



FOR RELEASE
2:00 p.m. April 1, 1982

Ministry
of the
Environment

FOR FURTHER INFORMATION
J. Ralston (416) 965-6954
A. Johnson (416) 965-6954
J. Hornick (416) 965-7117

NEW EVIDENCE OF CHEMICAL CONTAMINATION IN FISH

Environment Minister Keith Norton today released the latest Environmental Health Bulletin containing the results of Ontario's fish testing program in 39 water bodies.

At the same time, he made public the results of testing on spottail shiner minnows taken from both the American and Canadian sides of the Niagara River which revealed trace levels of the chemical dioxin 2,3,7,8-TCDD.

Sources of the dioxin in the minnows are believed to be previous disposal practices at sites associated with the chemical industry on the New York side of the Niagara River. }

Fish species from Lake Ontario and from the lower Niagara River contained 2,3,7,8-TCDD but in no case, except lake trout from the Port Credit area, did the average value exceed the 20 parts per trillion federal guideline. No dioxin was detected in fish from the Grand River near Waterloo and trace levels of 1 to 2 parts per trillion were measured in 3 of 11 lake trout from Lake Superior.

Niagara River and Lake Ontario drinking water supplies were tested for 2,3,7,8-TCDD and other contaminants found in the minnows and sport fish. Dioxin was not found in any water sample at or above the detection limit of 0.2 parts per trillion. Mirex and DDT were not found in water samples. PCB has been measured occasionally in Lake Ontario waters but concentrations are much below the interim Ontario drinking water objective of 0.003mg/L.

"As I have stated, our drinking water is safe and of good quality," said Mr. Norton. "I am concerned, however, about the potential long-term problems which these increased levels of dioxin in fish may present."

"Findings for 11 lake trout collected in the Port Credit area of western Lake Ontario are of particular concern. Dioxin 2,3,7,8-TCDD in these fish averaged 27.4 parts per trillion, with individual values ranging from 17 to 57 ppt."

These findings mark the first time in the Ministry's dioxin testing program that the average concentration of a sampling of fish exceeds the 20 ppt federal guideline. These trout also exceed the unrestricted consumption guidelines for PCB and mirex.

Mr. Norton said that medical specialists with the Ontario Ministry of Labour have recommended the continuation of "limited consumption" advice for lake trout from the Port Credit area as defined in the October, 1981, Environmental Health Bulletin.

This recommends that an adult male should consume only one or two meals of lake trout a month and that no lake trout caught in the area should be consumed by women of child-bearing age and children under the age of 15. Anglers are advised to consult the "Guide to Eating Ontario Sport Fish" for advice on consumption of specific species at specific locations.

The Minister outlined a series of steps which he said would leave no doubt in anyone's mind about the seriousness with which Ontario views the new findings.

He has written to Robert Flacke, Commissioner of the New York State Department of Environmental Conservation, proposing an immediate meeting to assign priorities for cracking down on pollution sources.

Premier Davis, he said, plans to raise pollution of the Niagara River at the New York-Ontario conference which Governor Carey of New York has proposed. And, Ontario's concerns about the Niagara River will be emphasized again, he said, when Premier Davis attends a meeting in June of Great Lakes governors initiated by Governor William Milliken of Michigan.

In addition, the U.S.-Canada Niagara River Toxics Committee is pressing ahead with long-range plans to control hazardous contaminants in the Niagara River.

The Environment Ministry's special scientific team, the Niagara River Improvement Committee, has been authorized to recruit a hydrogeologist to zero in on suspected sources of contamination in New York State, including the Hyde Park and Love Canal dump sites, he said.

Details of Ontario's new scientific findings are being provided to U.S. federal and New York State authorities and to all of the U.S. and Canadian environmental groups involved in recent judicial proceedings on Niagara River pollution problems.

"PCB and dioxin concentrations in minnows from Cayuga Creek, which contains drainage from the Love Canal area, reinforce our concerns about seepage of contaminants from industrial waste disposal sites," the Minister said.

