

Executive Summary of Lange/Revere Canals and Lake St. Clair Fish Fillet Samples

Background

In 2001, high levels of PCBs were discovered in sediments in the Lange/Revere canals on Lake St. Clair in the city of St. Clair Shores. Additional monitoring indicates the PCB problem persists even after the removal of significant amounts of contaminated sediments from the canals and associated storm drain system.

PCB contamination of Lake St. Clair fish has caused public health advisories ranging from “one meal per week” to “do not eat”, with some fish species and sizes not having restrictions (see www.michigan.gov/eatsafefish - 2010 Michigan Fish Advisory). The 2010 Michigan Fish Advisory recommends that children and women of childbearing age should not eat Lake St. Clair carp more than 1 meal per month. The general population (i.e, everyone else) should not eat more than 1 meal per week of Lake St. Clair carp. Due to the recent Lange/Revere carp fillet PCB results, MDCH has changed this advice to recommend nobody eat carp or catfish from Lake St. Clair.

For Lake St. Clair largemouth bass, children and women of childbearing age should not eat more than 1 meal per month. The general population should not eat more than 1 meal per week.

The 2010 Lake St. Clair fish advisories are based on samples collected in the northern part of Lake St. Clair in Anchor Bay, roughly 12 miles northeast of the Lange/Revere canals. Lake St. Clair carp were sampled most recently in 2001; largemouth bass were last sampled in 1987 but smallmouth bass, which generally have contaminant concentrations equivalent to largemouth bass, were sampled in 2003.

Lange/Revere Canals Results

MDCH and the Macomb County Health Department received a citizen request for fish sampling that was communicated to MDEQ. MDEQ arranged for the collection of black crappie (8), carp (12), largemouth bass (13), and pumpkinseed (5) from the canals to evaluate PCB concentrations in the edible portion (i.e., fillet). Samples were analyzed for the standard suite of contaminants. As of this date, a partial dataset with validated results for 12 carp fillets and for 1 largemouth bass fillet are available. The remaining fish fillet analyses are being completed and include a repeat analysis of a subset of the carp samples, additional largemouth bass, black crappie, and pumpkinseed.

The total PCB concentrations in the 12 carp fillets collected from Lange/Revere canals ranged from 13 to 215 parts per million (ppm), with a median concentration of 88 ppm (Table 1). Results are available for 1 of 13 largemouth bass collected; the total PCB concentration in that fish was 3.9 ppm. These results exceed the “do not eat” fish advisory value of 2.0 ppm of PCBs that applies to everyone including adults. More restrictive advisory values are used to protect sensitive populations such as women of childbearing age and young children.

Public Health Actions

Given the high PCB concentrations observed, MDCH is advising that no one eat any type of fish from the Lange/Revere canals. As a further precaution, MDCH recommends that no one eat carp or catfish caught from Lake St. Clair. These advisories will be listed in the 2011 Michigan Fish Advisory.

MDCH will be working with local officials to post public health fish advisory signs on the Lange/Revere canals. Over the next year, MDCH and MDEQ will be seeking additional fish samples from Lake St. Clair near the canals for chemical analysis.

A public information meeting is being planned for Wednesday, June 15 at 7 PM at City Hall (27600 Jefferson Circle Drive, St. Clair Shores, MI 48081).

Table 1. Total PCB concentrations (parts per million [ppm]) in fillets from fish collected in Revere/Lange Street canals (10-Mile Canal) in 2010 and from Lake St. Clair in 2010 and earlier.

CARP FILLETS				
	N	Min	Median	Max
10 Mile Canal – 2010	12	13.5	88.0	215.0
Lake St. Clair – 1998/2001	11	0.2	0.7	4.1

LARGEMOUTH BASS FILLETS				
	N	Min	Median	Max
10 Mile Canal - 2010	1		3.9	
Lake St. Clair - 2010	10	0.009	0.04	0.09
Lake St. Clair - 1987	10	0.01	0.21	0.72