

GREAT LAKES INDIAN FISH & WILDLIFE COMMISSION

P. O. Box 9 • Odanah, WI 54861 • 715/682-6619 • FAX 715/682-9294



• MEMBER TRIBES •

MICHIGAN

Bay Mills Community
Keweenaw Bay Community
Lac Vieux Desert Band

WISCONSIN

Bad River Band
Lac Courte Oreilles Band
Lac du Flambeau Band

MINNESOTA

Fond du Lac Band
Mille Lacs Band

Red Cliff Band
St. Croix Chippewa
Sokaogon Chippewa

To: Tim Wilson, Bad River Fisheries Specialist
Cyrus Hester, Environmental Specialist

From: Sara Moses, Environmental Biologist

A handwritten signature in blue ink that reads "Sara K. Moses". The signature is written in a cursive style.

Date: April 30, 2013

Re: Walleye Consumption Advice for the Kakagon River

The Bad River Natural Resources Department (NRD) recently requested information from the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) regarding mercury-based consumption advice for walleye from the Kakagon River on the Bad River reservation. The NRD collected 12 walleye from the Kakagon River per year in 2011 and 2012 during spring collections for the Bad River Hatchery. The fish were provided to GLIFWC's mercury testing program. Skin-off fillets were tested for total mercury by the Lake Superior Research Institute (LSRI) at the University of Wisconsin – Superior.

Information on the length, weight, age, sex, and mercury concentration of the 24 walleye from the Kakagon River are shown in Table 1 (see page 3). Mercury concentrations ranged from 0.095 to 0.794 $\mu\text{g/g}$ (ppm), with an average of 0.240 $\mu\text{g/g}$. Mercury concentrations were generally lower than those of similarly sized walleye from inland lakes within the Wisconsin Ceded Territories. A plot of mercury concentration versus walleye length is shown in Figure 1 (page 4).

GLIFWC communicates walleye consumption advice to its member tribes via GIS-based, color-coded Mercury Maps (<http://www.glifwc.org/Mercury/mercury.html>) for inland lakes. The color assigned to each lake corresponds to the recommended maximum number of walleye meals that can be safely consumed from that particular lake. Separate consumption advice is given for the sensitive (women of childbearing age and children under 15) and general (women beyond childbearing age and men 15 and older) populations. The advice given is for a typical 20-inch (or smaller) walleye. For the general population, if the fish being consumed are larger than 20

inches, fewer meals should be eaten, as mercury will be higher in these fish. It is recommended that members of the sensitive population do not consume any walleye over 20 inches.

An analysis identical to that used to assign color codes to inland lakes for the Mercury Maps was performed for the 24 walleye from the Kakagon River. The result based on the available information is that the Kakagon River is “blue” for the general population and “yellow” for the sensitive population. This corresponds to the following consumption advice for walleye (up to 20”) from the Kakagon River:

KAKAGON RIVER WALLEYE CONSUMPTION ADVICE			
Sensitive Population (women of childbearing age and children under 15)		General Population (women beyond childbearing age and men 15 and older)	
	Eat up to 2 meals or 16 oz. per month		Eat up to 8 meals or 64 oz. per month

To put this into perspective, there are no off-reservation inland lakes within the ceded territories where walleye are speared by Bad River members that have less restrictive consumption advice. There are only three other lakes speared by Bad River members that have the same consumption advice: Island Lake (Rusk County, WI), Long Lake (Chippewa County, WI), and Mille Lacs (Mille Lacs County, MN). In other words, walleye from the Kakagon River are relatively low in mercury when compared to walleye from inland lakes in the area.

Any questions you may have regarding this memo or GLIFWC’s Mercury Program should be directed to me at s.moses@glifwc.org or (715) 682-6619 x2109.

Table 1: Length, weight, age, sex, and mercury concentration of walleye collected from the Kakagon River during spring 2011 and 2012.

Fish ID	Collection Date	Length (inches)	Weight (Pounds)	Age (Years)	Sex	Mercury ($\mu\text{g/g}$, ppm)
12001	4/18/2011	26.4	5.29	14	F	0.675
12002	4/18/2011	26.8	5.89	12	F	0.394
12003	4/18/2011	27.2	6.06	13	F	0.568
12004	4/18/2011	14.5	1.09	3	M	0.095
12005	4/18/2011	16.8	1.72	5	M	0.135
12006	4/18/2011	16.0	1.74	4	M	0.113
12007	4/18/2011	16.0	1.41	4	M	0.101
12008	4/18/2011	18.2	1.94	5	M	0.235
12009	4/18/2011	20.7	2.96	7	M	0.196
12011	4/18/2011	20.2	2.98	6	M	0.199
12012	4/18/2011	14.3	1.16	4	M	0.099
12013	4/18/2011	13.0	0.77	4	M	0.095
12061	4/5/2012	15.4	1.34	4	M	0.112
12062	4/5/2012	16.1	1.51	4	M	0.108
12063	4/5/2012	15.1	1.11	3	M	0.165
12064	4/5/2012	14.2	1.01	3	M	0.157
12065	4/5/2012	13.2	0.84	3	M	0.153
12066	4/5/2012	23.6	4.25	9	F	0.218
12067	4/5/2012	23.2	4.37	16	M	0.794
12068	4/5/2012	23.0	4.31	11	M	0.453
12069	4/5/2012	18.1	2.21	5	M	0.161
12070	4/5/2012	19.0	2.27	5	M	0.201
12071	4/5/2012	14.0	0.86	3	M	0.122
12072	4/5/2012	20.1	2.64	5	M	0.205