The dioxin level, averaging 59 parts per trillion of 2,3,7,8-TCDD at the Cayuga Creek site, was four times higher than dioxin in minnows from other Niagara River locations sampled in 1981.

Dioxin was not detected in spottail shiners collected in the Nanticoke area of eastern Lake Erie, which is upstream from and unaffected by industrial waste losses to the Niagara River.

"The current test results support earlier tests which showed that levels of 2,3,7,8-TCDD are higher in Lake Ontario fish than in fish from other Ontario water bodies tested," Mr. Norton said. "And they support the opinion that Niagara Falls, New York, is the main source of this chemical in Lake Ontario fish."

-4-

"Our scientists are convinced that the dioxin came in, and is continuing to come in, from the American side," Mr. Norton said. "Our findings give clear indication of a potential long-term problem. Chemical sources in New York State must come under much tighter control and additional clean-up may be necessary."

-30-

NIAGARA RIVER SPOTTAIL SHINERS - 1981 COLLECTION

TABLE 1

<u>LOCATION</u>	<u>PCB(ppb)</u>	<u>DDT(ppb)</u>	<u>MIREX(ppb)</u>	<u>2,3,7,8-TCDD(ppt)</u>
Upper Niagara River near Fort Erie, Ontario (Ontario)	164	(37)	ND	15
Upper Niagara Opposite 102nd Street Disposal Area (New York)	327	9	17	7.5
Mouth of Cayuga Creek Downstream from Love Canal (New York)	(573)	(23)	18	(59)
Lower Niagara River at Lewiston (New York)	405	74	12	--
Lower Niagara River at Peggy's Eddy (New York)	309	189	6	7
Lower Niagara River near Queenston (Ontario)	329	107	15	--
Lower Niagara River near Niagara-on-the- Lake (Ontario)	327	73	10	13.5
Lake Erie at Nanticoke (Ontario)	--	--	--	ND*

* Not Detected

2,3,7,8-TCDD IN SPORT FISH

TABLE 2

<u>LOCATION</u>	<u>SPECIES</u>	<u>LENGTH (cm)</u>		<u>2,3,7,8-TCDD (ppt) IN DORSAL FILLET</u>	
		<u>MEAN</u>	<u>RANGE</u>	<u>MEAN</u>	<u>RANGE</u>
Lake Ontario at Clarkson (Port Credit)	Lake Trout (11)	60.9	(50.9-69.5)	27.4	(17.0-57.0)
Lake Ontario at Humber Bay (Toronto)	Lake Trout (6)	47.3	(43.-51.)	17.8	(6.0-28.0)
	R. Smelt (3c)	17.7	(15.-21.)	8.0	(7.0-10.0)
Lake Ontario at Ganaraska R. (Port Hope)	Rainbow Trout (7)	62.0	(45.8-73.9)	8.3	(7.0-11.0)
Lower Niagara River near Queenston	S.M. Bass (6)	28.8	(18.8-43.6)	12.7	(ND*-30.0)
	Y. Perch (5)	27.3	(26.0-28.2)	6.6	(3.0-13.0)
	R. Bass (5)	19.8	(18.0-21.0)	2.4	(ND*-5.0)
Grand River at Breslau (Waterloo)	S.M. Bass (8)	24.8	(18.0-35.0)	ND*	(ND*)
	R. Bass (5)	16.8	(14.0-19.0)	ND*	(ND*)
Lake Superior at Peninsula Harbour	Lake Trout (11)	44.9	(34.0-64.0)	0.45	(ND*-2.0)

*ND - Not detected at a 1. ppt Detection Limit

March/April 1982

ENVIRONMENTAL HEALTH BULLETIN

Ontario's Fish Contaminants Information Program

Environment Ontario issues bulletins on a routine basis to provide Ontario residents with up-to-date information on the results of fish collected and tested for contaminants such as mercury and PCB.

