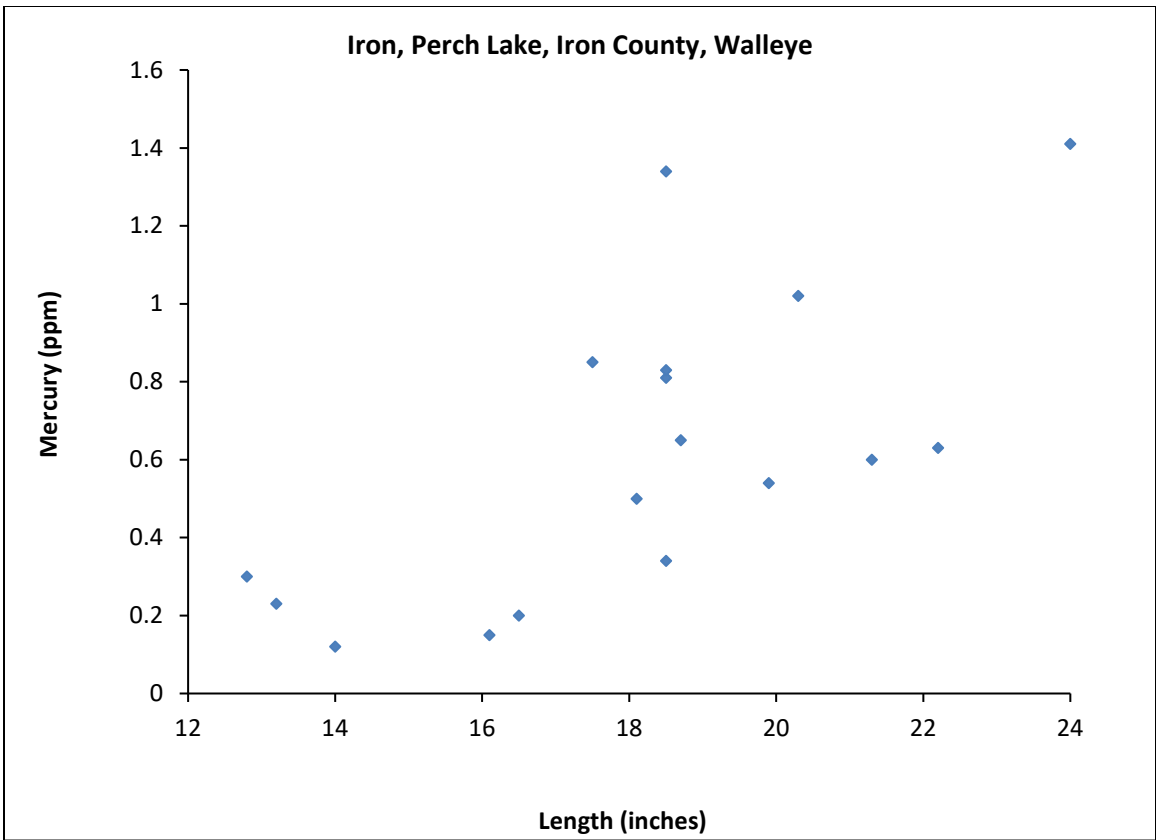
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	2006	17	12.8	15	16.1	24
Datasets available: 1988, 2006						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	14	0.71	0.15	1.41	0.92	1
Selenium	5	0.334	0.260	0.380	0.390	16
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.462	0.525				
Selenium	0.137	0.116				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Perch Lake walleye are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Perch Lake walleye less than 20 inches or 6 meals per year of those greater than 20 inches due to mercury. Statewide length break applied as the sample size of fish over 20 inches is limited.



**Northern Pike**

**Runkle Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1985	2003	20	16.7	na*	16.7	25
Datasets available: 1985, 2003						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	20	0.62	0.35	1.30	0.72	1
Chemical	Linear Regression	Exponential Regression	*There is no minimum size limit on Runkle Lake northern pike.			
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.199	0.241				