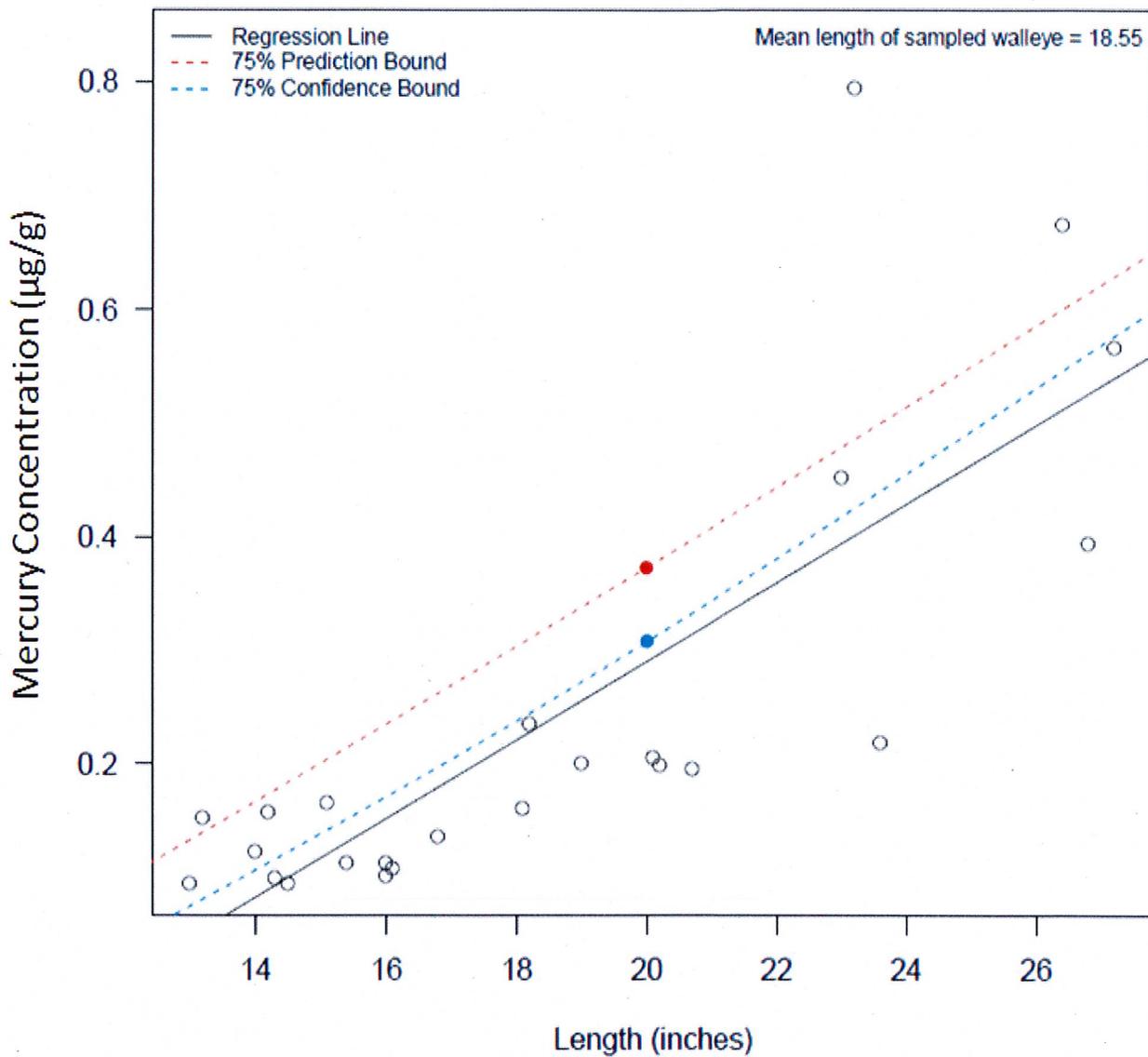


Figure 1: Mercury concentration versus walleye length for the Kakagon River. [Note: The 75% confidence and prediction upper bounds shown are used in the determination of walleye consumption advice.]

Cc: Neil Kmiecik, Biological Services Director