This bulletin contains information on fish collected from 39 water-courses and supplements the information on about 1102 lakes and rivers contained in the "Guide to Eating Ontario Sport Fish" booklets published in April, 1981 and subsequent Environmental Health Bulletins.

For each lake, the individual fish species tested are categorized according to size and contaminant concentration. Safe consumption limits can be determined by consulting the following "Fish Consumption Guidelines" table.

FISH CONSUMPTION GUIDELINES

(Expressed in meals per week or month with a meal consisting of an 8-ounce portion)

<u>CATEGORY</u>	<u>LENGTH OF FISHING VACATION</u>			
	<u>ONE WEEK</u>	<u>TWO WEEKS</u>	<u>THREE WEEKS</u>	<u>LONG-TERM CONSUMERS *</u>
A	← NO RESTRICTIONS →			
B	10 Meals/Week	5 Meals/Week	4 Meals/Week	1 Meal/Week
C	7 Meals/Week	4 Meals/Week	3 Meals/Week	3 Meals/Month
D	← NO CONSUMPTION →			
X	1 or 2 Meals/Week	1 or 2 Meals/Week	1 or 2 Meals/Week	1 or 2 Meals/Month
-	indicates that fish from these size ranges were not collected and consumption guidelines are not available.			

* For the purpose of these guidelines, those people who fish on and off for part of the year exceeding three weeks are considered long-term consumers.

NOTE: WOMEN OF CHILDBEARING AGE AND CHILDREN UNDER 15 YEARS OF AGE SHOULD EAT ONLY FISH FROM THE "A" CATEGORY.



Ministry
of the
Environment

Hon. Keith C. Norton, Q.C.,
Minister

Gérard J. M. Raymond
Deputy Minister

The recommended maximum consumption levels depend upon the period of time over which fish are consumed (1 week, 2 weeks, etc.) and the contaminant concentration in the fish. The categories A, B, C, and D in the above guideline represent levels of mercury from less than 0.5 parts per million (A) to over 1.5 parts per million (D). Fish categorized as "X" contain one or more organic contaminants (PCB, DDT, mirex, or 2,3,7,8-TCDD) at concentrations exceeding federal, unrestricted consumption guidelines.

To determine the recommended level of consumption of a given fish:

1. Identify the species.
2. Measure the length of the fish from the tip of the tail to the tip of the nose.
3. Check the lake table for the appropriate lake.
4. Note the category letter for the particular fish you are checking.
5. Determine the consumption recommendations from the "Fish Consumption Guidelines" table above.

As well as the lake name and its geographical location, the table includes the species of fish collected and the contaminants sampled for (e.g. Hg-mercury) and the level of contaminant in fish of each size caught as represented by a category letter defined above.

For any given fish and location, the fact that analysis was performed for a specific contaminant does not necessarily indicate that it was detected.

Booklets entitled "Guide to Eating Ontario Sport Fish", outlining the facts about fish contamination and the resultant health implications are now available from local offices of the ministries of the Environment and Natural Resources and in northern Ontario, the Ministry of Northern Affairs. For information concerning specific waterbodies and fish species, these local offices should be contacted.

The Ontario Government is continuing to sample fish from many lakes throughout the Province. As further information on additional waterbodies becomes available, listings will be made available to the media and data can be obtained from the local offices of the ministries of the Environment and Natural Resources.

FOR FURTHER INFORMATION:

A. Johnson	(416) 965-6954
J. Ralston	(416) 965-6954
D. Helliwell	(416) 965-1658

(Version francaise disponible)