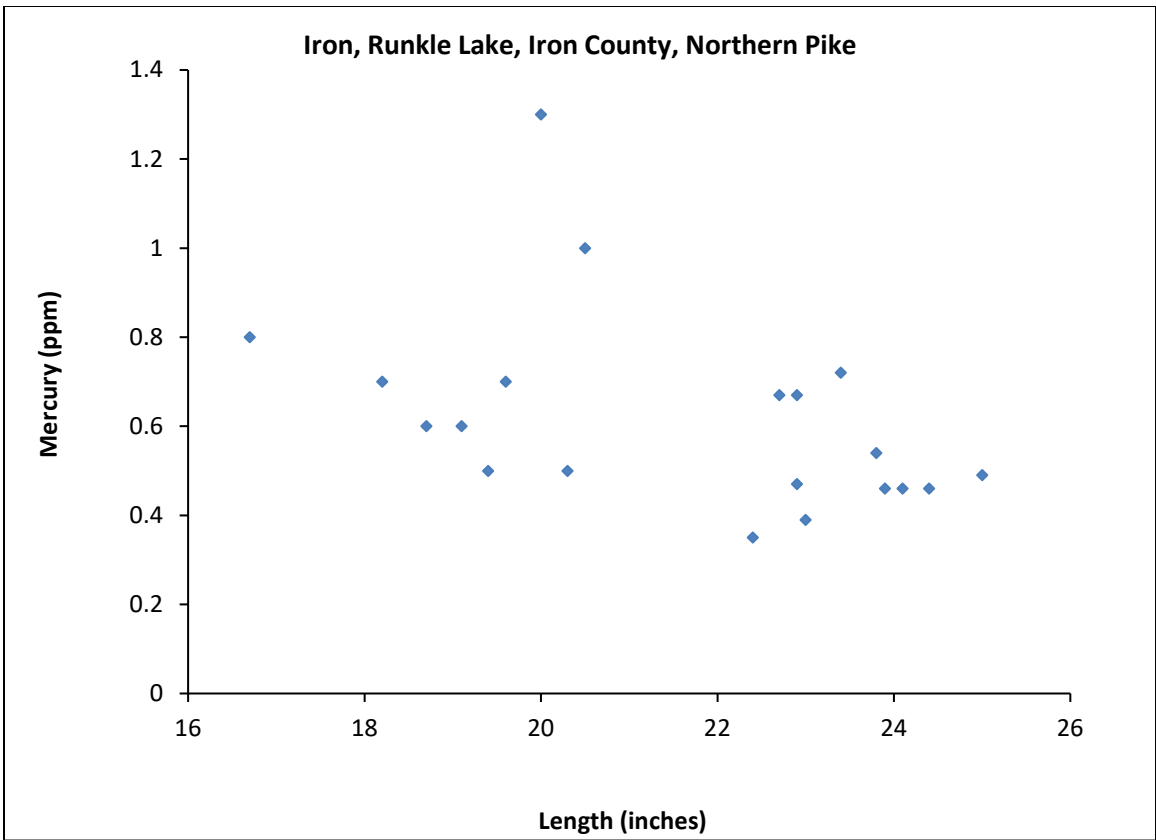
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2003	2003	11	22.4	na*	22.4	25
Datasets available: 2003						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	11	ND	--	--	--	--
DDT	11	0.001	0.001	0.002	0.002	16
Chlordane	11	ND	--	--	--	--
Toxaphene	11	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression	*There is no minimum size limit on Runkle Lake (Iron County) northern pike.			
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT						
Chlordane						
Toxaphene						
<b>Final meal category based on UCL:</b>						<b>1</b>

**Existing Advisory:** Runkle Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 1 meal per month of Runkle Lake northern pike smaller than 30 inches or more than 6 meals per year of those fish larger than 30 inches due to mercury. The statewide length break was applied as the size range of the fish was limited.





**Lake Trout**

**Smokey Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
1986	1986	1	31.9	8	31.9	31.9		
Datasets available:		1986						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category		
Mercury	1	1.6	--	--	--	--		
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
Mercury	--	--						

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
--	--	--	--	--	--	--		
Datasets available:		--						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category		
PCB	0	--	--	--	--	--		
DDT	0	--	--	--	--	--		
Chlordane	0	--	--	--	--	--		
Toxaphene	0	--	--	--	--	--		
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
PCB	--	--						
DDT	--	--						
Chlordane	--	--						
Toxaphene	--	--						
						<b>Final meal category based on UCL:</b>		--

**Existing Advisory:** Smokey Lake lake trout are not covered by an advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method.