LAKE LOCATION CO-ORDINATES	CONTAMINANTS SAMPLED	SPECIES	SIZE RANGE IN CENTIMETRES (INCHES)											
			<15 <6	15-20 6-8	20-25 8-10	25-30 10-12	30-35 12-14	35-45 14-18	45-55 18-22	55-65 22-26	65-75 26-30	75 30		
Central Region														
Raven Lake	Hg.	Lake Trout	-	-	-	-	A	A	B	C	D	-	-	-
4512/7851	Hg.	Smallmouth Bass	-	-	A	A	A	B	B	-	-	-	-	-
Sherbourne Twp. Haliburton Co.														
West-Central Region														
Grand River	2,3,7,8-TCDD.	Smallmouth Bass	-	A	A	A	A	-	-	-	-	-	-	-
(Breslau)	"	Rock Bass	A	A	-	-	-	-	-	-	-	-	-	-
4328/8025														
Waterloo R.M.														
Northeastern Region														
Kenogaming Lake	Hg.	Whitefish	-	-	-	A	A	A	-	-	-	-	-	-
4805/8155	Hg.	Northern Pike	-	-	-	-	A	A	A	B	B	C	-	-
Regan & Kenogaming Twps.	Hg.	White Sucker	-	A	A	A	A	A	-	-	-	-	-	-
Sudbury Dist.	Hg.	Walleye	-	-	A	A	A	A	B	C	D	-	-	-
Lac La France	Hg.	Walleye	-	-	-	-	B	B	-	-	-	-	-	-
4920/8028														
Bragg Twp.														
Cochrane Dist.														
Little Abitibi Lake	Hg.	Northern Pike	-	-	-	-	A	B	B	C	D	-	-	-
4924/8033	Hg.	Walleye	-	-	-	-	A	A	A	-	-	-	-	-
Sangster Twp.														
Cochrane Dist.														
Little Kesagami Lake	Hg.	Walleye	-	-	-	A	A	A	B	-	-	-	-	-
4945/8016	Hg.	Northern Pike	-	-	-	-	-	A	A	A	B	B	-	-
Cochrane Dist.														
Lower Tweed Lake	Hg, As.	Walleye	-	-	-	-	A	B	B	-	-	-	-	-
4932/8016	Hg, As.	Northern Pike	-	-	-	-	-	A	A	B	C	-	-	-
Tweed & Blakelock Twps.														
Cochrane Dist.														
Mattagami Lake	Hg.	Walleye	-	-	-	A	B	C	D	D	D	-	-	-
4752/8135	Hg.	Northern Pike	-	-	A	A	A	A	B	C	D	D	-	-
Sudbury Dist.	Hg.	Whitefish	-	-	A	A	A	A	B	-	-	-	-	-
Mistango Lake	Hg.	Northern Pike	-	-	-	-	-	A	A	B	B	-	-	-
4907/8027														
Freele Twp.														
Cochrane Dist.														
Nellie Lake	Hg.	Northern Pike	-	-	-	-	-	B	C	D	D	D	-	-
4848/8048														
Calvert & Aurora Twps.														
Cochrane Dist.														
Nettogami Lake	Hg.	Walleye	-	-	-	-	A	B	-	-	-	-	-	-
5013/8034	Hg.	Northern Pike	-	-	-	-	-	A	A	A	B	-	-	-
Cochrane Dist.														
North Tweed Lake	Hg, As.	Northern Pike	-	-	-	-	-	A	A	B	-	-	-	-
4936/8017														
Cochrane Dist.														
Ottawa River	Hg.	Sturgeon	A		A									
(Mattawa to Deux Rivières)														
4611/7830														
Papineau, Cameron & Clara Twps.														
Nipissing Dist.														
Ouellet Lake	Hg.	Walleye	-	-	-	-	B	B	C	C	-	-	-	-
4919/8147														
Haggart Twp.														
Cochrane Dist.														
Rawcourt Lake	Hg.	Northern Pike	-	-	-	A	A	A	A	B	B	-	-	-
4905/8112														
Clute Twp.														
Cochrane Dist.														
Reaume Lake	Hg.	Northern Pike	-	-	-	-	-	A	B	B	-	-	-	-
4854/8108														
Reaume Twp.														
Cochrane Dist.														
Shirley Lake	Hg, As.	Northern Pike	-	-	-	-	A	A	B	C	D	-	-	-
4927/8027														
Tweed Twp.														
Cochrane Dist.														
South Floodwood Lake	Hg.	Walleye	-	-	-	-	A	B	B	-	-	-	-	-
4922/8019	Hg.	Northern Pike	-	-	-	-	-	-	A	B	B	C	-	-
Bragg Twp.														
Cochrane Dist.														
Upper Kesagami Lake	Hg, As.	Walleye	-	-	-	-	B	B	C	-	-	-	-	-
4940/8017														
Cochrane Dist.														
Wakwayowkastic Lake	Hg, As.	Walleye	-	-	-	-	A	B	C	-	-	-	-	-
4936/8019	Hg, As.	Northern Pike	-	-	-	-	A	A	B	B	B	C	-	-
Cochrane Dist.														
Wilson Lake	Hg.	Northern Pike	-	-	-	-	-	A	B	B	B	-	-	-
4844/8049	Hg.	Yellow Perch	-	-	A	B	-	-	-	-	-	-	-	-
McCart Twp.														
Cochrane Dist.														
Zinger Lake	Hg.	Walleye	-	-	-	-	-	B	D	-	-	-	-	-
4925/8044														
Potter Twp.														
Cochrane Dist.														
Lake 17H-51	Hg, As.	Walleye	-	-	-	-	A	B	B	-	-	-	-	-
4931/8019	Hg, As.	Northern Pike	-	-	-	-	-	A	A	B	B	C	-	-
Tweed Twp.														
Cochrane Dist.														