**Rock Bass**

**Smokey Lake**

**Iron County**

**Hg Analysis:**

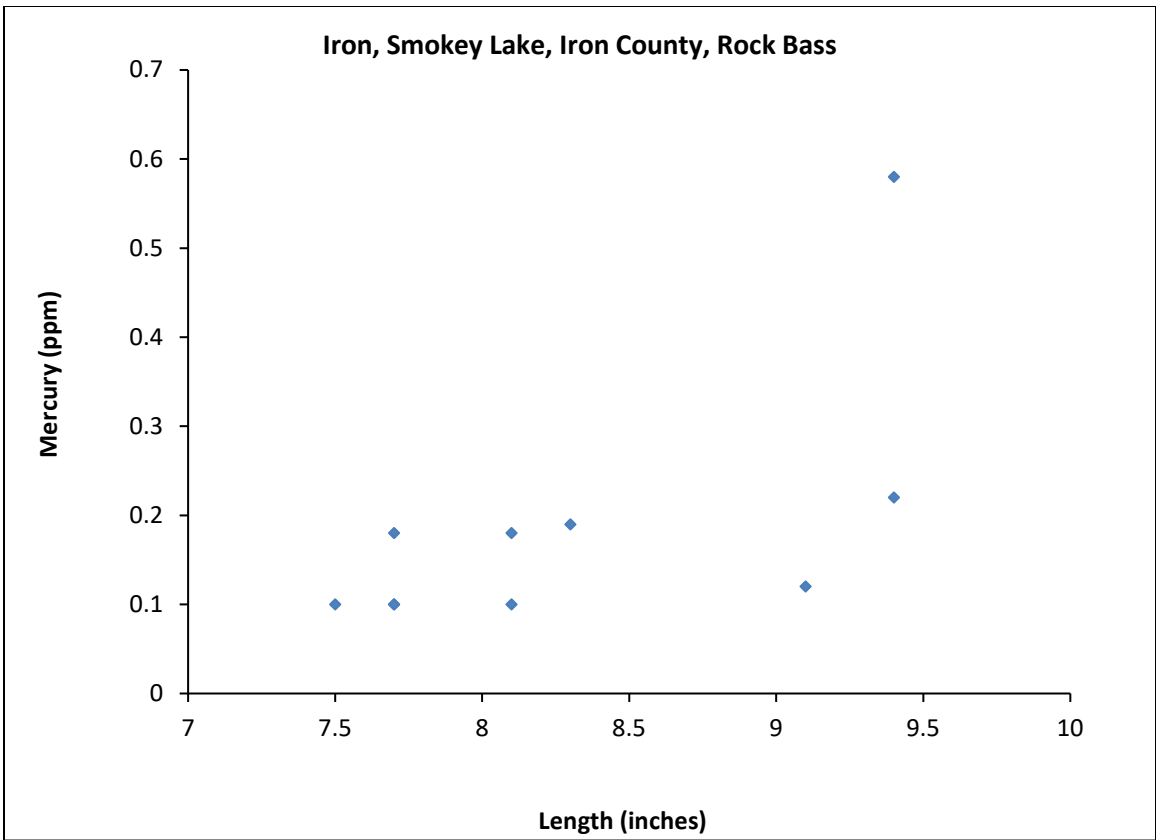
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	1986	10	7.5	na	7.5	9.4
Datasets available: 1986						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.19	0.1	0.58	0.29	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.405	0.454				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Smokey Lake rock bass are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Smokey Lake rock bass due to mercury.



**Smallmouth Bass**

**Smokey Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of All Samples	
Earliest	Most Recent				Min	Max
1986	1986	2	12.8	14	12.8	12.8
Datasets available: 1986						
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	2	0.46	0.46	0.47	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Smokey Lake smallmouth bass are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. Statewide guidelines apply: No one should eat more than 2 meals per month of largemouth or smallmouth bass smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches.

**White Sucker**

**Smokey Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1986	1986	1	20.1	na	20.1	20.1
Datasets available: 1986						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	1	0.17	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Smokey Lake sucker are not covered by an advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. Statewide guidelines apply: No one should eat more than 8 meals per month of sucker from inland waters.

**Walleye**

**Stager Lake**

**Iron County**

**Hg Analysis:**

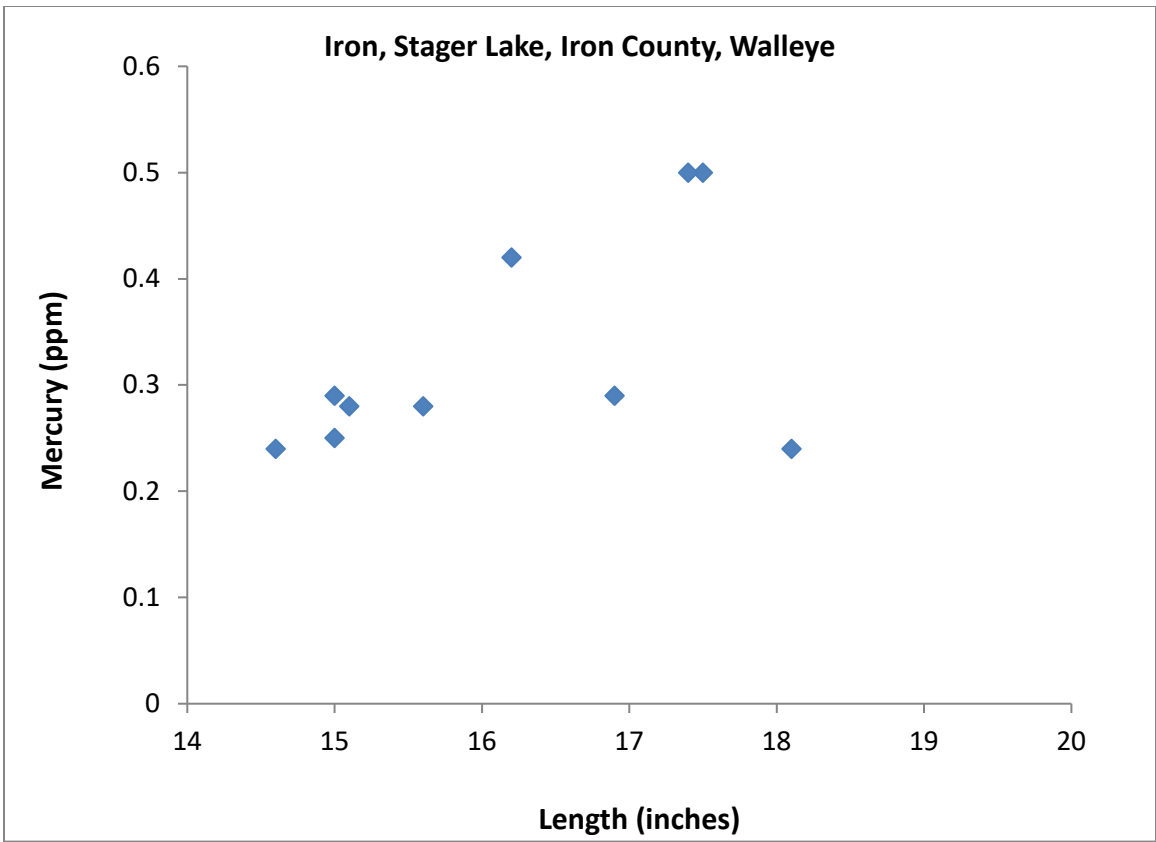
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2012	2012	10	14.6	15	14.6	18.1
Datasets available: 2012						
Chemical	Sample Size (Legal)	Mean Conc. (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.33	0.24	0.50	0.40	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.261	0.238				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean Conc. (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	--	--	--	--	--	--
DDT	--	--	--	--	--	--
Chlordane	--	--	--	--	--	--
Toxaphene	--	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Stager Lake walleye are covered by the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of walleye smaller than 20 inches or more than 1 meal per month of walleye larger than 20 inches due to mercury. The statewide length break was applied as the size range of fish was limited.