LAKE LOCATION CO-ORDINATES	CONTAMINANTS SAMPLED	SPECIES	SIZE RANGE IN CENTIMETRES (INCHES)											
			< 15 < 6	15-20 6-8	20-25 8-10	25-30 10-12	30-35 12-14	35-45 14-18	45-55 18-22	55-65 22-26	65-75 26-30	75 > 30		
Lake 211-04 5004/8019 Cochrane Dist.	Hg, As.	Northern Pike	-	-	-	-	A	A	B	C	D	-		
Northwestern Region														
Bruce Lake 5049/9320 Kenora Dist.	Hg. Hg. Hg.	Walleye Northern Pike White Sucker	- - -	- - A	- - A	A A A	A A A	B A A	B A A	C B -	- B -	- C -		
Eagle Lake 4942/9313 Kenora Dist.	Hg. Hg.	Walleye Northern Pike	- -	- -	- -	- -	- -	A -	A -	B A	- B	- -		
Fields Lake 4919/8524 Thunder Bay Dist.	Hg. Hg.	Walleye Northern Pike	- -	- -	- -	A -	A -	B A	C B	D B	- C	- -		
Missisa Lake 5218/8512 Kenora Dist.	Hg. Hg. Hg.	White Sucker Walleye Whitefish	- - -	- - -	- - A	- - A	- A A	A B A	A C -	- - -	- - -	- - -		
Lake Nipigon (Ombabika Bay) 5012/8815 Thunder Bay Dist.	Hg, PCB. " "	Walleye Longnose Sucker Sauger Cisco	- - - -	- - A -	- - A A	A - A A	A A -	B A -	B -	- -	- -	- -		
Pakwash Lake 5045/9330 Kenora Dist.	Hg. Hg. Hg.	Walleye White Sucker Northern Pike	- - -	- - -	A -	A A -	A A -	A A A	A A A	B -	- -	- B		
Trout Lake 5115/9315 Kenora Dist.	Hg.	Walleye	-	-	-	-	-	A	B	C	D	-		
Great Lakes														
(Lower) Niagara River (Queenston) 4310/7903 Niagara R.M.	Hg, PCB, Mirex, Pest., 2,3,7,8-TCDD. " 2,3,7,8-TCDD. " " " " Hg, PCB, Mirex, Pest. PCB, Mirex, Pest. 2,3,7,8-TCDD. "	American Eel Yellow Perch Walleye Rainbow Trout Northern Pike Muskie White Sucker Coho Rock Bass Smallmouth Bass	- -											