**Largemouth and  
Smallmouth Bass**

**Stanley Lake**

**Iron County**

**Hg Analysis:**

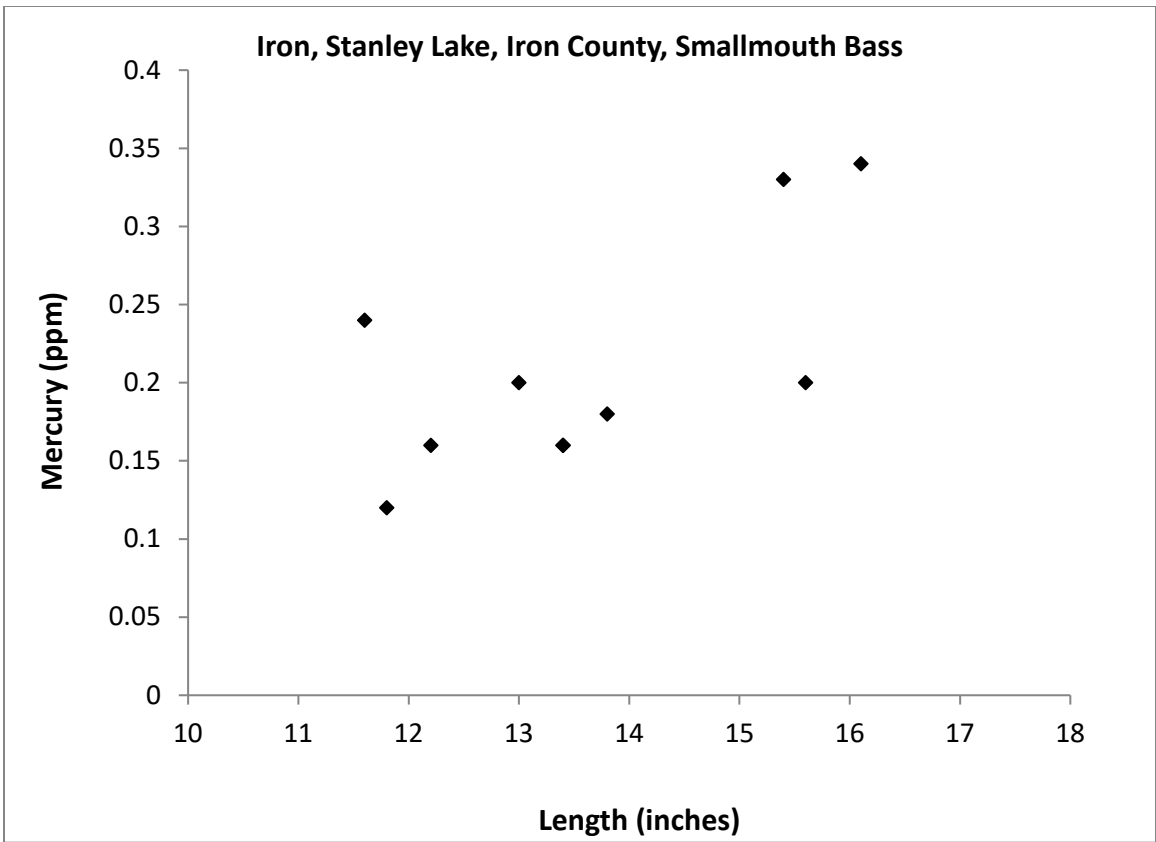
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
1990	1990	10	11.6	14	13.8	16.1	
Datasets available: 1990							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
Mercury	4	0.26	0.18	0.34	--	--	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
Mercury	0.449	0.439					

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples		Meal Category
Earliest	Most Recent				Min	Max	
--	--	0					
Datasets available: --							
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
PCB	0	--	--	--	--	--	
DDT	0	--	--	--	--	--	
Chlordane	0	--	--	--	--	--	
Toxaphene	0	--	--	--	--	--	
Chemical	Linear Regression	Exponential Regression					
	R <sup>2</sup>	R <sup>2</sup>					
PCB	--	--					
DDT	--	--					
Chlordane	--	--					
Toxaphene	--	--					
<b>Final meal category based on UCL:</b>							--

**Existing Advisory:** Stanley Lake largemouth bass and smallmouth bass are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. Statewide guideline apply: No one should eat more than 2 meals per month of largemouth or smallmouth bass smaller than 18 inches or more than 1 meal per month of those fish larger than 18 inches.



**Walleye**

**Stanley Lake**

**Iron County**

**Hg Analysis:**

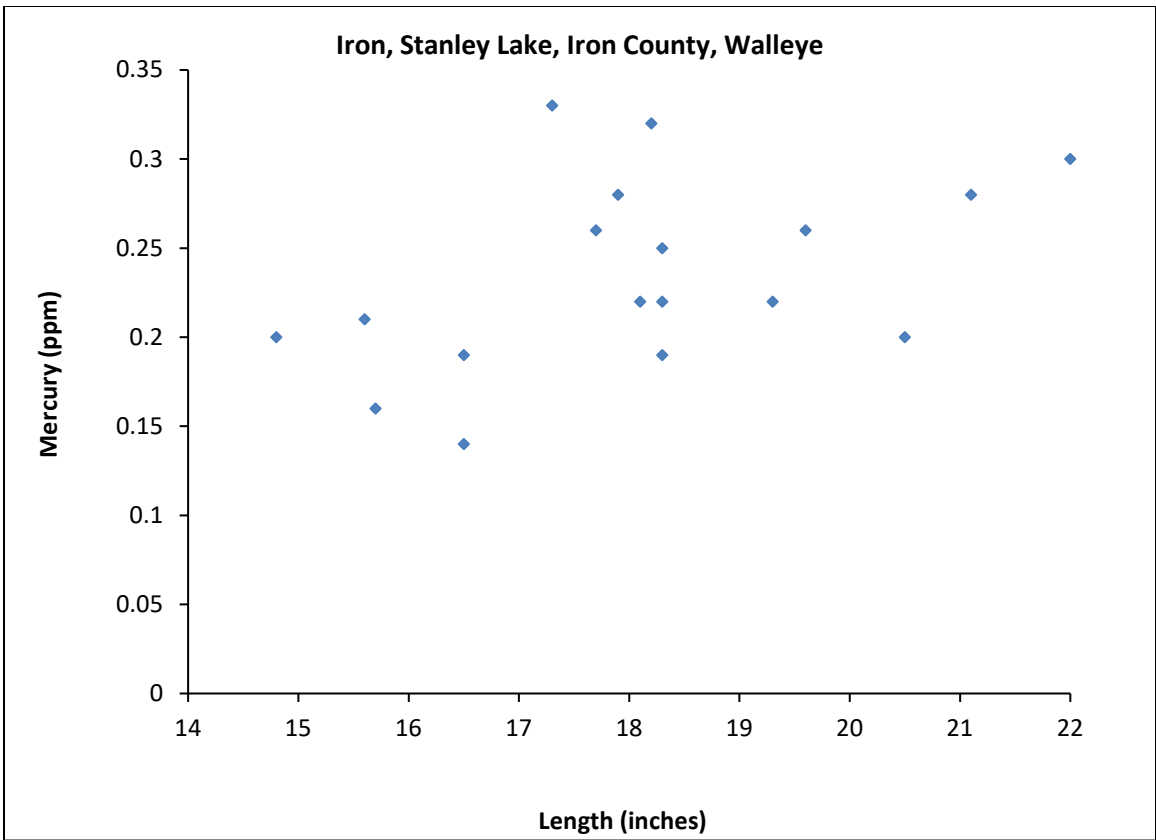
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1990	2001	18	14.8	15	14.8	22
Datasets available: 1990, 2001						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	18	0.24	0.14	0.33	0.26	4
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.216	0.236				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>4</b>

**Existing Advisory:** There are no eating restrictions for Stanley Lake walleye.

**Recommendation:** No one should eat more than 4 meals per month of Stanley Lake walleye smaller than 20 inches or more than 2 meals per month of those fish larger than 20 inches due to mercury. The statewide length break was applied as the size range of the fish was limited.



**Northern Pike**

**Sunset Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of All Samples	
Earliest	Most Recent				Min	Max
1988	1988	2	22	24	22	23
Datasets available:		1988				
Chemical	Sample Size (All)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	2	--	0.25	0.31	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	--	--				

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	2	22	24	22	23
Datasets available:		1988				
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	2	ND	--	--	--	--
DDT	2	0.02	0.02	0.02	--	--
Chlordane	2	ND	--	--	--	--
Toxaphene	2	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						--

**Existing Advisory:** Sunset Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** A dataset of less than five data points for a given chemical, species and waterbody is considered insufficient for evaluation using the standard evaluation method. Statewide guidelines apply: No one should eat more than 1 meal per month of northern pike larger than 30 inches or more than 2 meals per month of northern pike smaller than 30 inches in length.

**Walleye**

**Sunset Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	10	14.8	15	14.8	22
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	10	0.41	0.22	0.65	0.51	2
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.806	0.806				

**Organics Analysis:**

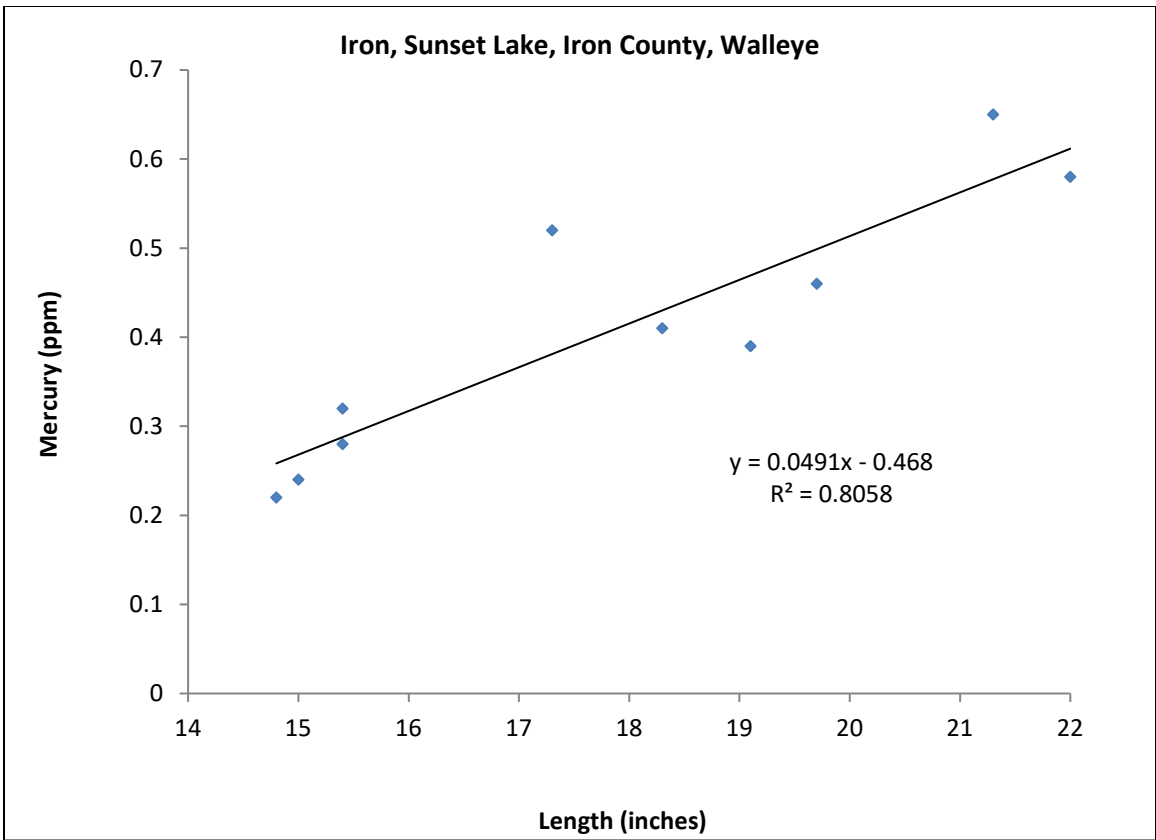
Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
1988	1988	10	14.8	15	14.8	22
Datasets available: 1988						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	10	ND	--	--	--	--
DDT	10	0.03	0.011	0.07	0.04	12
Chlordane	10	ND	--	--	--	--
Toxaphene	10	ND	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>2</b>

**Existing Advisory:** Sunset Lake walleye are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 2 meals per month of Sunset Lake walleye smaller than 20 inches or more than 1 meal per month of those fish larger than 20 inches due to mercury.

*Note: DDT as a cause of an advisory is discounted due to the age of the data.*

Length (Inches)	Hg Regression Equation Estimate (ppm)	Meal Category
14	0.22	4
15	0.27	4
16	0.32	2
17	0.37	2
18	0.42	2
19	0.46	2
20	0.51	2
22	0.61	1
24	0.71	1
<i>Shaded area denotes extrapolated estimates</i>		



**Northern Pike**

**Tepee Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
2003	2003	10	21.3	24	23.7	29.9
Datasets available: 2003						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
Mercury	6	1.14	0.83	1.75	1.56	0.5
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
Mercury	0.356	0.417				

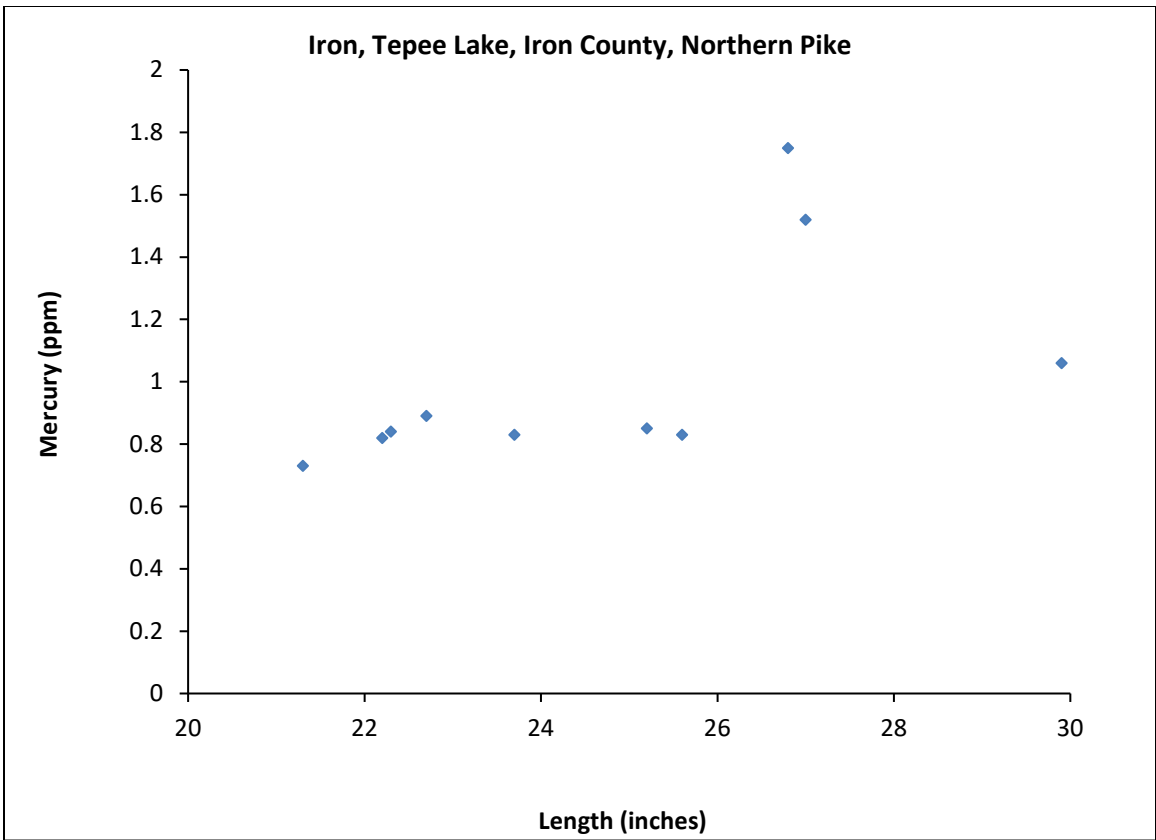
**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples	
Earliest	Most Recent				Min	Max
--	--	--	--	--	--	--
Datasets available: --						
Chemical	Sample Size (Legal)	Mean (ppm)	Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category
PCB	0	--	--	--	--	--
DDT	0	--	--	--	--	--
Chlordane	0	--	--	--	--	--
Toxaphene	0	--	--	--	--	--
Chemical	Linear Regression	Exponential Regression				
	R <sup>2</sup>	R <sup>2</sup>				
PCB	--	--				
DDT	--	--				
Chlordane	--	--				
Toxaphene	--	--				
<b>Final meal category based on UCL:</b>						<b>0.5</b>

**Existing Advisory:** Tepee Lake northern pike are covered under the statewide mercury advisory.

**Recommendation:** No one should eat more than 6 meals per year of Tepee Lake northern pike smaller than 30 inches, and no one should eat any of those fish larger than 30 inches due to mercury. The statewide length break was applied as the size range of the fish were limited.





**Walleye**

**Winslow Lake**

**Iron County**

**Hg Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
2013	2013	10	14.8	15	14.8	22.1		
Datasets available: 2013								
Chemical	Sample Size (Legal)	Mean		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
Mercury	10	0.50		0.27	0.80	0.62	1	
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
Mercury	0.406	0.409						

**Organics Analysis:**

Range of Years Used		N (All)	Overall Min Length	Legal Min (Inches)	Range of Legal Sized Samples			
Earliest	Most Recent				Min	Max		
--	--	0	--	--	--	--		
Datasets available: --								
Chemical	Sample Size (Legal)	Mean		Min. Conc. (ppm)	Max Conc. (ppm)	95%UCL (ppm)	Meal Category	
PCB	--	--		--	--	--	--	
DDT	--	--		--	--	--	--	
Chlordane	--	--		--	--	--	--	
Toxaphene	--	--		--	--	--	--	
TEQ	--	--		--	--	--	--	
Chemical	Linear Regression	Exponential Regression						
	R <sup>2</sup>	R <sup>2</sup>						
PCB	--	--						
DDT	--	--						
Chlordane	--	--						
Toxaphene	--	--						
TEQ	--	--						
							<b>Final meal category based on UCL: 1</b>	

**Existing Advisory:** Winslow Lake walleye are covered by the statewide advisory: No one should eat more than 2 meals per month of walleye smaller than 20 inches or more than 1 meal per month of those fish larger than 20 inches due to mercury.

**Recommendation:** No one should eat more than 1 meal per month of Winslow Lake walleye less than 20 inches and 6 meals per year of those fish larger than 20 inches due to mercury. The statewide length break was applied as the size range of the fish were limited.

